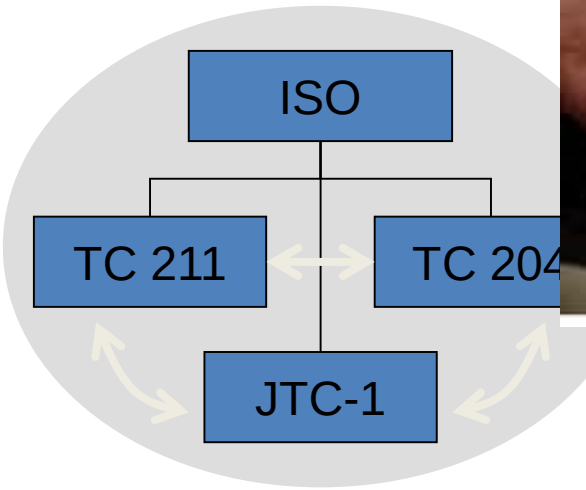
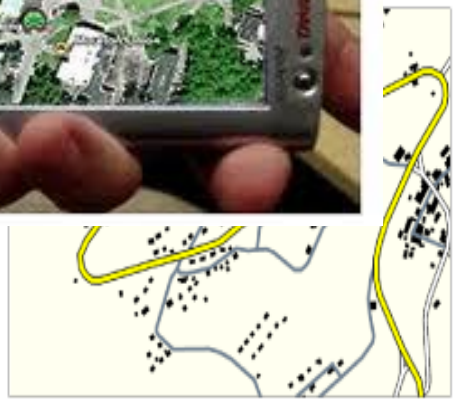
As normas ISO

ISO/TC 211
Geographic information/Geomatics





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The future of GNSS user technology

Published: 12 October 2016

As all positioning requirements exist within a given context, no single positioning method or technology – or magic combination thereof – can serve as 'the answer'.

The GSA's recently released GNSS User Technology Report aims not only to foresee how location will be used in the years to come, but also how it will influence the design of positioning systems. Download your copy today!

Imagine in the not-so-distant future setting your morning alarm based on real-time traffic estimates and having your coffee brewed accordingly, ready and waiting for you as you head out the door.

Always apologising for forgetting to send Mom flowers on Mother's Day? No worries, soon your phone will send you an automatic reminder and provide your autonomous car with directions to the nearest floral shop. No time

EU GNSS in the news

14 October 2016

Galileo's Ariane 5

European Space Agency (ESA)

The GSA's recently released GNSS User Technology Report aims not only to foresee how location will be used in the years to come, but also how it will influence the design of positioning systems. Download your copy today!

Imagine in the not-so-distant future setting your morning alarm based on real-time traffic estimates and having your coffee brewed accordingly, ready and waiting for you as you head out the door.

Always apologising for forgetting to send Mom flowers on Mother's Day? No worries, soon your phone will send you an automatic reminder and provide your autonomous car with directions to the nearest floral shop. No time to shop? Then just send a drone to deliver the flowers for you.

This isn't science fiction. In the era of the Internet of Things (IoT) and Big Data, trends in geo-positioning and information technology (IT) are simply inseparable. After all, IoT is built on the premise that it will know where the 'things' are. In fact, already today nearly half of all available mobile applications use location information – a significance that will likely only increase. However, according to the GNSS User Technology Report, this will only happen if the positioning systems of the future provide:

1. **Ubiquitous positioning:** the ability to choose the optimal combination of sensors and networks to become environment-independent.
2. **Automation and ambient intelligence:** sufficient reliability to enable such autonomous operations as driving, sailing, parking, landing, etc., by sensing the environment and adapting to it in real time.
3. **Security:** not only in the sense of a solution's reliability and safety, but also by responding to growing concerns about privacy.

"What this report shows is that no single positioning method or technology – or magic combination thereof – can serve as 'the answer'," says GSA Executive Director Carlo des Dorides. "After all, the technology that's right for pedestrian navigation probably isn't the best fit for use with an unmanned vehicle." Des Dorides explains that the reason for this is that all positioning requirements exist within a given context, including the physical and radio-electrical environment, user dynamics and power, size and weight constraints. "It is this context that determines what positioning technologies are required," he says.

Your guide to the shaping the future

With this 'future' and understanding of what is required to reach it in mind, the GNSS User Technology Report aims not only to foresee how location will be used in the years to come, but also how it will influence the design of positioning systems. The need for ubiquitous positioning, automation and ambient intelligence and security are impacting all aspects of receiver design – from antenna frequency range to signal processing channels. Furthermore, the implementation of disruptive techniques, such as vector and cloud processing, is making it possible to achieve greater performances in keeping battery life at acceptable levels. On top of this, other

News

News

SuperMap Occupies the First Position in Chinese GIS Market in 2015

27 September, 2016

SuperMap Software Press Releases

On 26th September, CCIDNET.com along with China Market Intelligence Center (CMIC) has released 'GIS Software Market Research Report', which made a deep analysis and authoritative prediction on the GIS (Geographic Information System) software market in China. And they have made multi-dimensional analysis and competitive comparisons among Esri, SuperMap Software Co., Ltd., Zondy Cyber and GeoStar according to the main indicators of market share, branding, technology, service, expanding ability and internal operation.

According to the statistics of China Market Intelligence Center, the GIS software scale in 2015 has reached approximately 2.4 billion US dollars. Government application is still the main market for GIS software; Chinese-made GIS basic platform software enterprises have transcended in multiple aspects, merging has become an important method for enterprises to improve their competitiveness, service-oriented has become main direction for GIS software.

The report indicates that after 30 years of development, the agglomeration degree of GIS basic platform software industry has increased. The market is mainly occupied by Essri, SuperMap Software Co., Ltd., Zondy Cyber and GeoStar, which occupy 74% of the market in total. SuperMap Software Co., Ltd., as the most competitive enterprise in GIS basic platform industry, has occupied 31.6% of the market share, listed as No.1 in the Chinese market share. Esri occupies 29.0% of the market while Zondy Cyber and GeoStar are listed as No.3 and No. 4, which occupy 7.9% and 5.9 of Chinese market share.

It is worth mentioning that some old GIS platform brands like Intergraph and MapInfo have faded away from the market. While brands like Skyline, Givtech and EV-Image are booming along with the rise of 3D GIS, the 3 companies mentioned above occupy 5.3%, 2.0%, 1.2% of the market share in 2015.

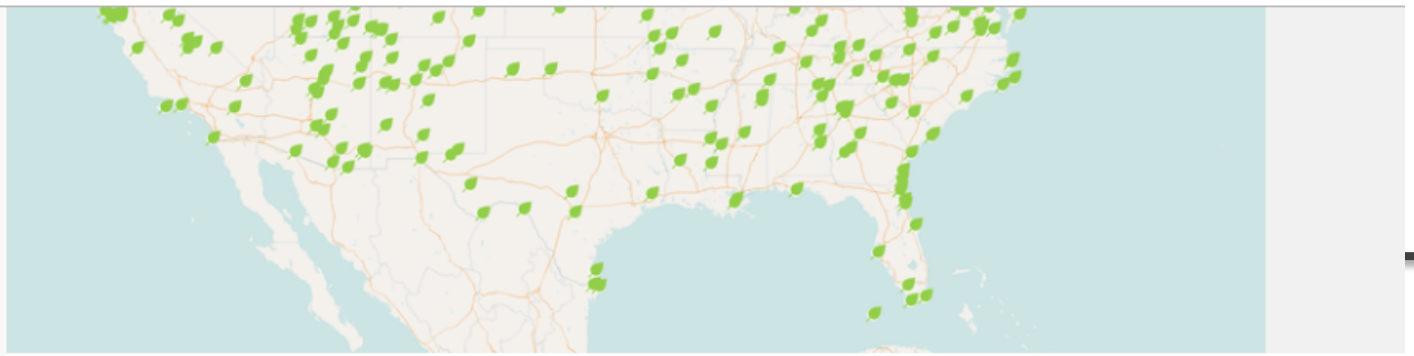
Quick Links

Download SuperMap GIS?

Get the 90-day trial license

Who is using our products?

Download Brochure



Raymond Camden from HERE Technologies will demonstrate how to use the web-based HERE XYZ Studio to build and design interactive maps. You'll see how to import map data, add it to a map, and then add custom styles. Finally, Raymond will show how you can share your maps with others.

In this webinar you will learn to:

- Build a custom web map of National Parks using HERE XYZ, a location data management service
- Import location datasets.
- Add custom styles.
- Share your map with others.

About HERE

HERE, the Open Location Platform company, enables people, enterprises and cities to harness the power of location. By making sense of the world through the lens of location we empower our customers to achieve better outcomes - from helping a city manage its infrastructure or an enterprise optimize its assets to guiding drivers to their destination safely. To learn more about HERE, including our new generation of cloud-based location platform services, visit http://360.here.com and http://www.here.com.

REGISTER Share

QUNAV EXPRESSING CREATIVITY THROUGH TECHNICAL INNOVATIONS

Vision-Aided Navigation | Plug & Play Sensor Fusion | Jamming Mitigation | Collaborative Signal Processing

Key features

- Integration of consumer-grade sensors
- Tightly and deeply coupled mechanizations
- Software-based mitigation of multipath, jamming and spoofing
- Reliable and consistent navigation performance

QuNav develops and implements sensor-fusion and software receiver solutions for GPS-challenged and GPS-denied environments.

INTRODUCING GIVE 1.0

GNSS/Inertial Vehicular Engine for Automotive Applications

GIVE is a low-cost, completely self-contained solution that maintains accurate navigation capabilities even in THE most difficult environments—urban canyons, tunnels and parking structures.

Download Example Test Results **(www.qunav.com/products)**

FIRST EARTH OBSERVATION SATELLITE WITH AI READY FOR LAUNCH

12 September 2019 A few months from now will see the launch of the first European satellite to demonstrate how onboard artificial intelligence can improve the efficiency of sending Earth observation data back to Earth. Dubbed ϕ-Sat, or PhiSat, this revolutionary artificial intelligence technology will fly on one of the two CubeSats that make up the FSSCat mission – a Copernicus

The hyperspectral camera on one of the CubeSats will collect an enormous number of images of Earth, some of which will not be suitable for use because of cloud cover. To avoid downlinking these less than perfect images back to Earth, the ϕ-Sat artificial intelligence chip will filter them out so that only usable data are returned.

Marco Esposito, from cosine Remote Sensing, the company that led the development of the artificial intelligence algorithm, explained, "While compact, the instrument – which covers the visible and near infrared with hyperspectral capability, enhanced with bands in the thermal infrared – is very powerful and will acquire terabytes of data that can be used to monitor vegetation changes and to assess water quality, for example.

"However, generating this amount of data actually poses a problem, as the data have to be handled efficiently so that they can reach the users in a timely manner. With ϕ-Sat we have effectively given the instrument its own brain, which processes the data onboard to detect clouds in the images.

"This not only ensures better quality data, but makes the delivery much more efficient."

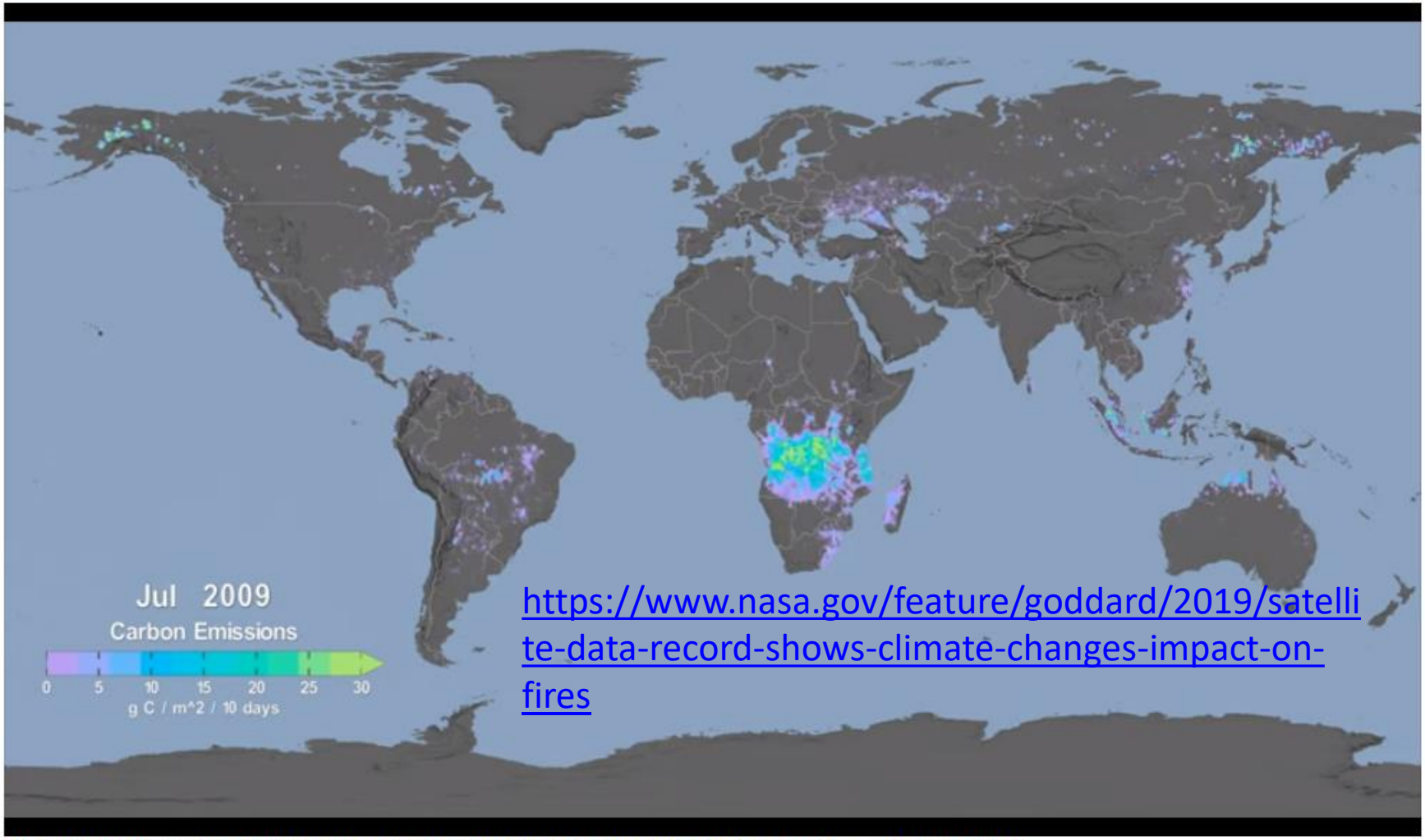
change for the future of Earth observation.

"And, with ϕ-Sat – Europe's first artificial intelligence in space – we are going to do just this."

FSSCat

Satellite Data Record Shows Climate Change's Impact on Fires

Hot and dry. These are the watchwords for large fires. While every fire needs a spark to ignite and fuel to burn, it's the hot and dry conditions in the atmosphere that determine the likelihood of a fire starting, its intensity and the speed at which it spreads. Over the past several decades, as the world has increasingly warmed, so has its potential to burn.



https://www.nasa.gov/feature/goddard/2019/satellite-data-record-shows-climate-changes-impact-on-fires

This visualization shows carbon emissions from fires from Jan. 1, 2003, through Dec. 31, 2018. The color bar reflects the quantity of carbon emitted.
Credits: NASA

IN DEPTH | ATMOSPHERIC SCIENCE

Forecasters fear threat of 5G wireless rollout

Gabriel Popkin

+ See all authors and affiliations

Science 09 Aug 2019:
Vol. 365, Issue 6453, pp. 528-529
DOI: 10.1126/science.365.6453.528

You are currently viewing the summary.

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Summary

A remarkable interagency battle is playing out within the U.S. government over whether plans for the next generation of wireless technology, known as 5G, will threaten accurate weather forecasts—and, if so, how to mitigate the threat. Months of technical studies and debate have only deepened the impasse. NASA and the National Oceanic and Atmospheric Administration say 5G antennas will blast signals near the frequencies their satellites use to gather critical water vapor data, and could compromise forecasts and science. The agencies are calling for tight limits on stray noise. The Federal Communications Commission, which licenses the wireless spectrum for 5G operators in the United States, says those fears are overblown.

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Science

Vol 365, Issue 6453
09 August 2019

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FACULDADE DE CIÊNCIAS
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Sumário

- Características das Normas
- Classificação das normas
- A ISO
- Procedimento de Normalização
- ISO/TC211
- Esquema Espacial
- INSPIRE

As Normas (standard)

O que é uma norma?

"regra de procedimento; principio; modelo; lei."

As boas normas são simples e únicas

Por exemplo as letras romanas são usadas há mais de 2000 anos e são capazes de se adotar à maioria das línguas do mundo.

Por contraste os números romanos não tiveram tanto sucesso como norma e acabaram por desaparecer.

Características das Normas

Todos os dias contactamos com normas e quase não nos apercebemos do quanto estas contribuem para a simplificação ou facilitação de tarefas.

São exemplos:

Folha de papel A4, A3, etc

Formatos de ficheiros
*.DOC (MicrosofWord),
*.TIF, (Tagged Interchange Format, Adobe)
*.DXF (AutoCad), *.shp (Shape ESRI)

Perspectiva Linguística

(Em inglês o termo correspondente a **norma** é "**standard**", em Francês "**la norme**" e alemão "**die Norm**").

Uma organização internacional como a ISO (International Organization for Standardization) publica normas formais que têm algum nível de relevância no domínio das aplicações.

Estas normas são referidas por "**de-jure**" ("*pela lei*")

As empresas desenvolvem normas com o objectivo de melhor operar com os seus produtos. Se o "standard" for bem aceite pela comunidade torna-se uma norma "**de-facto**" ("*na prática*")

Perspectiva Económica

O motivo para a industria investir na normalização é o retorno financeiro. Um estudo realizado em 2000 provou que os ganhos de normalização na industria alemã era de 15 mil milhões de euros anuais.

As razões para este ganhos são:

1. Normalização evita a opção de interfaces para um variado número de aplicações

2. Participação no processo de normalização coloca as empresas em vantagem relativamente às outras que não participam

3. As normas permitem as empresas terem vários fornecedores

4. As normas suportam o processo legislativo. Cerca de 20% das normas alemãs (DIN) são referenciadas por leis. Neste sentido as normas simplificam o processo legislativo

Perspectiva Nacional

Os princípios de normalização são:

Faz uma vez, faz certo, faz internacionalmente

No domínio das TI qualquer abordagem de âmbito nacional só poderá ser vista como referência de uma solução internacional.

De qualquer modo, as normas internacionais têm de ser adaptadas a cada país (linguística) e devem obter o contributo dos vários Estados.

Em Portugal a instituição participante é o
IPQ (Instituto Português de Qualidade)

O Instituto Portugues de Qualidade

"No quadro do Sistema Português da Qualidade (SPQ) - Decreto-Lei nº 142/2007, de 27 de Abril - o IPQ, como Organismo Nacional de Normalização (ONN), coordena a actividade normativa nacional, a qual está definida nas "Regras e Procedimentos para a Normalização Portuguesa, aprovadas por Despacho IPQ nº 26/2010 de 28 de Setembro."

"No que concerne à participação ao nível internacional, o IPQ assegura a representação de Portugal em inúmeras estruturas europeias e internacionais relevantes para a sua missão, designadamente,

European Committee for Standardization (CEN),

European Committee for Electrotechnical Standardization (CENELEC),

International Electrotechnical Commission (IEC),

Conference General des Poids et Mésures (CGPM),

International Organization for Legal Metrology (OIML), e

International Organization for Standardization (ISO)."

NORMALIZAÇÃO

As normas dão um enorme contributo em muitos aspetos das nossas vidas, embora muitas vezes, seja um contributo impercetível para o cidadão.
A vida seria muito difícil sem normas. O que aconteceria se, por exemplo, não existissem normas sobre produtos de construção, material elétrico ou sobre segurança de equipamentos? A título de exemplo sem dimensões normalizadas de contentores de carga, o comércio internacional seria mais lento e caro.


Norma Portuguesa
NP 4524
2013
Turismo de Ar Livre
Atividades de Turismo de Natureza
Instituto Português da Qualidade

Habitualmente desconhecemos o papel desempenhado pelas normas no aumento dos níveis de qualidade, segurança, eficiência, interoperabilidade, bem como no fornecimento de todos estes benefícios, com um custo mais económico.

Qualquer norma é considerada uma referência idónea do mercado a que se destina, sendo por isso usada em processos de legislação, de acreditação, de certificação, de metrologia, de informação técnica e de relações comerciais Cliente - Fornecedor.

As normas são documentos de aplicação voluntária, salvo se existe um diploma legal que as torne de cumprimento obrigatório.

Organizações Internacionais de Normalização

As várias organizações internacionais de normalização podem ser divididas em dois grupos:

Organizações Internacionais

A sua decisão é baseada no consenso

O seu funcionamento é baseado no financiamento de cada estado membro em função do seu potencial económico permitindo funcionar de forma independente dos estados ou empresas.

Exemplos:
ISO – International Organisation for Standardization
IEC - International Electrotecnical Organization
ITU – International Telecomunication Union

Organizações Internacionais de Normalização

Consórcios Internacionais

São liderados pela industria com participação de agências governamentais.

O objectivo principal é defender os interesses dos seus membros.

Um dos interesses será desenvolver normas comuns de modo a potenciar outros desenvolvimentos (as normas "de-facto")

Exemplos:
OGC – Open Geospatial Consortium
(o maior e mais importante consorcio da comunidade da IG)
W3C – World Wide Web Consortium

OGC®
Making location count.

About Standards Innovation News & Events Membership Resources

Welcome to The Open Geospatial Consortium

The Open Geospatial Consortium (OGC) is an international consortium of more than 530 businesses, government agencies, research organizations, and universities driven to make geospatial (location) information and services FAIR - Findable, Accessible, Interoperable, and Reusable.

OGC's member-driven consensus process creates royalty free, publicly available, open geospatial standards. Existing at the cutting edge, OGC actively analyzes and anticipates emerging tech trends, and runs an agile, collaborative Research and Development (R&D) lab - the OGC

Upcoming Events

- 8th FIG Land Administration Domain Model Workshop
  01 Oct - 03 Oct
- 2019 Fall State of The AR Cloud Symposium and Showcase
  16 Oct - 16 Oct
- Bentley The Year in Infrastructure 2019 Conference

A ISO (International Organization for Standardization)

A ISA (International Federation of the National Standardizing Associations) foi fundada em 1926 e estava focada na engenharia mecânica. A sua actividade terminou em 1942.

Em 1947 sucedeu-lhe a ISO (International Organization for Standardization) como organização não governamental. A sua sede é em Genebra, Suíça.

O trabalho na ISO é baseado em três princípios:

Consensus

As diferentes visões dos diferentes parceiros são tomados em consideração. A aprovação de uma norma é feita com 75% dos votantes

Industry-wide

As normas deverão sempre conduzir a soluções globais que satisfaçam as necessidades da industria e dos consumidores

Voluteering

É baseado no envolvimento voluntário de todos as partes interessadas

A ISO (International Organization for Standardization)

O trabalho na ISO é descentralizado

O trabalho de normalização é realizado pelas

Comissões Técnicas (TC) e **Sub-Comissões (SC)**

Cada TC e SC tem o seu próprio secretariado numa instituição competente num qualquer lugar do mundo. Neste momento a ISO tem 186 TC e 50 SC.

No caso da TC-211 (IG/Geomatics) o secretariado é na Suécia,

O número de membros de um TC pode variar entre os 10 e 1000. No caso da TC211 são cerca de 60 que se encontram 2 vezes por ano.

Normas da IG-Geomática – TC211

As primeiras normas na área da IG surgiram na década de 1990.

(Embora já existissem na Europa há muitos anos normas para a execução de trabalhos nas áreas da Geodesia, Cadastro e Cartografia)

1991: O primeiro projecto para normalizar a informação geográfica, liderado pela AFNOR, a agência francesa, a Organização Europeia de Normalização CEN (Comité Européen de Normalisation) criou o Comité Técnico 287 (Geographic Information). O trabalho dessa comissão resultou em 8 pré-normas europeias.

1994: ISO/TC211 é criada e a congénere europeia foi extinta.

A Comunidade Europeia implementou recentemente (2007) uma iniciativa chamada INSPIRE que pretende desenvolver uma SDI a nível europeu. Este projecto suporta as normas ISO.

ISO/TC211

A principal força impulsionadora da ISO/TC211 foi a Defence Geospatial Information Working Group (DGIWG) dos EUA e os esforços de normalização nos EUA e Canadá.

As outras duas organizações que contribuíram para o aparecimento da ISO/TC211 foram a IHO (International Hydrographic Organization) e a CEN/TC278 (Geographic Data Files, GDF)

Âmbito:	A Informação Geográfica / Geomática

As normas deverão especificar uma infra-estrutura e os necessários serviços para o manuseamento de dados geográficos incluindo a sua **gestão, aquisição, processamento, análise, acesso, representação e transferência**.

Quando possível a norma deverá estabelecer a ligação com outras normas das Tecnologias da Informação.

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https://committee.iso.org/home/tc211

ISO/TC 211

Geographic information/Geomatics

Powered by ISO

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Scope

Standardization in the field of digital geographic information.
This work aims to establish a structured set of standards for information concerning objects or phenomena that are directly or indirectly associated with a location relative to the Earth.

These standards may specify, for geographic information, methods, tools and services for data management (including definition and description), acquiring, processing, analyzing, accessing, presenting and transferring such data in digital/electronic form between different users, systems and locations.

The work shall link to appropriate standards for information technology and data where possible, and provide a framework for the development of sector-specific applications using geographic data.

Do not miss the newsletter

We know not all have time to look at the web page but did you know you can keep yourself updated with ISO/TC 211 news via the Newsletter.

ISO/TC211

Group photo taken at the University of Maribor Faculty of Electrical Engineering and Computer Science in Maribor, June 2019.

If you are not receiving the Newsletter already let Mats Ahlin know and you will be on the list for the next one.

75

published ISO standards*

under the direct responsibility of ISO/TC 211

25

ISO standards under development*

under the direct responsibility of ISO/TC 211

* number includes updates

ISO/TC 211 Business Plan

Click here to access the business plan

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Our page on iso.org

Who develops ISO standards?

Why get involved in standards development?

TC

STANDARDS BY ISO/TC 211

Geographic information/Geomatics

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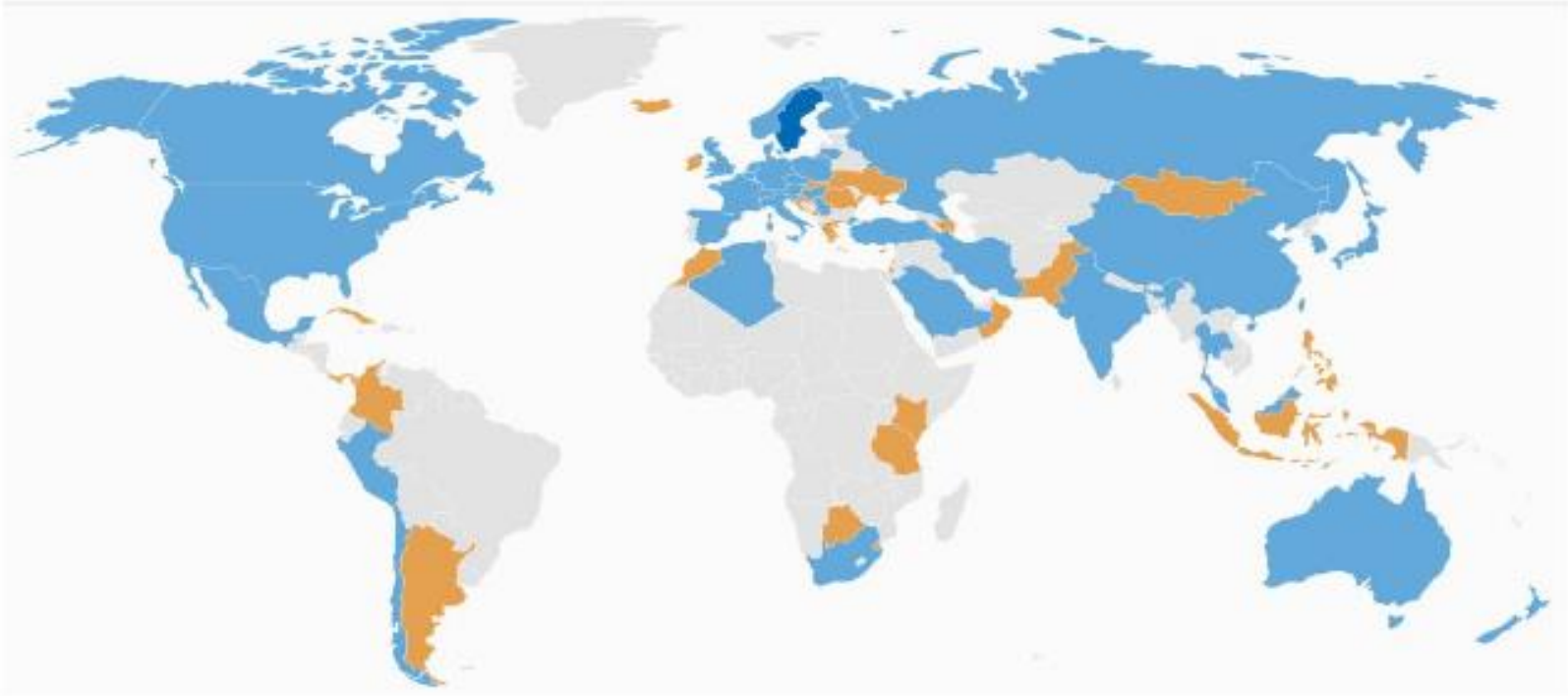
STANDARD AND/OR PROJECT UNDER THE DIRECT RESPONSIBILITY OF ISO/TC 211 SECRETARIAT (75)	STAGE	ICS
ISO 6709:2008 Standard representation of geographic point location by coordinates	90.92	35.240.70
ISO 6709:2008/COR 1:2009 Standard representation of geographic point location by coordinates — Technical Corrigendum 1	60.60	35.240.70
ISO 19101-1:2014 Geographic information — Reference model — Part 1: Fundamentals	60.60	35.240.70
ISO 19101-2:2018 Geographic information — Reference model — Part 2: Imagery	60.60	35.240.70
ISO 19103:2015 Geographic information — Conceptual schema language	60.60	35.240.70
ISO 19104:2016 Geographic information — Terminology	60.60	01.040.35 35.240.70
ISO 19105:2000 Geographic information — Conformance and testing	90.92	35.240.70
ISO 19106:2004 Geographic information — Profiles	90.93	35.240.70
ISO 19107:2003 Geographic information — Spatial schema	90.92	35.240.70
ISO 19108:2002 Geographic information — Temporal schema	90.93	35.240.70
ISO 19108:2002/COR 1:2006 Geographic information — Temporal schema — Technical Corrigendum 1	60.60	35.240.70

ISO/TC211 - Membros



Secretariat

Sweden - Swedish Standards Institute (SIS)

ISO/TC211 - Estrutura

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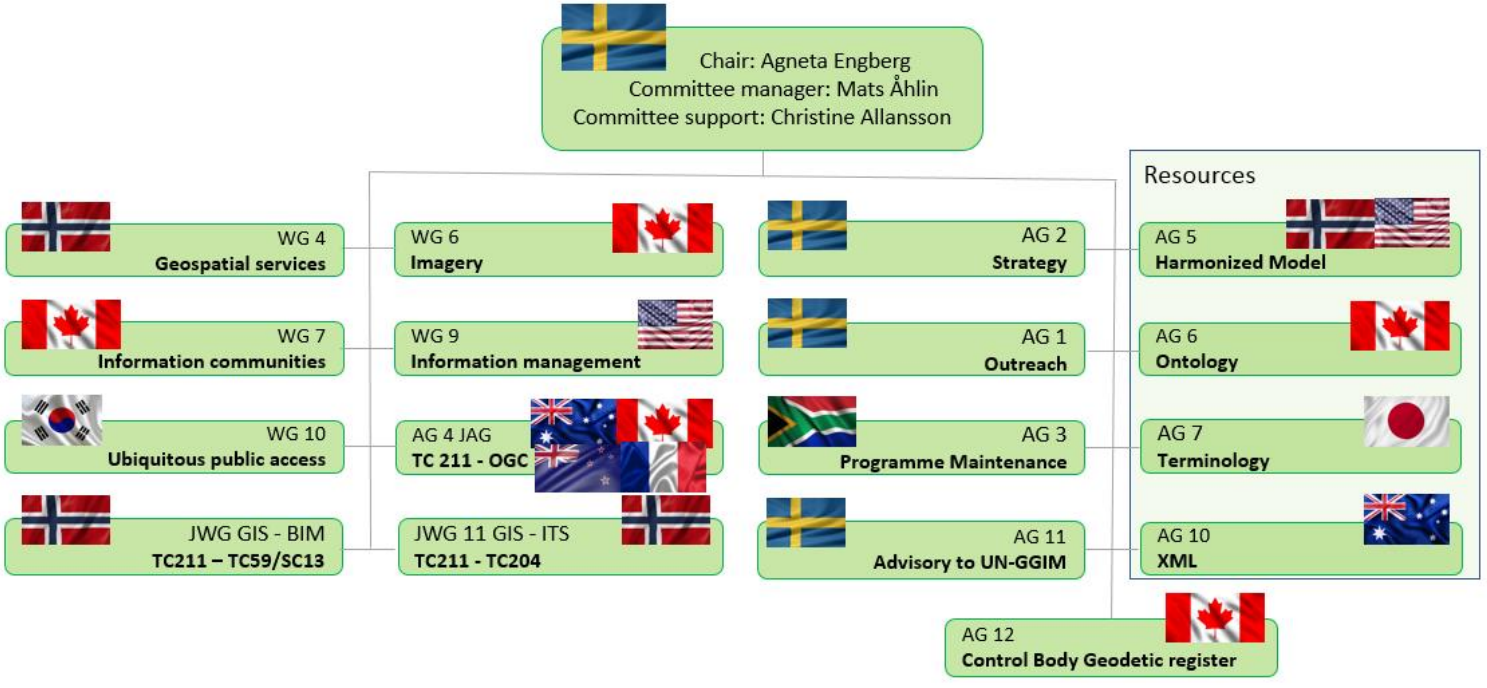
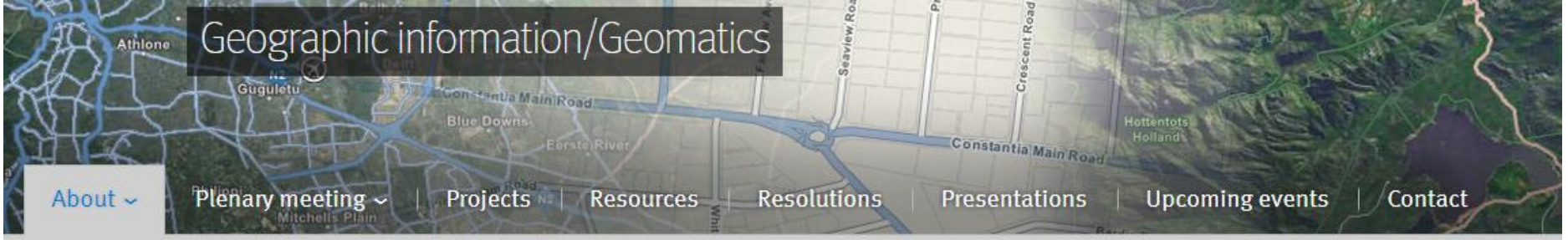
What is the organisational structure of ISO/TC 211?

The work within ISO/TC211 is done in working groups (WG), joint working group (JWG) and joint task force (JTF), each with a specific focus. The WGs is then supported by various advisory groups (AG). The structure and leadership within ISO/TC 211 is depicted in the Figure below:





Active working groups

	Number on livelink
Working group 1 Framework and reference model Convenor: Mr. Andrew Jones, Australi (2013-11 - Reappointed 2016-12)	ISO/TC 211/WG 01
Working group 4 Geospatial services Convenor: Mr. Morten Borrebæk, Norway (1995-08 - Reappointed 2017-06)	ISO/TC 211/WG 04
Working group 6 Imagery Convenor: Mr. Doug O'Brien, Canada (2002-05 - Reappointed 2017-06)	ISO/TC 211/WG 06
Working group 7 Information communities Convenor: tdb	ISO/TC 211/WG 07
Working group 9 Information management Convenor: Mr. John Herring, USA (2011-05 - Reappointed 2017-06)	ISO/TC 211/WG 09
Working group 10 Ubiquitous public access Convenor: Professor Sang-Ki Hong, Korea (2008-01 - Reappointed 2017-06)	ISO/TC 211/WG 10

Next ISO/TC 211 meeting

Nov 27th - Dec 1st 2017 in Wellington, New Zealand

Register here

Practical information

Draft Agenda

May 28th - June 1st 2018 in Copenhagen, Denmark

Registration not open yet

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ISO/TC 211 Publications (1)

Working Group 1 - Framework and reference model

Published standards/specifications

ISO 19101-1:2014 Geographic information - Reference model - Part 1: Fundamentals

ISO/TS 19103:2005 Geographic information - Conceptual schema language - Under revision in WG 4

ISO/TS 19104:2008 Geographic information - Terminology - Under revision

ISO 19105:2000 Geographic information - Conformance and testing

ISO/TR 19121:2000 Geographic information - Imagery and gridded data

WI 19124 Geographic information - Imagery and gridded data components - Completed with review summary, N 1017

ISO/TS 19129:2009 Geographic information - Imagery, gridded and coverage data framework - Moved to new WG 6

WI 19130 Geographic information - Sensor and data models for imagery and gridded data - Moved to new WG 6

ISO/TC 211 Publications (2)

Working Group 4 - Geospatial services

ISO 19116:2004 Geographic information - Positioning services
ISO 19117:2012 Geographic information - Portrayal
ISO 19118:2011 Geographic information - Encoding
ISO 19119:2005 Geographic information - Services *(under revision)*
ISO 19119:2005 Amd 1:2008 Geographic information - Services - Amendment 1
ISO 19125-1:2004 Geographic information - Simple feature access - Part 1: Common architecture *(under revision)*
ISO 19125-2:2004 Geographic information - Simple feature access - Part 2: SQL options *(under revision)*
ISO 19128:2005 Geographic information - Web Map server interface
ISO 19136:2007 Geographic information - Geography Markup Language (GML)
ISO 19136-2:2016 Geographic information - Geography Markup Language (GML) - Part 2: Extended schemas and encoding rules
ISO 19142:2010 Geographic information - Web Feature Service *(under revision)*
ISO 19143:2010 Geographic information - Filter encoding *(under revision)*
ISO 19149:2010 Geographic information - Rights expression language for geographic information - GeoREL

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ISO/TC 211 Publications (3)

Working group 6 - Imagery

Published standards/specifications

ISO/TR 19120:2001 Geographic information - Functional standards
ISO 19101-2:2008 Geographic information - Preference model - Part 2: Imagery
ISO 19115-2:2009 Geographic information - Metadata - Part 2: Extensions for imagery and gridded data *(under revision)*
ISO/TS 19129:2009 Geographic information - Imagery, gridded and coverage data framework
ISO/TS 19130:2010 Geographic information - Imagery sensor models for geopositioning *(under revision)*
ISO/TS 19130-2 Geographic information - Imagery sensor models for geopositioning - Part 2: SAR, InSAR, lidar and sonar
ISO/TS 19139-2:2012 Geographic information - Metadata - XML Schema Implementation - Part 2 : Extensions for imagery and gridded data
ISO/TS 19159-1 Geographic information - Calibration and validation of remote sensing imagery sensors - Part 1: Optical sensor

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ISO/TC 211 Publications (4)

Working group 7 - Information communities

Published standards/specifications

ISO 19110:2005 Geographic information - Methodology for feature cataloguing
ISO 19110:2005 Amd. 1:2011
ISO 19115-1:2014 Geographic information - Metadata – Part 1: Fundamentals
ISO/TR 19122:2004 Geographic information/Geomatics - Qualification and certification of personnel

ISO 19126:2009 Geographic information - Feature concept dictionaries and registers
ISO 19137:2007 Geographic information - Core profile of the spatial schema
ISO/TS 19139:2007 Geographic information - Metadata - Implementation specifications *(under revision)*
ISO 19144-1:2009 Geographic information - Classification Systems – Part 1: Classification system structure
ISO 19144-1:2009 Corrigendum 1:2012
ISO 19144-2:2012 Geographic information - Classification systems - Part 2: Land Cover Meta Language (LCML)
ISO 19150 Geographic information - Ontology - Review summary N 2705
ISO/TS 19150-1 Geographic information - Ontology - Part 1: Framework
ISO 19150-2:2016 Geographic information - Ontology - Part 2: Rules for developing ontologies in the Web Ontology Language (OWL)
ISO 19152:2012 Geographic information - Land Administration Domain Model (LADM)

ISO/TC 211 Publications (5)

Working group 9 - Information management

Published standards/sepcifications

ISO 6709:2008 Standard representation of geographic point location by coordinates

ISO 19111-2:2009 Geographic information - Spatial referencing by coordinates - Part 2: Extension for parametric values

ISO/TS 19127:2005 Geographic information -- Geodetic codes and parameters *(under revision)*

ISO 19131:2007 Geographic information - Data product specifications

ISO 19131:2007/Amd 1:2011

ISO 19135-1 Geographic information - Procedures for item registration - Part 1: Fundamentals *(Revision of ISO 19135:2005)*

ISO 19135-2 Geographic information - Procedures for item registration - Part 2: XML Schema Implementation

ISO 19138:2006 Geographic information - Data quality measures (Withdrawn, replaced by ISO 19157:2013)

ISO 19145:2013 Geographic information - Registry of representations of geographic point location

ISO 19146:2010 Geographic information - Cross-domain vocabularies

ISO 19153:2014 Geospatial Digital Rights Management Reference Model (GeoDRM RM)

ISO 19156:2011 Geographic information - Observations and measurements

ISO 19157:2013 Geographic information - Data quality

ISO/TS 19158:2012 Geographic information - Quality assurance of data supply

ISO/TS 19162:2016 Geographic information - Well-known text representation of coordinate reference systems

Review summary: Geographic information - Amendment to ISO 19113:2002 Geographic information - Quality principles and ISO 19115:2003 Geographic information - Metadata

ISO/TC 211 Publications (6)

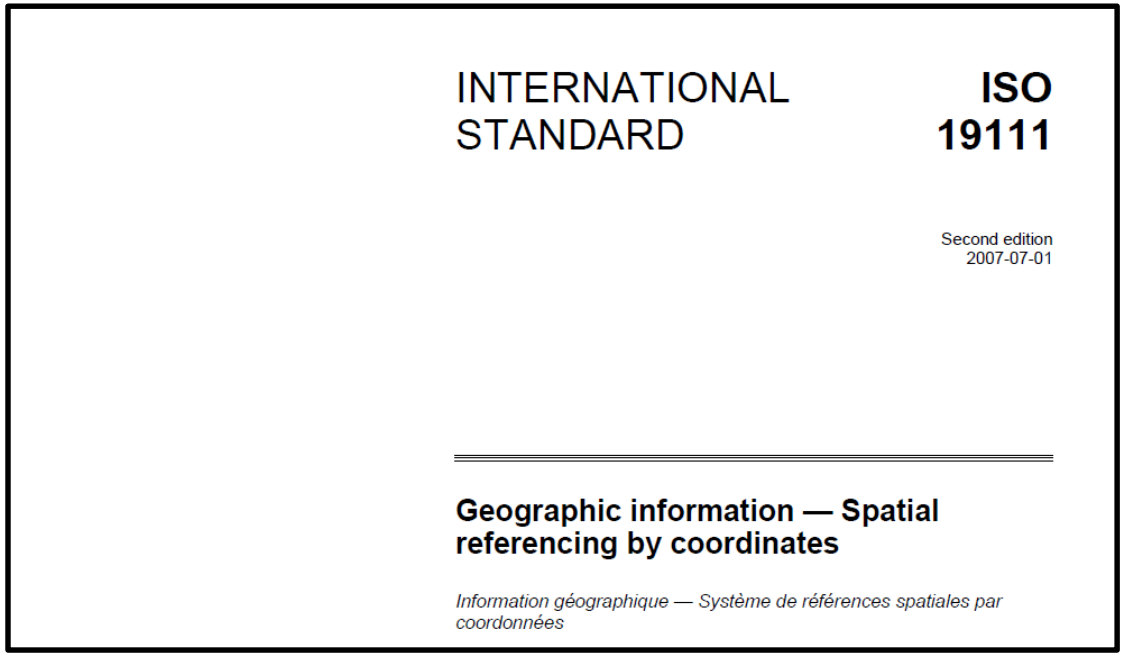
ISO/TS 19130:2010 Geographic information - Imagery sensor models for geopositioning	90.92	35.240.70
ISO/TS 19130-2:2014 Geographic information -- Imagery sensor models for geopositioning -- Part 2: SAR, InSAR, lidar and sonar	90.60	35.240.70
ISO 19131:2007 Geographic information -- Data product specifications	90.92	35.240.70
ISO 19131:2007/Amd 1:2011 Requirements relating to the inclusion of an application schema and feature catalogue and the treatment of coverages in an application schema.	60.60	35.240.70
ISO 19132:2007 Geographic information -- Location-based services -- Reference model	90.93	35.240.70
ISO 19133:2005 Geographic information -- Location-based services -- Tracking and navigation	90.93	35.240.70
ISO 19134:2007 Geographic information -- Location-based services -- Multimodal routing and navigation	90.93	35.240.70
ISO 19135-1:2015 Geographic information -- Procedures for item registration -- Part 1: Fundamentals	60.60	35.240.70
ISO/TS 19135-2:2012 Geographic information - Procedures for item registration -- Part 2: XML schema implementation	90.93	35.240.70
ISO 19136:2007 Geographic information -- Geography Markup Language (GML)	90.92	35.240.70
ISO 19136-2:2015 Geographic information -- Geography Markup Language (GML) -- Part 2: Extended schemas and encoding rules	60.60	35.240.70
ISO 19137:2007 Geographic information -- Core profile of the spatial schema	90.93	35.240.70
ISO/TS 19139:2007 Geographic information -- Metadata -- XML schema implementation	90.92	35.240.70
ISO/TS 19139-2:2012 Geographic information -- Metadata -- XML schema implementation -- Part 2: Extensions for imagery and gridded data	90.93	35.240.70

Formato de uma Norma ISO

Todos as normas têm o mesmo aspecto.

As normas ISO são documentos com uma estrutura rígida com páginas informativas e normativas

Têm uma página de rosto



INTERNATIONAL STANDARD

ISO 19111

Second edition
2007-07-01

Geographic information — Spatial referencing by coordinates

Information géographique — Système de références spatiales par coordonnées

Formato de uma Norma ISO

Escopo

INTERNATIONAL STANDARD **ISO 19111:2007(E)**

Geographic information — Spatial referencing by coordinates

1 Scope

This International Standard defines the conceptual schema for the description of spatial referencing by coordinates, optionally extended to spatio-temporal referencing. It describes the minimum data required to define one-, two- and three-dimensional spatial coordinate reference systems with an extension to merged spatial-temporal reference systems. It allows additional descriptive information to be provided. It also describes the information required to change coordinates from one coordinate reference system to another.

In this International Standard, a coordinate reference system does not change with time. For coordinate reference systems defined on moving platforms such as cars, ships, aircraft and spacecraft, the transformation to an Earth-fixed coordinate reference system can include a time element.

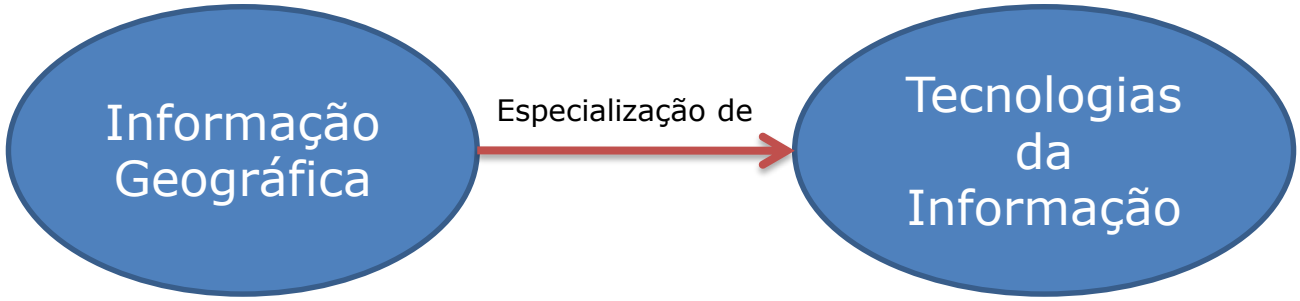
This International Standard is applicable to producers and users of geographic information. Although it is applicable to digital geographic data, its principles can be extended to many other forms of geographic data such as maps, charts and text documents.

Define sem ambiguidade o assunto do documento e os aspectos abordados indicando os limites de aplicabilidade.

O âmbito deverá ser sucinto de modo a ser usado como sumário para efeitos bibliográficos

Modelo de Referência (19101)

É assumido na família de normas ISO19100 que :



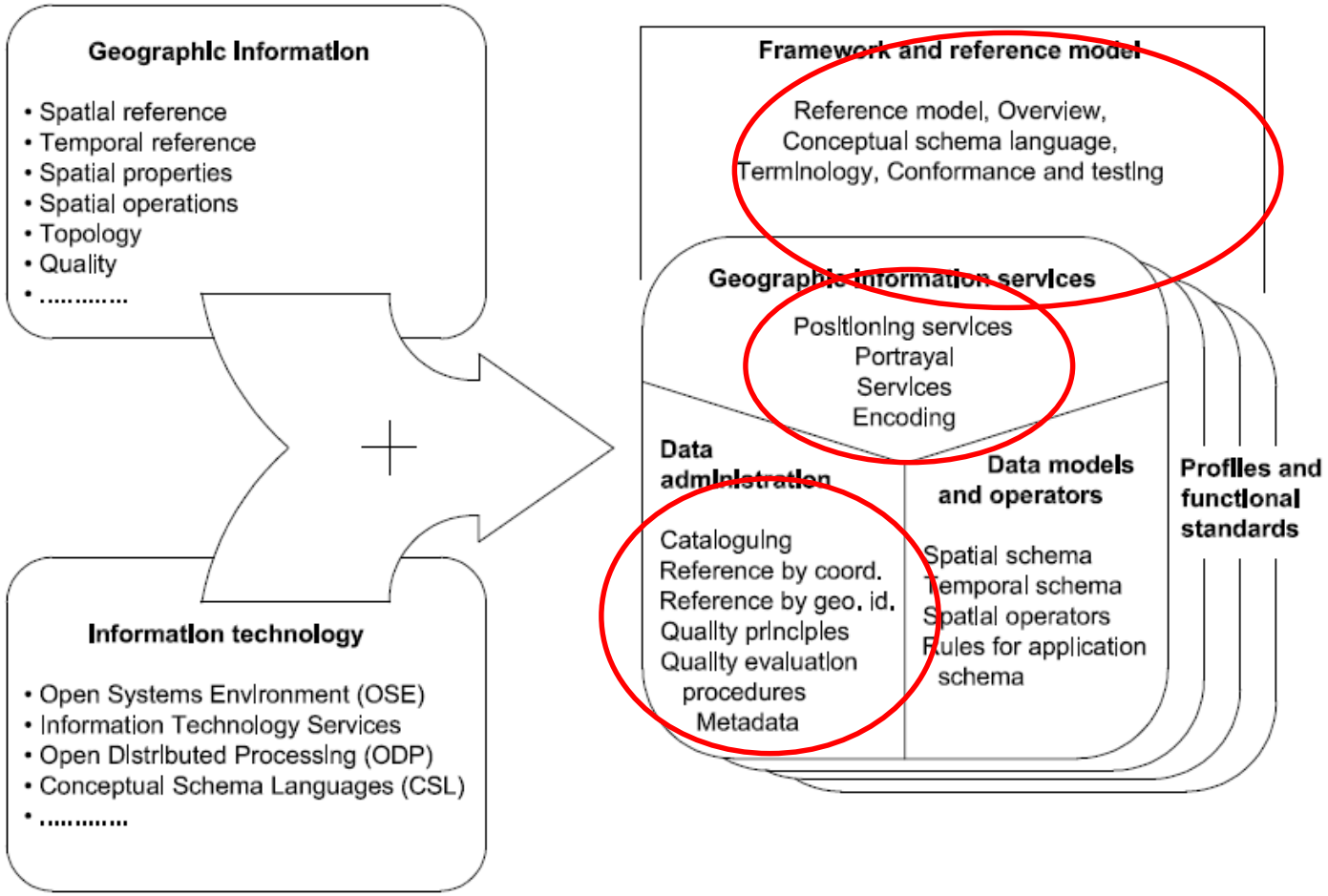
Por essa razão, a normalização da informação geográfica na série ISO19100 é baseada na integração de conceitos de IG com conceitos de TI

A ISO19101 (Reference Model) define um modelo de referência hierárquico estruturado para a família ISO19100.

O modelo de referência é uma aplicação especial do "ponto de vista da informação" (semântica da informação e processamento da informação) que é identificado como o mais importante para a normalização da Geomática. Uma componente do modelo de referencia é baseado na abordagem computacional que se reporta aos serviços.

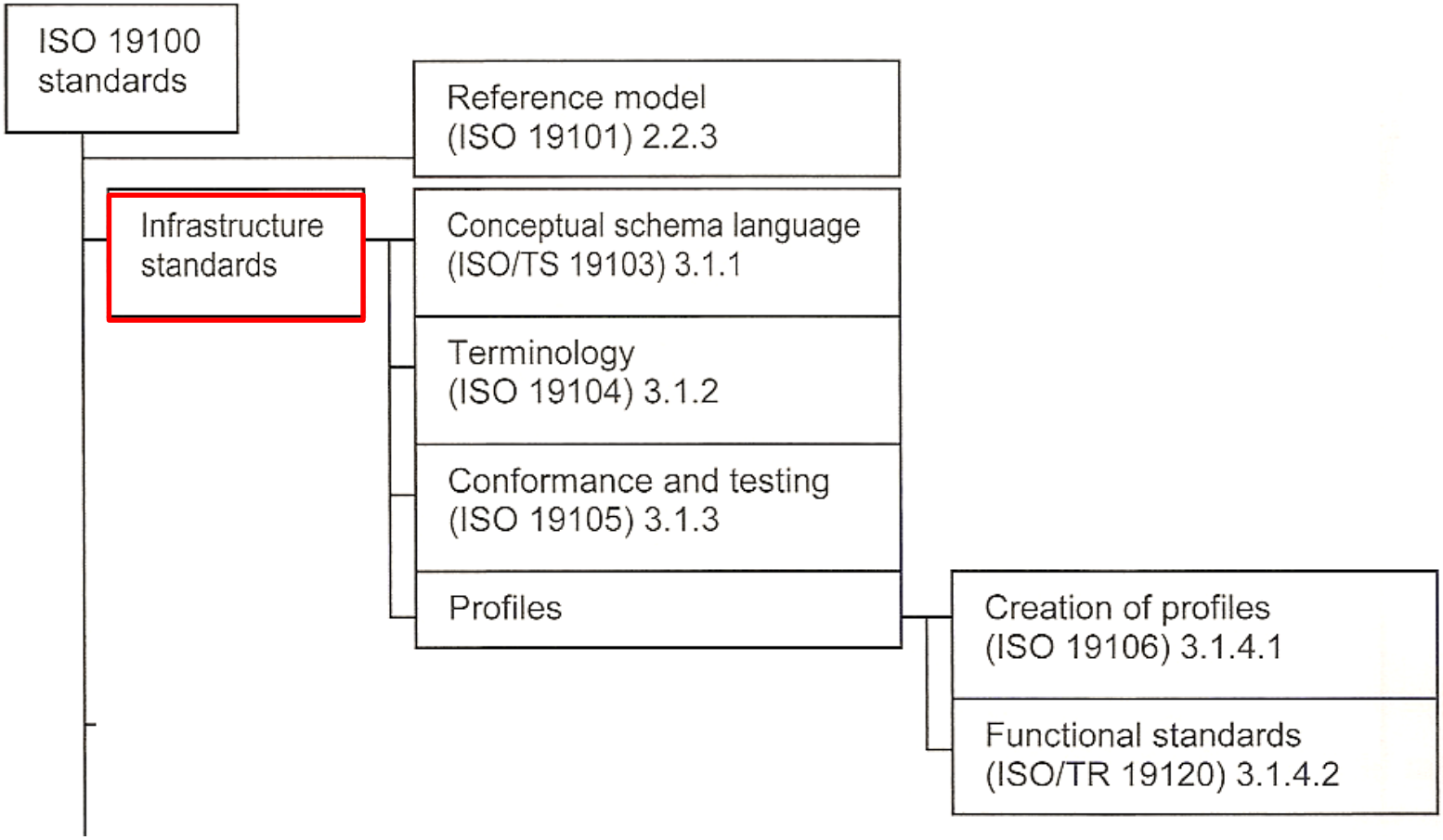
Modelo de Referência (19101)

+3



Road-Map das ISO 19100

+2



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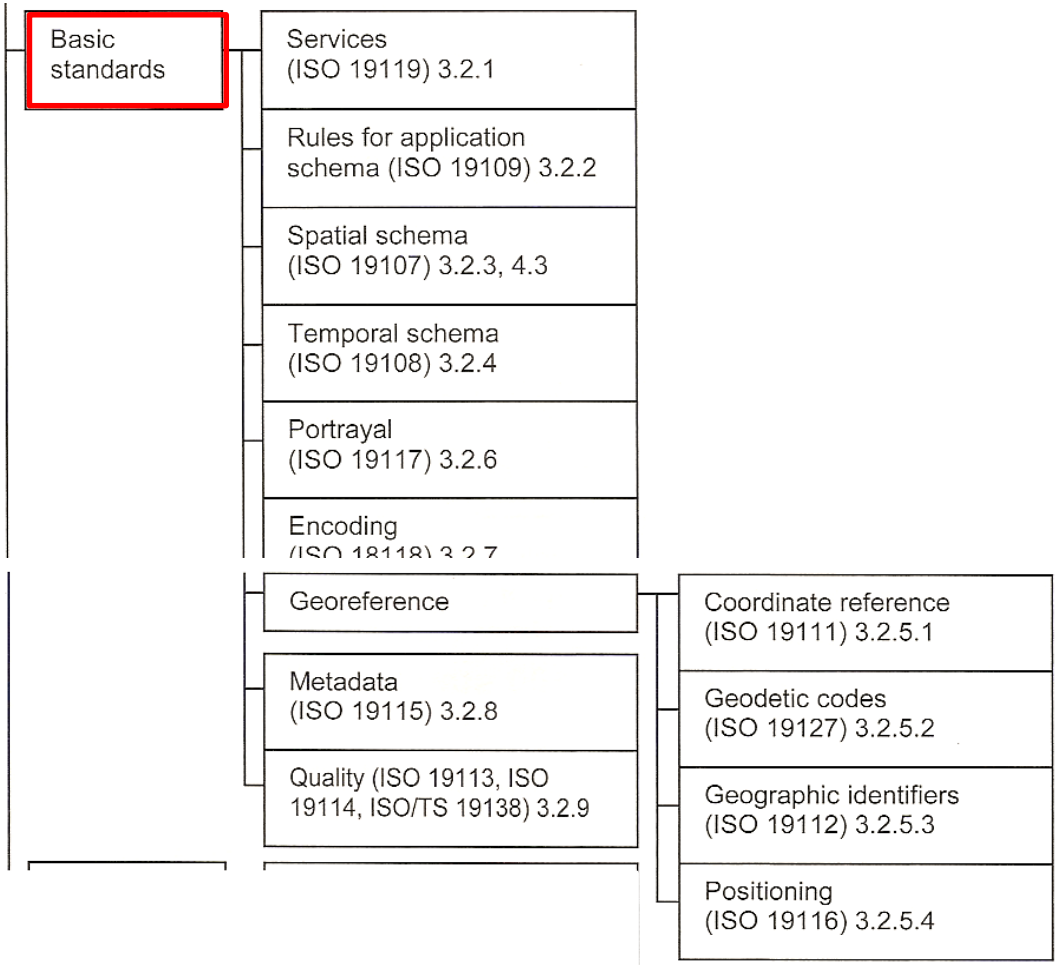
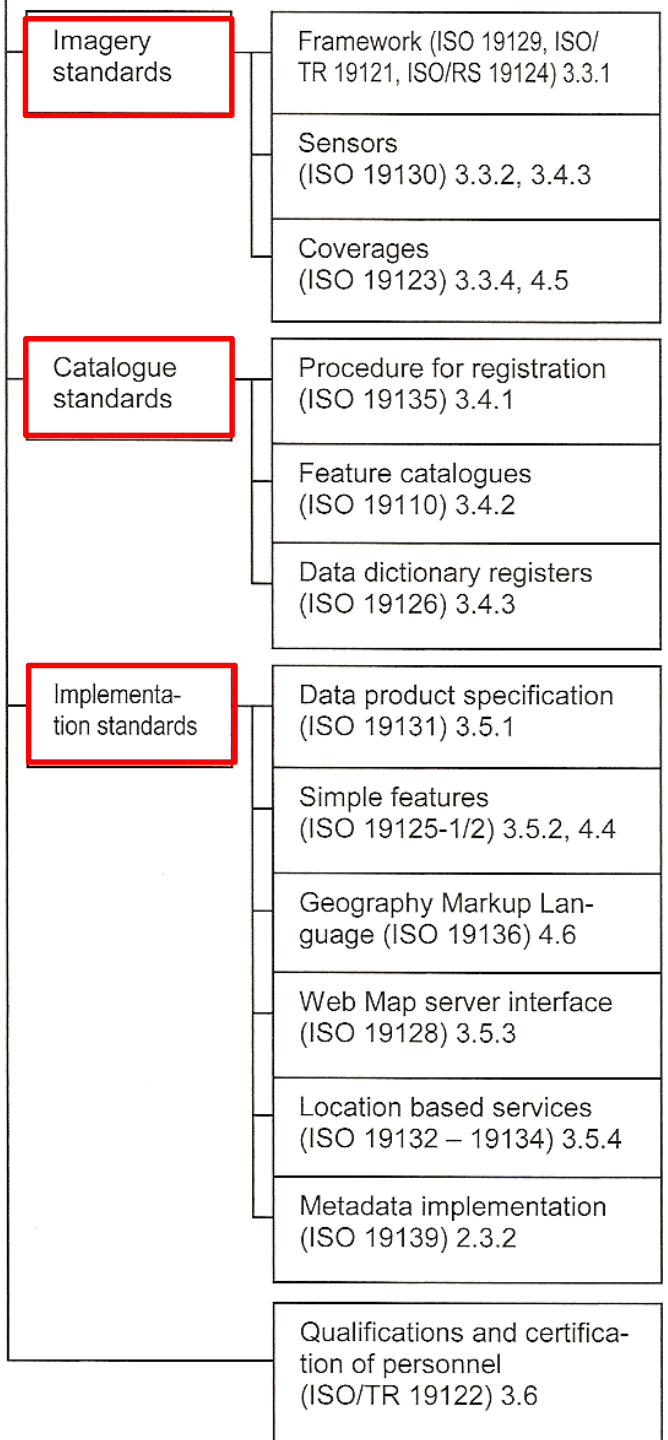
Road-Map das ISO 19100





Linguagem do esquema conceptual

A ISO19103 define um perfil UML (Unified Modelling language) para a Informação Geográfica.

A UML é uma norma ISO/IEC 19501-1

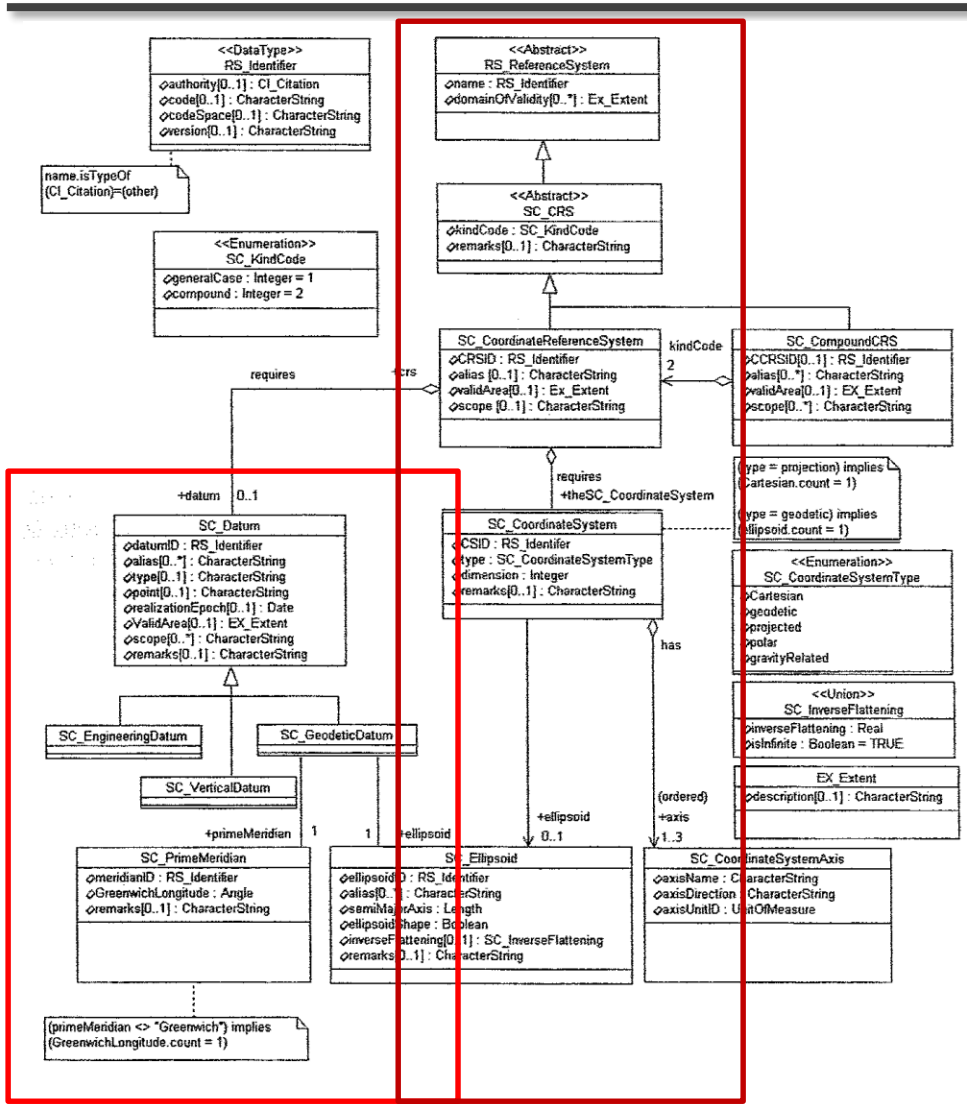
EXPRESS é uma linguagem conceptual usada no campo da engenharia mecânica e foi normalizada pela ISO/TC184

Os esquemas conceptuais em UML são baseados em elementos gráficos e léxicos enquanto que os esquemas em EXPRESS contêm apenas texto.

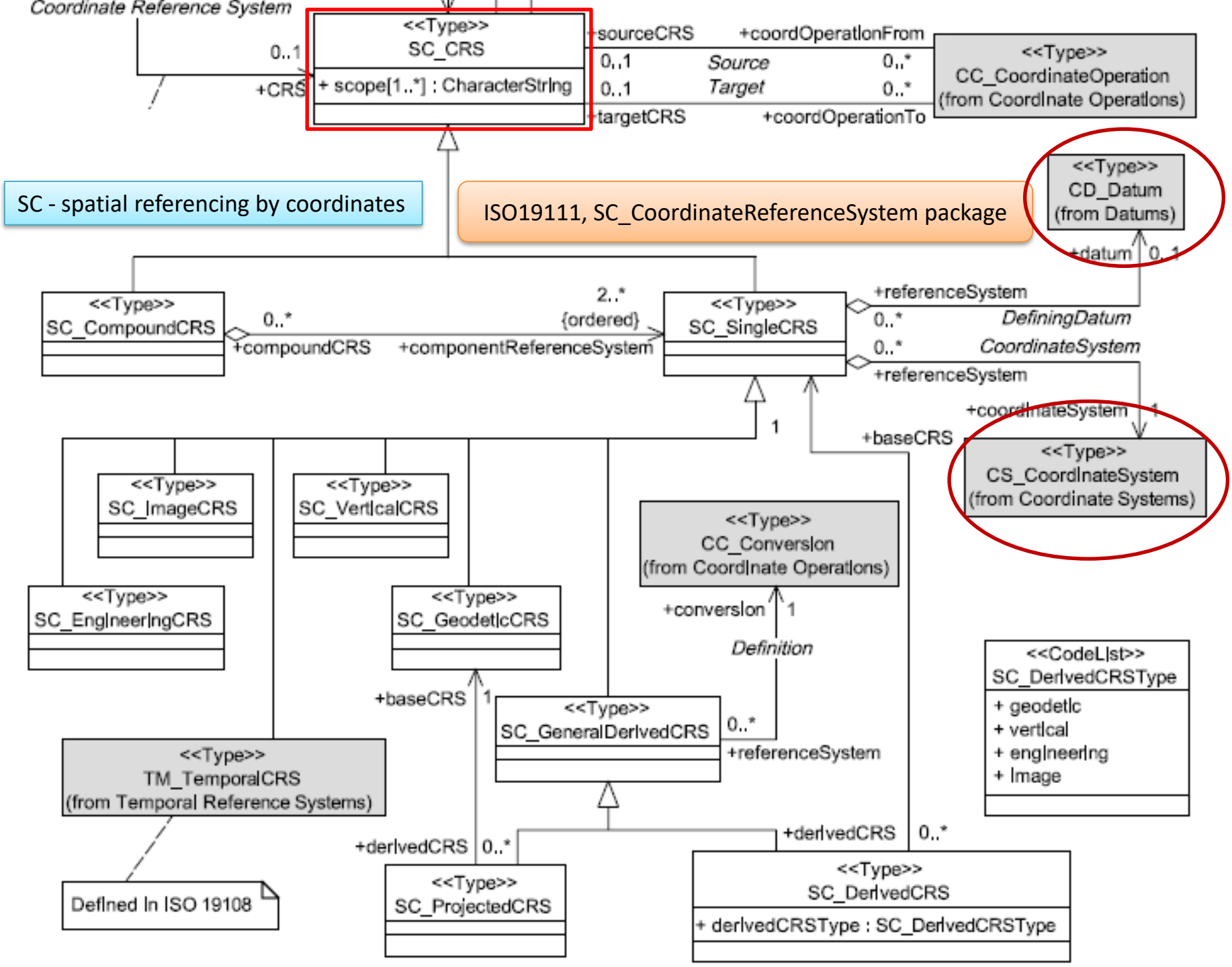
De acordo com as normas ISO 19100 ambas as linguagens são válidas para modelação de IG. Contudo UML é preferível.

Exemplo de Esquema UML
19111 - Spatial Referencing by Coordinates

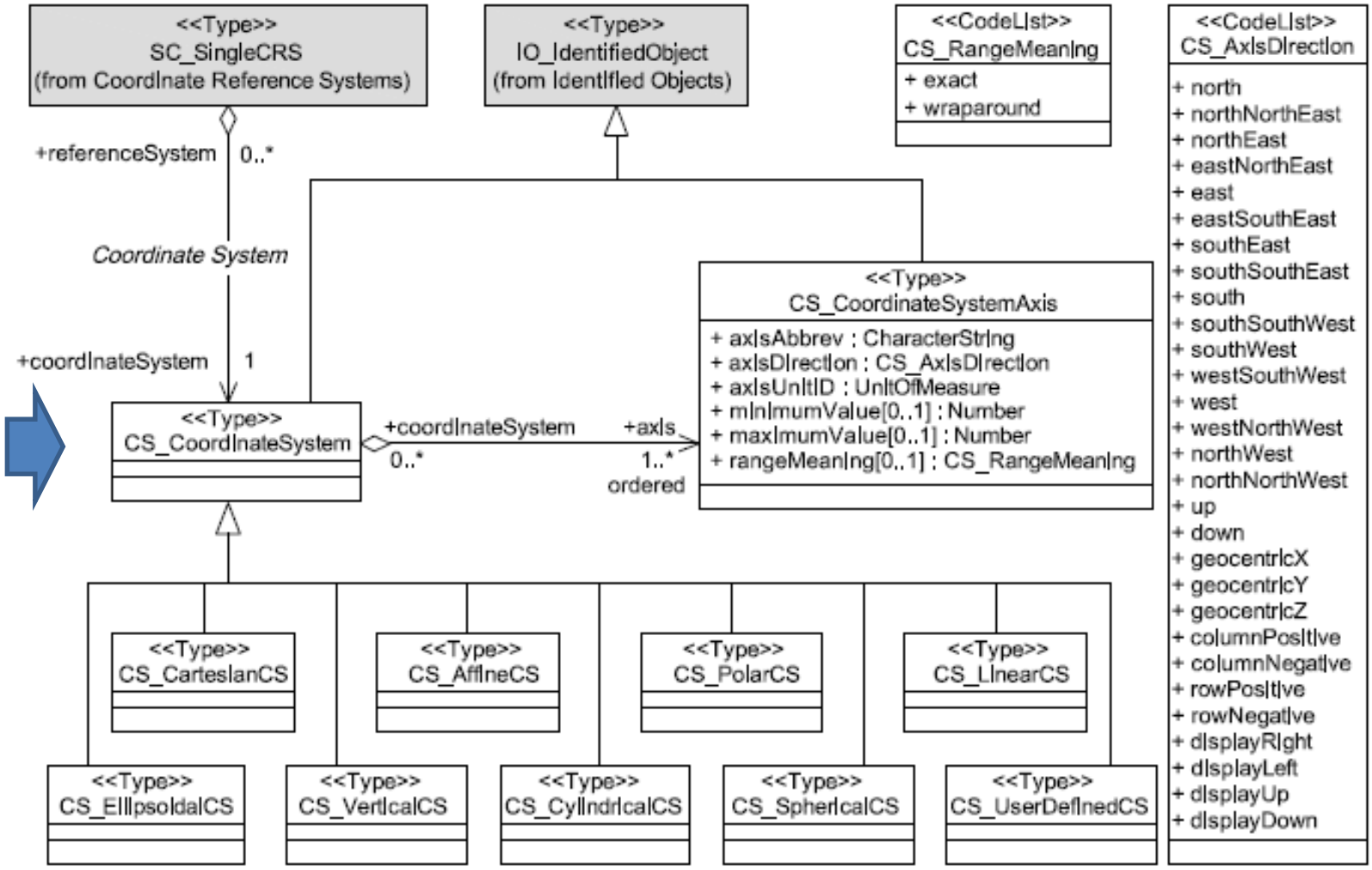
+2



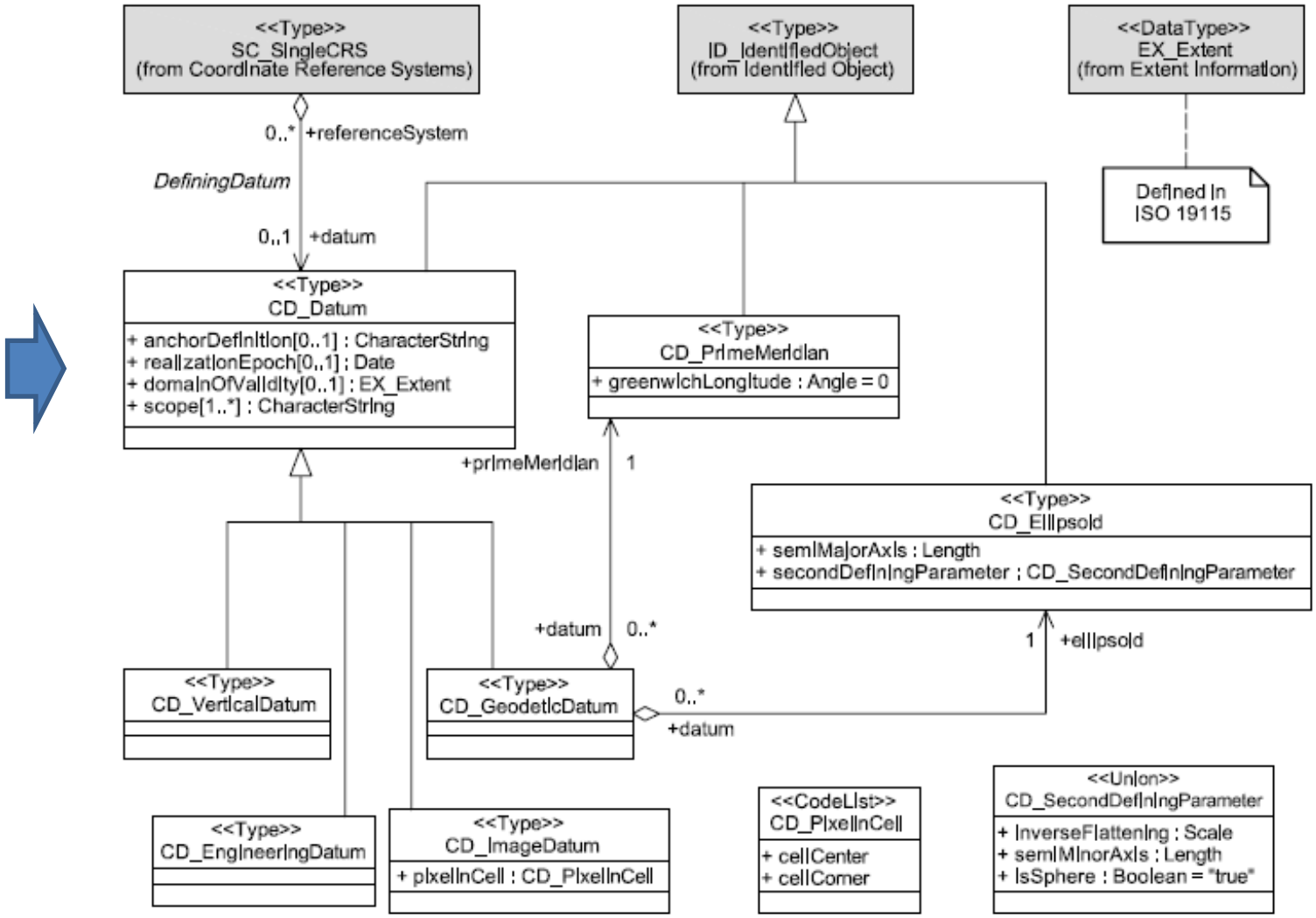
Basicamente, consiste em duas árvores de generalização uma com a classe mãe RS_ReferenceSystem e outra com a classe SC_Datum.
O Diagrama de classes é normativo

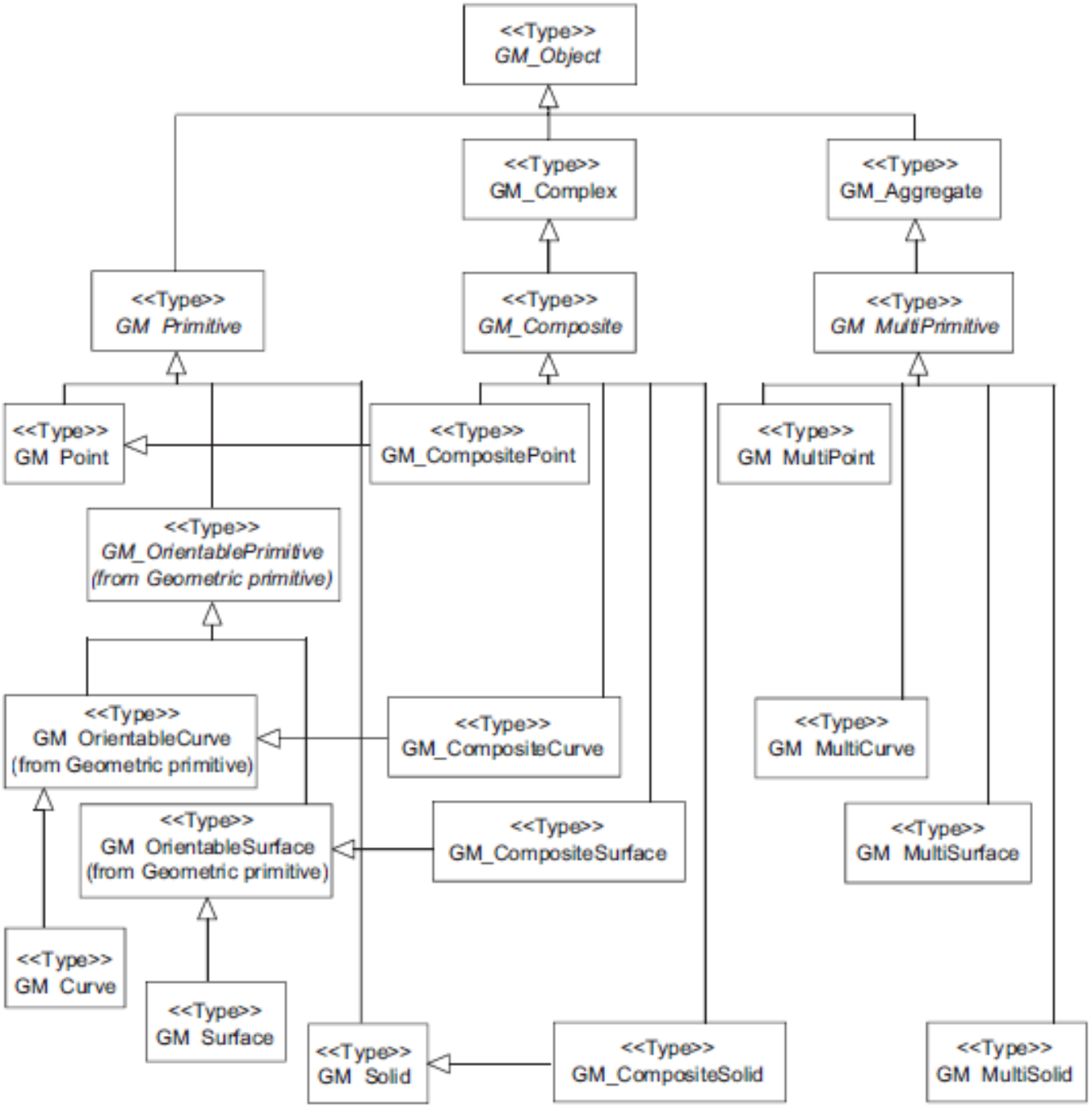

Coordinate Reference System
<<Type>>
SC_CRS
+ scope[1..*] : CharacterString
0..1
+CRS
+sourceCRS
+coordOperationFrom
0..1
Source
0..*
0..1
Target
0..*
+targetCRS
+coordOperationTo
<<Type>>
CC_CoordinateOperation
(from CoordInate OperatIons)
SC - spatial referencing by coordinates
ISO19111, SC_CoordinateReferenceSystem package
<<Type>>
CD_Datum
(from Datums)
+datum
0..1
<<Type>>
SC_CompoundCRS
0..*
+compoundCRS
2..*
{ordered}
+componentReferenceSystem
<<Type>>
SC_SingleCRS
+referenceSystem
0..*
DefiningDatum
0..*
CoordinateSystem
+referenceSystem
+coordInateSystem
1
+baseCRS
1
<<Type>>
CS_CoordInateSystem
(from Coordinate Systems)
<<Type>>
SC_ImageCRS
<<Type>>
SC_VertIcalCRS
<<Type>>
CC_ConversIon
(from CoordInate OperatIons)
<<Type>>
SC_EngIneerIngCRS
<<Type>>
SC_GeodetIcCRS
+conversIon
1
Definition
<<CodeLIst>>
SC_DerIvedCRSType
+ geodetIc
+ vertIcal
+ engIneerIng
+ Image
+baseCRS
1
<<Type>>
SC_GeneralDerIvedCRS
0..*
+referenceSystem
<<Type>>
TM_TemporalCRS
(from Temporal Reference Systems)
+derIvedCRS
0..*
+derIvedCRS
0..*
Defined In ISO 19108
<<Type>>
SC_ProjectedCRS
<<Type>>
SC_DerIvedCRS
+ derIvedCRSType : SC_DerIvedCRSType

CS_CoordinateSystem package



CD_Datum package





ISO19107

Classes Geométricas básicas com relações de especialização

Example D.2: Vertical coordinate reference system.

UML identifier	Attribute	Entry	Comment
SC_VerticalCRS			
name:	Vertical CRS name	ODN	
domainOfValidity:	CRS validity	British mainland	This attribute has been made mandatory in this revision of the International Standard. This example shows a character string entry: refer to ISO 19115.
scope:	CRS scope	National height system	This attribute has been made mandatory in this revision of the International Standard.
CS_VerticalCS			
name:	Vertical coordinate system name	ODN heights	
CS_CoordinateSystemAxis			
name:	Coordinate system axis name	height	
axisAbbrev:	Coordinate system axis abbreviation	H	
axisDirection:	Coordinate system axis direction	up	
axisUnitID:	Coordinate system axis unit identifier	metre	
CD_VerticalDatum			
name:	Vertical datum name	Ordnance Datum Newlyn	
alias:	Datum alias	ODN	This is an optional attribute.
anchorDefinition:	Datum anchor	Mean Sea Level at Newlyn between 1915 and 1921	This is an optional attribute.

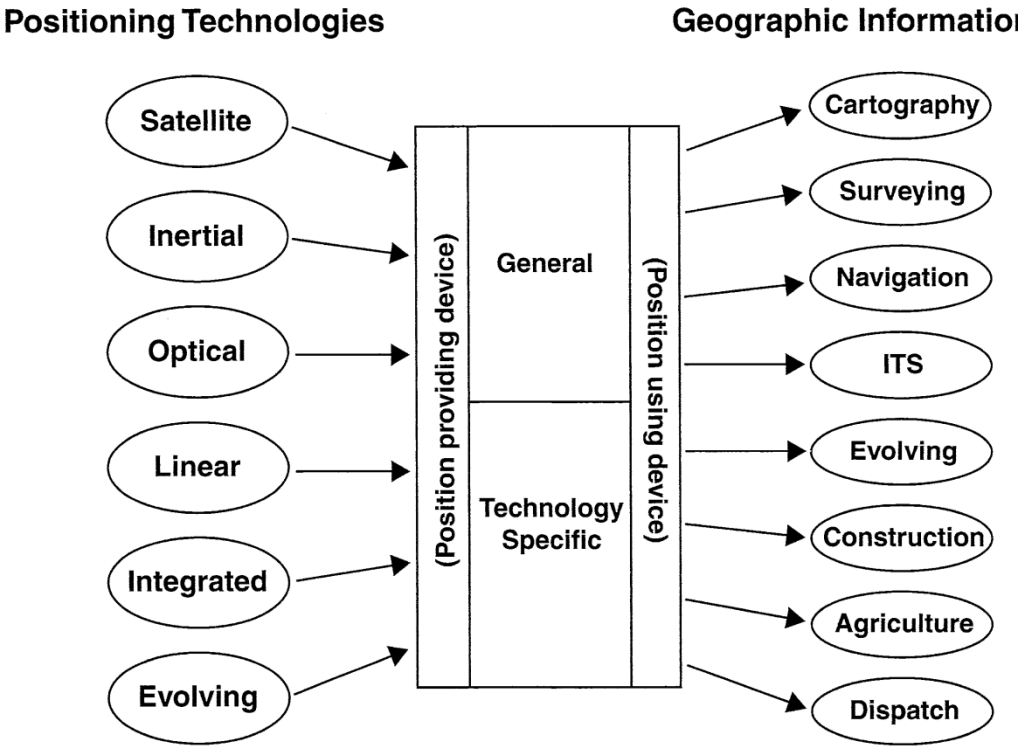
Example D.3: Geodetic coordinate reference system to which latitude and longitude are referenced.

UML identifier	Attribute	Entry	Comment
SC_GeodeticCRS			
name:	Geodetic CRS name	NAD83(CSRS)	
domainOfValidity:	CRS validity	EX_GeographicBoundingBox westBL: -120 eastBL: -57.1 southBL: 43.46 northBL: 62.56	This attribute is optional. This example shows geographic bounding box entries: refer to ISO 19115.
scope:	CRS scope	Geodetic surveying and other high accuracy applications.	This attribute has been made mandatory in this revision.
remarks:	CRS remarks	Supersedes NAD83. See datum remarks.	This attribute is optional.
CS_EllipsoidalCS			An ellipsoidal CS may be 2- or 3-dimensional. The axes descriptions will be given 2 or 3 times, as appropriate. In this example, although the CRS is 3-dimensional it is assumed that the coordinate tuple contains only latitude and longitude, and therefore, no description of a third, vertical CS axis is required.
name:	Ellipsoidal coordinate system name	Latitude/longitude in degrees	Finding a suitable entry for the mandatory CS name is often a challenge as there is no established practice for naming coordinate systems.
CS_CoordinateSystemAxis			
name:	Coordinate system axis name	geodetic latitude	
axisAbbrev:	Coordinate system axis abbreviation	φ	
axisDirection:	Coordinate system axis direction	north	

UML identifier	Attribute	Entry	Comment
axisUnitID:	Coordinate system axis unit identifier	degree	
CS_CoordinateSystemAxis			
name:	Coordinate system axis name	geodetic longitude	
axisAbbrev:	Coordinate system axis abbreviation	λ	
axisDirection:	Coordinate system axis direction	east	
axisUnitID:	Coordinate system axis unit identifier	degree	
CD_GeodeticDatum			
name:	Geodetic datum name	NAD83 Canadian Spatial Reference System	
alias:	Datum alias	NAD83 Système canadien de référence spatiale	An optional entry.
alias:	Datum alias	NAD83(CSRS)	An optional entry.
alias:	Datum alias	NAD83(SCRS)	An optional entry.
remarks:	Datum remarks	NAD83(CSRS) is a locally	An optional entry.
CD_Ellipsoid			
name:	Ellipsoid name	GRS 1980	
semiMajorAxis:	Length of semi-major axis	6378137.0 m	
secondDefiningParameter:	Second defining parameter	inverseFlattening	
inverseFlattening:	Inverse flattening	298.2572221	
anchorDefinition:	Datum anchor	Geocentre	An optional entry.
realizationEpoch:	Datum realization epoch	1998	An optional entry.
CD_PrimeMeridian			Because the datum class is CD_GeodeticDatum, if this CD_PrimeMeridian class had been absent, the attributes name and Greenwich longitude would have taken their default values.
name:	Prime meridian name	Greenwich	Because the value for this attribute is “Greenwich”, it is not essential to provide this attribute information.
GreenwichLongitude:	Prime meridian Greenwich longitude	0 degrees	Because the value for the prime meridian name is “Greenwich”, it is not essential to provide the prime meridian Greenwich longitude information.

Serviços Posicionamento (ISO19116)

Serviços de posicionamento empregam uma grande variedade de tecnologias que fornecem a posição e informação relacionada com uma grande variedade de aplicações.

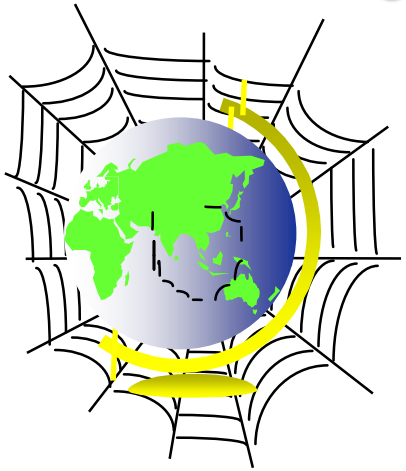


A ISO19116 normaliza o modelo de dados para a informação de base independentemente do tipo de sistema e um conjunto de operações para manipular esses dados

ISO/TC 211 web-site

https://committee.iso.org/home/tc211

Contém :



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- Scope and work programme
- Mail to secretariat
- News and information
- Presentations (slides)

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Making location count.

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Welcome to the OGC

The OGC (Open Geospatial Consortium) is an international not for profit organization committed to making quality open standards for the global geospatial community. These standards are made through a consensus process and are freely available for anyone to use to improve sharing of the world's geospatial data.

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Inspire

European Commission

INSPIRE

Infrastructure for Spatial Information in the European Community

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Maintenance and Implementation

INSPIRE DIRECTIVE

In Europe a major recent development has been the entering in force of the INSPIRE Directive in May 2007, establishing an infrastructure for spatial information in Europe to support Community environmental policies, and policies or activities which may have an impact on the environment.

INSPIRE is based on the infrastructures for spatial information established and operated by the 27 Member States of the European Union. The Directive addresses 34 spatial data themes needed for environmental applications, with key components specified through technical implementing rules. This makes INSPIRE a unique example of a legislative "regional" approach.

Legislation

Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) was published in the official Journal on the 25th April 2007. The INSPIRE Directive entered into force on the 15th May 2007

To ensure that the spatial data infrastructures of the Member States are compatible and usable in a Community and transboundary context, the Directive requires that common Implementing Rules (IR) are adopted in a number of specific areas (Metadata, Data Specifications, Network Services, Data and Service Sharing and Monitoring and Reporting). These IRs are adopted as Commission Decisions or Regulations, and are binding in their entirety. The Commission is assisted in the process of adopting such rules by a regulatory committee composed of representatives of the Member States and chaired by a representative of the Commission (this is known as the Comitology procedure).

- Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) 14.03.2007
- INSPIRE Metadata Regulation 03.12.2008
- Commission Decision regarding INSPIRE monitoring and reporting 05.06.2009
- Commission Regulation (EC) No 976/2009 of 19 October 2009 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the Network Services 19.10.2009
- Corrigendum to INSPIRE Metadata Regulation 15.12.2009

INSPIRE – DIRECTIVE 2007/2/EC

DIRECTIVES

DIRECTIVAS

DIRECTIVAS

DIRETTIVE

DIRETTIVA 2007/2/CE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO

del 14 marzo 2007

che istituisce un'Infrastruttura per l'informazione territoriale nella Comunità europea (Inspire)

INSPIRE – DIRECTIVE 2007/2/EC

Será que é irrelevante esta questão? (da designação)

Infraestrutura para (de)

- Informação Ambiental
- Informação Geográfica
- Informação Cartográfica

Art. 4 - The Infrastructure for Spatial Information in the European Community (Inspire) should assist policy-making in relation to policies and activities that may have a direct or indirect impact on the **Environment.**

Termos:

'spatial data' means any data with a direct or indirect reference to a specific location or geographical area;

http://inspire.ec.europa.eu/

INSPIRE KNOWLEDGE BASE

INSPIRE Video

Focus On

Latest News

13/08/2019
Call for expression of interest to tender: Data ecosystems for geospatial data
02/08/2019
Call for expression of interest to tender: Facilitating access to INSPIRE data through standard-based APIs
01/08/2019
Have Your Say: Data flow mapping across the EU

All News

Events

22/10/2019
Inspire Helsinki 2019
07/05/2019
Webinar: INSPIRE good practices – Alternative Encodings
27/11/2018
EG/EuroSDR Workshop "Use of INSPIRE Data: Past experiences and scenarios for the future"

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INSPIRE Principles
INSPIRE Legislation
Implementing Rules
INSPIRE Technical Guidance
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Monitoring and Reporting
Network Services
Spatial Data Services
Use

About INSPIRE

The INSPIRE Directive aims to create a European Union spatial data infrastructure for the purposes of EU environmental policies and policies or activities which may have an impact on the environment. This European Spatial Data Infrastructure will enable the sharing of environmental spatial information among public sector organisations, facilitate public access to spatial information across Europe and assist in policy-making across boundaries.

INSPIRE is based on the infrastructures for spatial information established and operated by the Member States of the European Union. The Directive addresses 34 spatial data themes needed for environmental applications.

The Directive came into force on 15 May 2007 and will be implemented in various stages, with full implementation required by 2021.

This video provides an overview of why INSPIRE is needed and what types of spatial are covered by INSPIRE.

Data Specifications

The INSPIRE Implementing Rules on interoperability of spatial data sets and services (IRs) and Technical Guidelines (Data Specifications) specify common data models, code lists, map layers and additional metadata on the interoperability to be used when exchanging spatial datasets.

Datasets in scope of INSPIRE are ones which come under one or more of the 34 spatial data themes (below) set out in the INSPIRE Directive. Interoperability in INSPIRE means the possibility to combine spatial data and services from different sources across the European Community in a consistent way without involving specific efforts of humans or machines. Interoperability may be achieved by either changing (harmonising) and storing existing data sets or transforming them via services for publication in the INSPIRE infrastructure.

While the Implementing Rules specify what must be implemented at an abstract and generic level, the non-binding Technical Guidelines specify how legal obligations could be implemented, making reference to existing geospatial standards where appropriate. Implementing these Technical Guidelines will maximise the cross-border and cross-thematic interoperability of INSPIRE spatial data sets and services as well as guaranteeing interoperability with other sectors.

Each Annex has a set of milestones for when metadata, data, and network services for datasets are to be available, set out in this roadmap.

ANNEX: 1

- Addresses
- Administrative units
- Cadastral parcels
- Coordinate reference systems
- Geographical grid systems
- Geographical names
- Hydrography
- Protected sites
- Transport networks

Implement

Guide for implementers
Roadmap
Data Specifications
Monitoring & Reporting
Metadata
Network Services
Data and Service Sharing
Spatial Data Services
Maintenance and Implementation Framework

Data Specifications

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INSPIRE in your Country
Learn

Data Specifications > Themes > Cadastral parcels

Areas defined by cadastral registers or equivalent.
Annex 1

Description

INSPIRE Data Specification on Cadastral Parcels – Technical Guidelines 3.1

Read/Compare Technical Guidelines

Registry entry for [Cadastral parcels]

Thematic Clusters Links

Topographic and Cadastral Reference Data
Cadastral parcels

[Cadastral parcels] Data on INSPIRE Geoportal

Find Your Scope

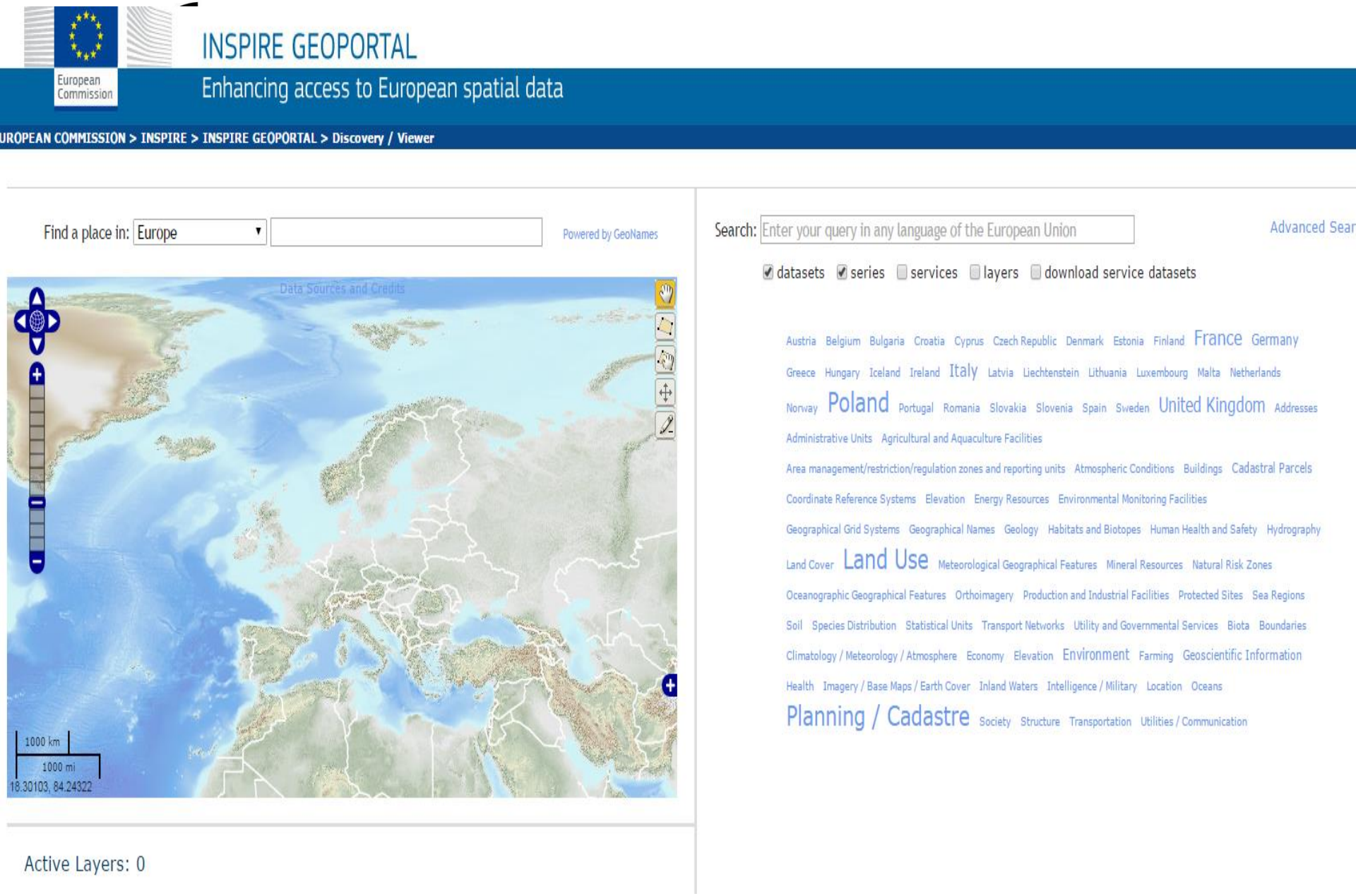
Implementations

Data Models

Data Schema

Experts

http://inspire.ec.europa.eu/Themes/122/2892


European Commission
INSPIRE GEOPORTAL
Enhancing access to European spatial data
UROPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL > Discovery / Viewer
Find a place in: Europe
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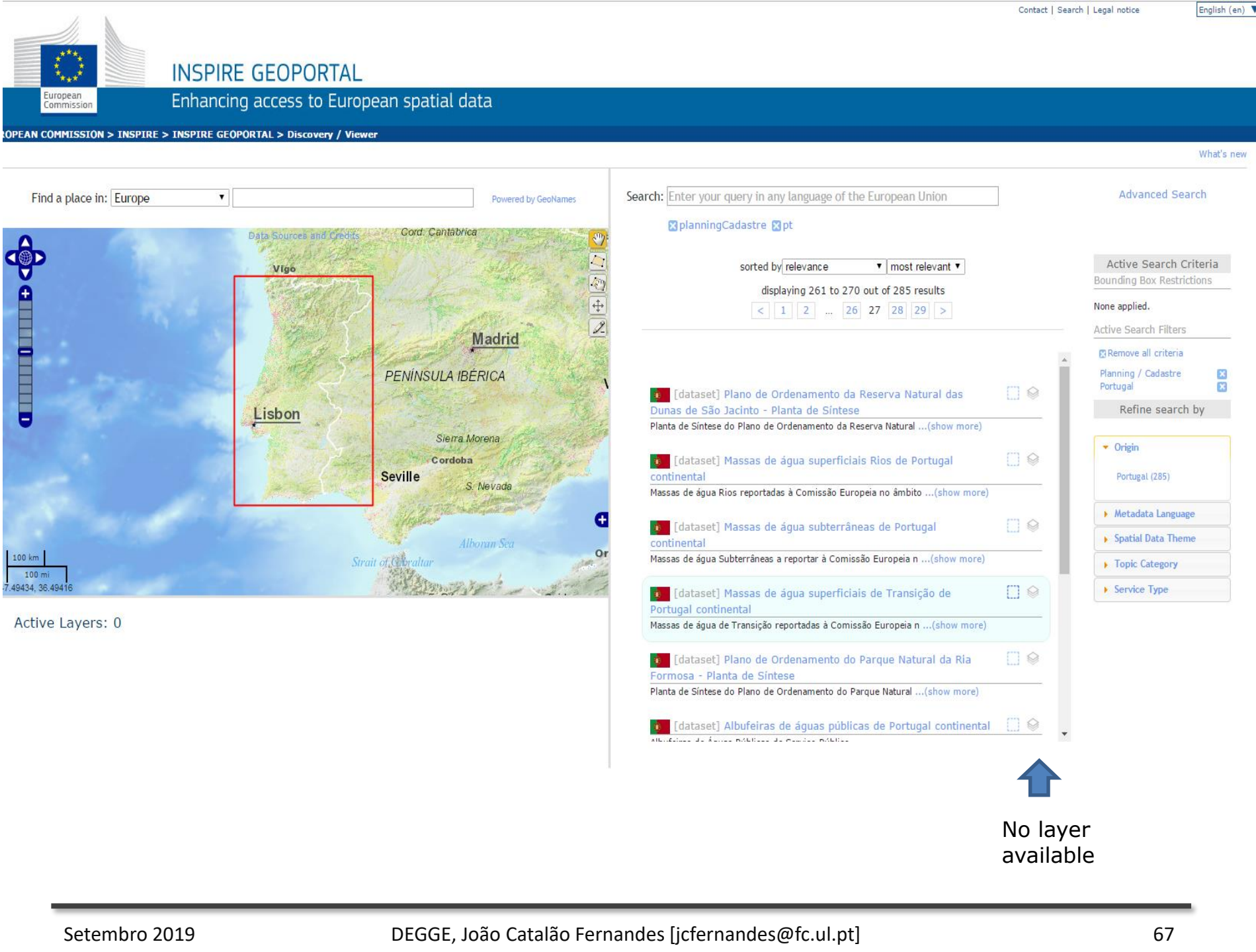
1000 km
1000 mi
18.30103, 84.24322
Active Layers: 0
Search: Enter your query in any language of the European Union
Advanced Sear
datasets series services layers download service datasets
Austria Belgium Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland France Germany
Greece Hungary Iceland Ireland Italy Latvia Liechtenstein Lithuania Luxembourg Malta Netherlands
Norway Poland Portugal Romania Slovakia Slovenia Spain Sweden United Kingdom Addresses
Administrative Units Agricultural and Aquaculture Facilities
Area management/restriction/regulation zones and reporting units Atmospheric Conditions Buildings Cadastral Parcels
Coordinate Reference Systems Elevation Energy Resources Environmental Monitoring Facilities
Geographical Grid Systems Geographical Names Geology Habitats and Biotopes Human Health and Safety Hydrography
Land Cover Land Use Meteorological Geographical Features Mineral Resources Natural Risk Zones
Oceanographic Geographical Features Orthoimagery Production and Industrial Facilities Protected Sites Sea Regions
Soil Species Distribution Statistical Units Transport Networks Utility and Governmental Services Biota Boundaries
Climatology / Meteorology / Atmosphere Economy Elevation Environment Farming Geoscientific Information
Health Imagery / Base Maps / Earth Cover Inland Waters Intelligence / Military Location Oceans
Planning / Cadastre Society Structure Transportation Utilities / Communication


Contact | Search | Legal notice
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OPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL > Discovery / Viewer
What's new
Find a place in: Europe
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Cord. Cantábrica
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Lisbon
Sierra Morena
Cordoba
Seville
S. Nevada
Alboran Sea
Strait of Gibraltar
100 km
100 mi
-7.49434, 36.49416
Active Layers: 0
Search: Enter your query in any language of the European Union
Advanced Search
planningCadastre
pt
sorted by relevance most relevant
displaying 261 to 270 out of 285 results
< 1 2 ... 26 27 28 29 >
[dataset] Plano de Ordenamento da Reserva Natural das Dunas de São Jacinto - Planta de Síntese
Planta de Síntese do Plano de Ordenamento da Reserva Natural ...(show more)
[dataset] Massas de água superficiais Rios de Portugal continental
Massas de água Rios reportadas à Comissão Europeia no âmbito ...(show more)
[dataset] Massas de água subterrâneas de Portugal continental
Massas de água Subterrâneas a reportar à Comissão Europeia n ...(show more)
[dataset] Massas de água superficiais de Transição de Portugal continental
Massas de água de Transição reportadas à Comissão Europeia n ...(show more)
[dataset] Plano de Ordenamento do Parque Natural da Ria Formosa - Planta de Síntese
Planta de Síntese do Plano de Ordenamento do Parque Natural ...(show more)
[dataset] Albufeiras de águas públicas de Portugal continental
Active Search Criteria
Bounding Box Restrictions
None applied.
Active Search Filters
Remove all criteria
Planning / Cadastre
Portugal
Refine search by
Origin
Portugal (285)
Metadata Language
Spatial Data Theme
Topic Category
Service Type
No layer available

European Commission

INSPIRE GEOPORTAL

Enhancing access to European spatial data

Find a place in: Europe

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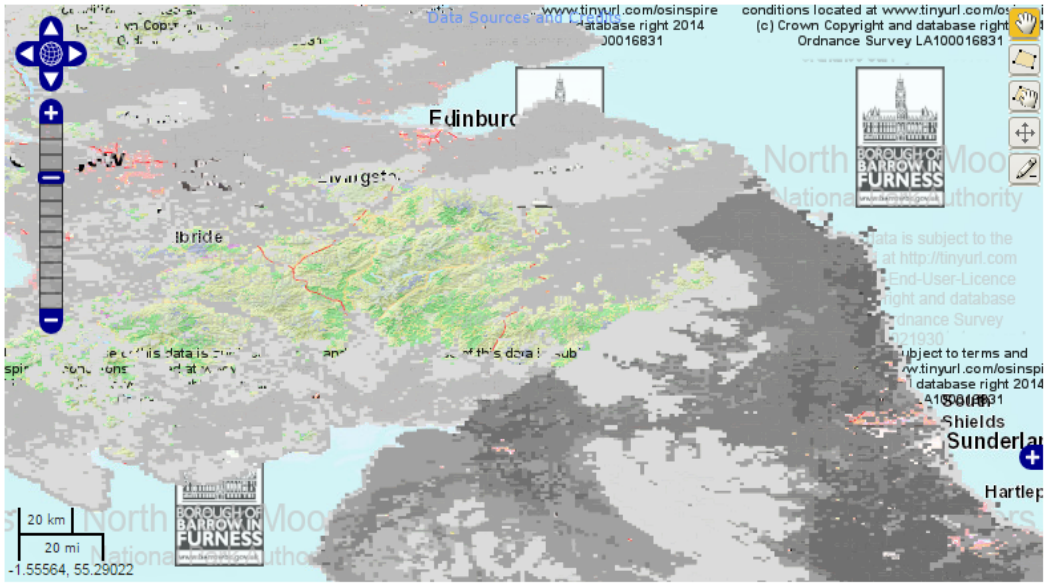

Search: Enter your query in any language of the European Union

uk

sorted by relevance most relevant

displaying 1 to 10 out of 26225 results

< 1 2 3 ... 2622 2623 >

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[No abstract available for this resource]

[layer] SAVED2007_E8
[No abstract available for this resource]

[layer] UKContShelf BGS 1:1M Seabed Sediments
UKContShelf BGS 1:1M Seabed Sediments. Your use of any infor ...(show more)

[layer] PLANNINGAPPEALS
[No abstract available for this resource]

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[No abstract available for this resource]

[layer] BPAAP2010_BP16
[No abstract available for this resource]

[layer] SAVED2007_D13
[No abstract available for this resource]

Active Layers: 4

Remove all layers

Ash: Individual Trees: [No abstract available for this resource]

NYMNPA Section 3 Moor and Heath: Section 43 of the Wildlife and Countryside Act 1981 (as amended by Section 3 of the Wildlife and Countryside [Amendment] Act 1985) requires National Parks to

A Directiva INSPIRE

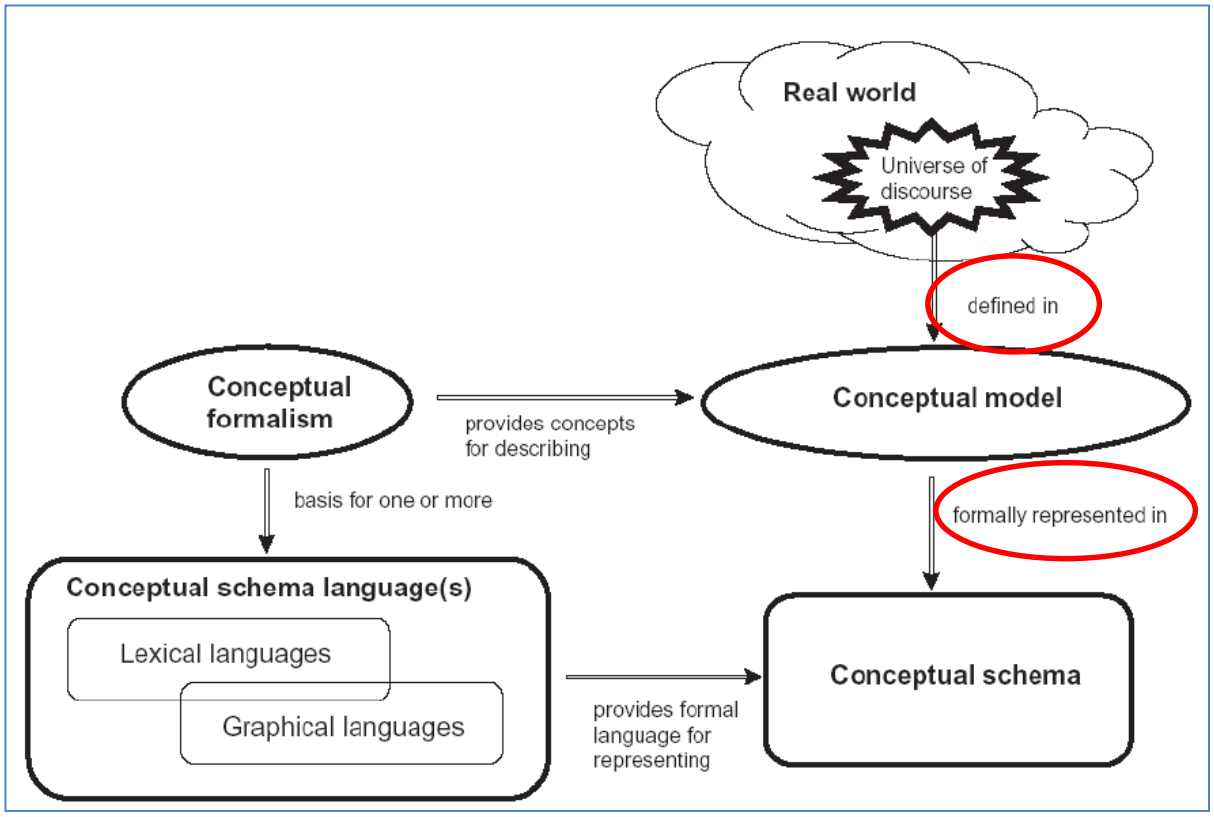
A presente directiva abrange os conjuntos de dados espaciais que satisfaçam as seguintes condições:

- Estarem relacionados com uma zona sobre a qual um Estado-Membro tenha e/ou exerça jurisdição;
- Estarem disponíveis em formato digital;
- Serem mantidos por entidades públicas (ou terceiras) por conta da mesma;
- Dizerem respeito a um ou mais dos temas enumerados nos anexos I, II ou III.

A presente diretiva NÃO exige a recolha de novos dados espaciais.

Generic Conceptual Model

Requirement 4 The reference model specified in ISO 19101 shall be used as the reference model of the INSPIRE data specifications.



Conceptual schema language

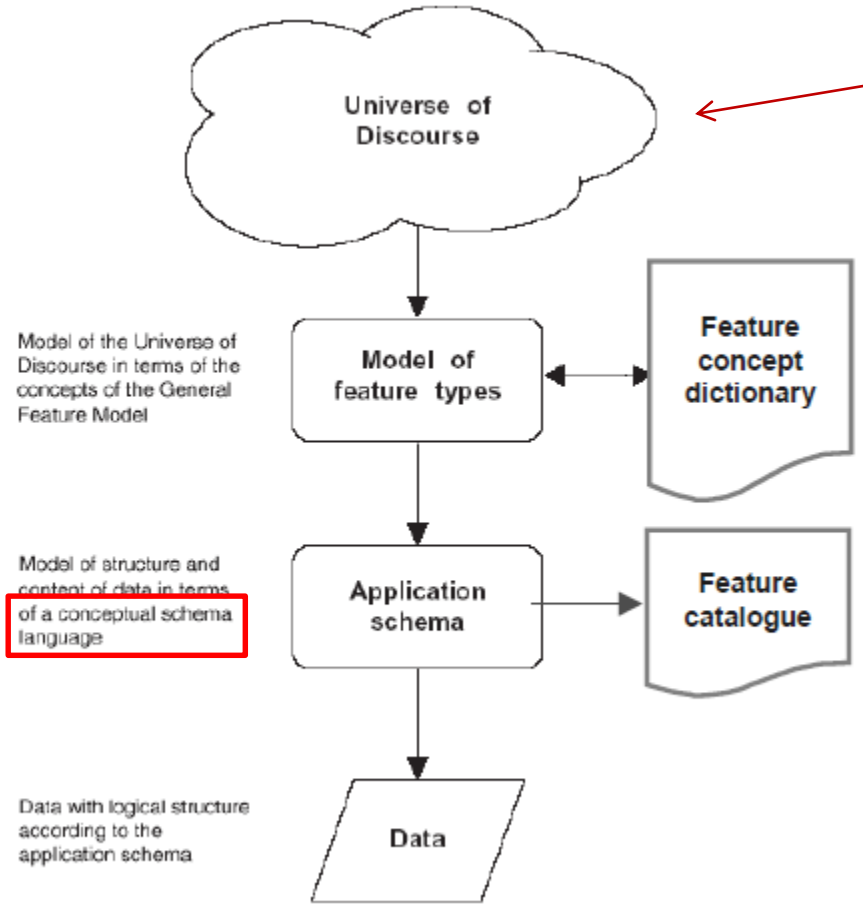
Requirement 20	Every INSPIRE application schema shall be specified in UML, version 2.1.

The use of a common conceptual schema language (i.e. UML) allows for an automated processing of application schemas and the encoding, querying and updating of data based on the application schema – across different themes and different levels of detail.

Requirement 21	Every spatial object type and its properties shall be shown in class diagrams in the UML package describing the application schema (or packages contained by that package).

Requirement 22	The use of UML shall conform to ISO 19109 8.3 and ISO/TS 19103 with the exception that UML 2.1 instead of ISO/IEC 19501 shall be used.

General Feature Model



"Community environmental policies and policies or activities which may have an impact on the environment"

The spatial object types of an INSPIRE application schema shall be represented in a corresponding feature catalogue.

ISO 19110

General Conceptual Model

2 Normative references

EN ISO 19101:2005, Geographic information — Reference model

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

NOTE A revision of the standard is a current work item of ISO/TC 211. To the extent possible, alignment of this document with the future version has been taken into consideration.

EN ISO 19107:2005, Geographic information — Spatial schema

EN ISO 19108:2005, Geographic information — Temporal schema

EN ISO 19109:2006, Geographic Information — Rules for application schemas

EN ISO 19110:2006, Geographic information — Methodology for feature cataloguing

EN ISO 19135:2007, Geographic information — Procedures for item registration

EN ISO 19136:2009, Geographic Information – Geography Markup Language

ISO/TS 19139:2007, Geographic Information – Metadata – XML Schema implementation

ISO 19156:2011, Geographic Information – Observation and Measurements

UML 2.1.2, Unified Modelling Language (UML) Superstructure and Infrastructure, Version 2.1.2

A Directiva INSPIRE

Methodology for the development of data specifications (D2.6_v3.0.pdf)

Apart from logical consistency (see the Generic Conceptual Model clause 20), the INSPIRE Directive **does not** spell out

(D2.6) 7.5 Data quality

ISO 19131 requires a data specification to cover the data quality elements and data quality subelements defined in ISO 19113. Those quality elements are:

- Completeness
- Logical Consistency
- Positional Accuracy
- Temporal Accuracy
-Thematic Accuracy

metadata

Methodology for the development of data specifications (D2.6_v3.0.pdf)

However, as INSPIRE is based on existing data, it won't be possible that all data sets will be compliant with the quality required (or at least desirable).

Recommendation 25
Specify the positional accuracy desirable in the common data specification; accept deviations and ask data providers to register them in metadata, at data set level.

In the INSPIRE **administrative unit** data specification, there are no mandatory quality requirements. However it is recommended that Member States provide the data at the source accuracy where possible targeting a minimal positional accuracy of **50 meters**. The actual values of data quality elements (omission, topological and conceptual consistency, positional, thematic, and temporal accuracy) have to be published as metadata, when they are available.

Methodology for the development of data specifications (D2.6_v3.0.pdf)

Recommendation 26
The main point to ensure consistency across national boundaries is to combine data sets at similar levels of detail.

Recommendation 27
The possible levels of detail to be considered for INSPIRE data specifications are:
- European
- National
- Regional
- Local

Example 1 (geology):
- european level (continent) : from 1 : 5 000 000 to 1 : 1 500 000.
- national level (nation) : 1 : 250 000 to 1 : 1 000 000
- regional level : from 1 : 250 000 to 1 : 25 0000
- local level : scale > 1 : 25 000.

Definition of Annex Themes and Scope

Estrutura dos dados Espaciais

Dados referência
(reference data)

+

Dados temáticos

Reference data is a series of dataset that everybody involved with geographic information uses to reference his/her own data as part of their work.

It is used as a common base to which **thematic data** may be referenced.

Os dados de referência deve cumprir três requisitos funcionais:

- fornecer uma localização inequívoca para a informação do utilizador
- permitir a fusão de dados de diversas fontes
- Fornecer o contexto que permita aos outros a melhor compreensão do que está a ser apresentado

Definition of Annex Themes and Scope

Reference Data

1. Geodetic reference data
2. Units of administration
3. Units of property rights (parcels, buildings)
4. Addresses
5. Selected topographic themes (hydrography, transport, height)
6. Orthoimagery
7. Geographical names

É expectável que os Dados de Referencia sejam produzidos ou organizados pelas Agencias Nacionais de Cartografia e Agencias Cadastrais.

Anexos

The data themes of INSPIRE are divided in modular blocks. "Annexes I and II focus on reference data, while Annex III focuses on data for environmental analysis and impact assessment.

Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites

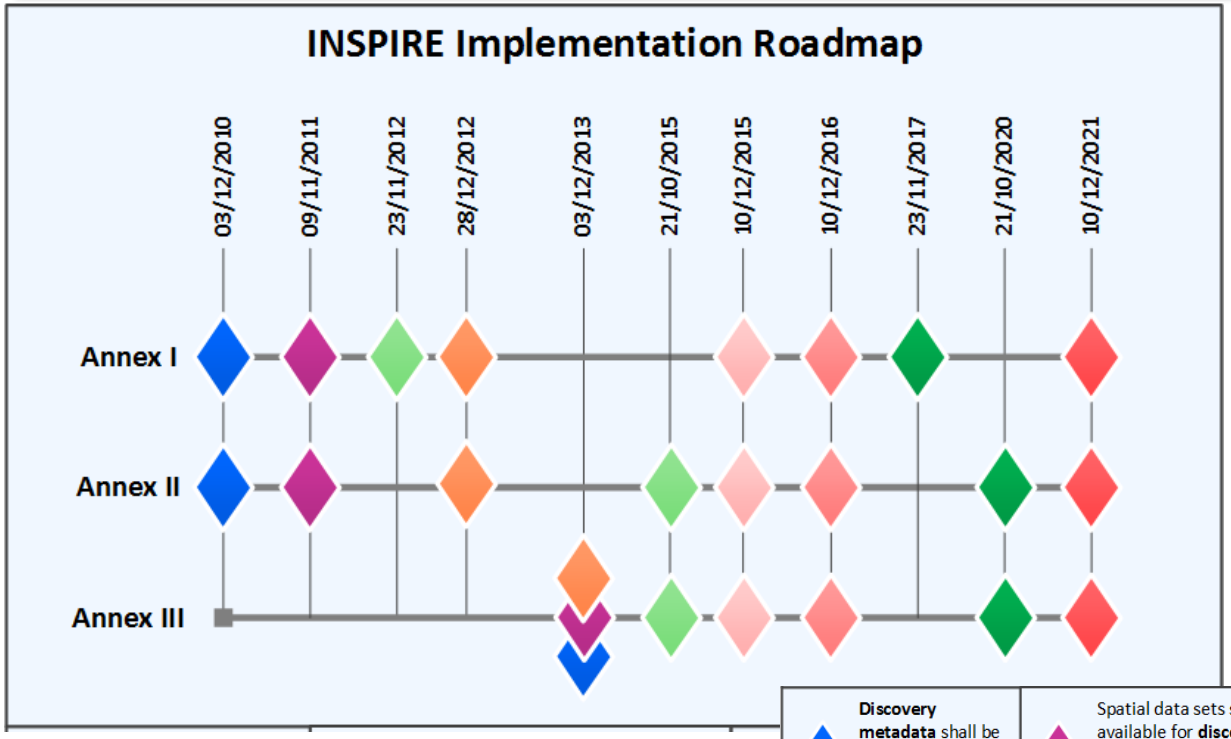
Annex II

10. Elevation
11. Land cover
12. Ortho-imagery
13. Geology

Annex III

14. Statistical units
15. Buildings
16. Soil
17. Land use
18. Human health and safety
19. Utility and governmental services
20. Environmental monitoring facilities
21. Production and industrial facilities
22. Agricultural and aquaculture facilities
23. Population distribution – demography
24. Area management/restriction/regulation zones & reporting units
25. Natural risk zones
26. Atmospheric conditions
27. Meteorological geographical features
28. Oceanographic geographical features
29. Sea regions
30. Bio-geographical regions
31. Habitats and biotopes
32. Species distribution
33. Energy Resources
34. Mineral resources

Implementation Roadmap



Discovery metadata shall be available for spatial data sets and services

Spatial data sets shall be available for **discovery and view** from the INSPIRE geo-portal (data does not yet need to be conformant to IR-ISDSS)

Spatial data sets shall be available for **download and transformation** (whenever applicable[1]) from the INSPIRE geo-portal (data does not yet need to be conformant to IR-ISDSS[2])

Newly collected and extensively restructured spatial data sets shall be **conformant** to IR-ISDSS (incl. **metadata for interoperability**) and available through network services

All spatial data sets shall be **conformant** to IR-ISDSS (incl. **metadata for interoperability**) and available through network services

All invocable spatial data services shall be **conformant to Annex V of IR-ISDSS** (incl. **metadata**)

Invocable spatial data services related to newly collected and extensively restructured spatial data sets shall be **conformant to Annexes VI and** (where practicable) **VII of IR-ISDSS** (incl. **metadata**)

All invocable spatial data services shall be **conformant to Annexes VI and** (where practicable) **VII of IR-ISDSS** (incl. **metadata**)

IR-ISDSS = Implementing Rules on interoperability of spat
1089/2010), including its amendments Regulations (EU
[1] Transformation Services only need to be provided if dat
other means (see Art. 7(3) of the INSPIRE Directive)
[2] With the exception of newly collected and extensively r
compliant with the IR-ISDSS by 23/11/2012

Coordinate Reference Systems (CRS)

O âmbito do tema *Coordinate reference systems abrange os Sistemas de Referencia de Coordenadas Geodésicas (Geodetic Coordinate* Reference Systems (CRS)) necessários para referenciar de forma inequivoca a informação espacial como um conjunto de coordenadas (X, Y, Z) e /ou latitude, longitude e altitude .

As coordenadas latitude, longitude e altitude elipsoidal podem ser calculadas a partir das coordenadas (X,Y,Z) usando um elipsóide de referencia.

As **coordenadas planas** (cartográficas) são calculadas a partir da latitude e longitude usando uma projeção cartográfica apropriada. São adoptadas e recomendadas diferentes projeções para diferentes objectivos.

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Coordinate Reference Systems (CRS)

Requirement 1	For the three-dimensional and two-dimensional (horizontal component) coordinate reference systems, the European Terrestrial Reference System 1989 (ETRS89) shall be used for the areas within the geographical scope of ETRS89.

Requirement 2	The International Terrestrial Reference System (ITRS) or other geodetic coordinate reference systems compliant with ITRS shall be used in areas that are outside the geographical scope of ETRS89.

Requirement 3	For the computation of latitude, longitude and ellipsoidal height, and for the computation of plane coordinates using a suitable mapping projection, the parameters of the GRS80 ellipsoid shall be used.

Requirement 4	For representation with plane coordinates one of the Lambert Azimuthal Equal Area (ETRS89-LAEA), the Lambert Conformal Conic (ETRS89-LCC) or the Transverse Mercator (ETRS89-TMzn) projection shall be used.

Coordinate Reference Systems (CRS)

Requirement 8	For the vertical component on land, the European Vertical Reference System (EVRS) shall be used to express gravity-related heights for the areas within the geographical scope of EVRS.

Requirement 9	Other vertical reference systems related to the Earth gravity field shall be used to express gravity-related heights in areas that are outside the geographical scope of EVRS.

Recommendation 6	For referring the coordinate reference systems adopted by INSPIRE, identifiers presented in the table 1 are recommended.

Recommendation 7	For referring a compound CRS, one 2D and one 1D system combined together, the respective identifier shall be created by appending the identifiers of the 2D and 1D CRS with a slash between both.

EXAMPLE When both ETRS89-GRS80 and EVRS the CRS used the identifier shall be ETRS89-GRS80/EVRS.

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Coordinate Reference Systems (CRS)

Table 1

Identifier	Type of coordinates
ETRS89-XYZ	Cartesian coordinates in ETRS89 in space (X,Y,Z)
ETRS89-GRS80h	Geodetic (geographic) coordinates and ellipsoidal height in ETRS89 on the GRS80 ellipsoid (Latitude, Longitude, Ellipsoidal height)
ETRS89-GRS80	Geodetic (geographic) coordinates in ETRS89 on the GRS80 (Latitude, Longitude)
EVRS	Height in EVRS (H)
LAT	Depth of the sea floor, where there is an appreciable tidal range (D)
MSL	Depth of the sea floor, in marine areas without an appreciable tidal range, in open oceans and effectively in waters that are deeper than 200m (D)
ISA	Pressure coordinate in the free atmosphere (P)
PFO	Pressure coordinate in the free ocean (P)
ETRS89-LAEA	ETRS89 coordinates projected into plane coordinates by the Lambert Azimuthal Equal Area projection (Y,X)
ETRS89-LCC	ETRS89 coordinates projected into plane coordinates by the Lambert Conformal Conic projection (N,E)
ETRS89-TMzn[18]	ETRS89 coordinates projected into plane coordinates by the Transverse Mercator projection (N,E)

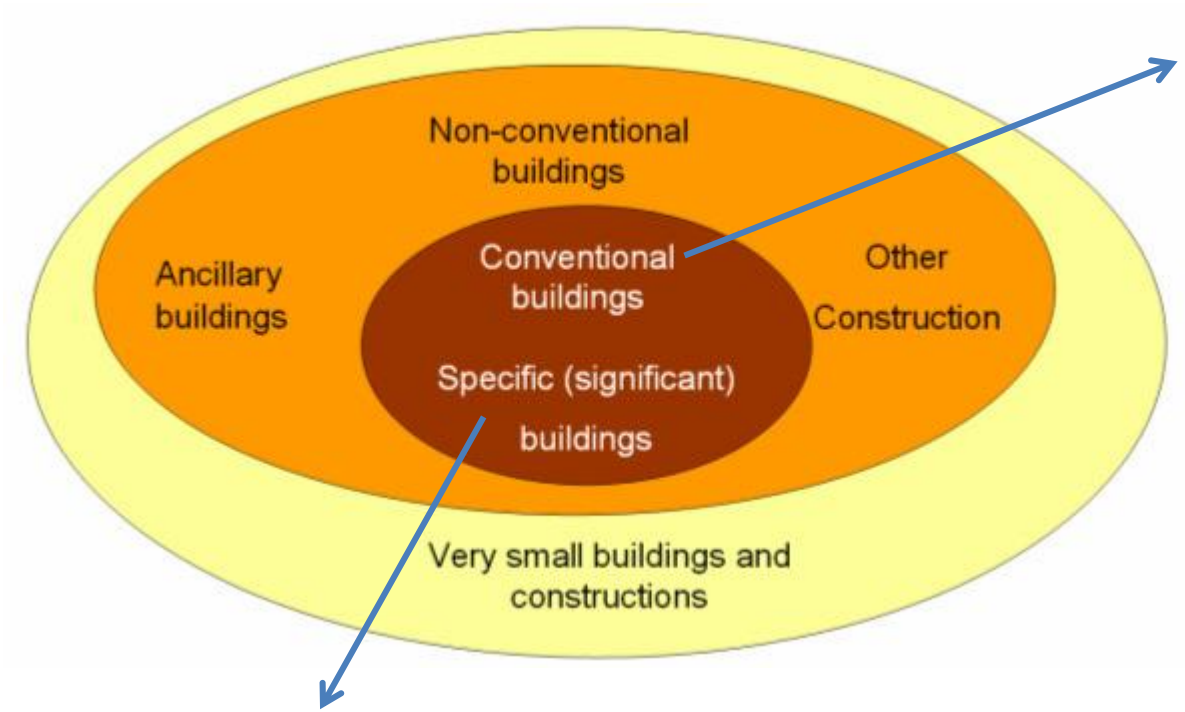
Buildings

Definition:
Considered as under scope of the theme Buildings are constructions above and/or underground which are intended or used for the shelter of humans, animals, things, the production of economic goods or the delivery of services and that refer to any structure permanently constructed or erected on its site.

	Basic semantic	Rich semantic
2D geometry	**Core 2D profile** *uses application schemas:* - *base* - *Buildings2D*	**Extended 2D profile** *uses application schemas:* - *base* - *Buildings2D* - *base extended* - *extended 2D*
3D geometry	**Core 3D profile** *uses application schemas:* - *base* - *Buildings3D*	**Extended 3D profile** *uses application schemas:* - *base* - *Buildings3D* - *base extended* - *extended 3D*

The profile approach for theme Buildings

Buildings



Actividades humanas (residencial, industrial, comércio e serviços)

Com uma área superior a 15-20m^2

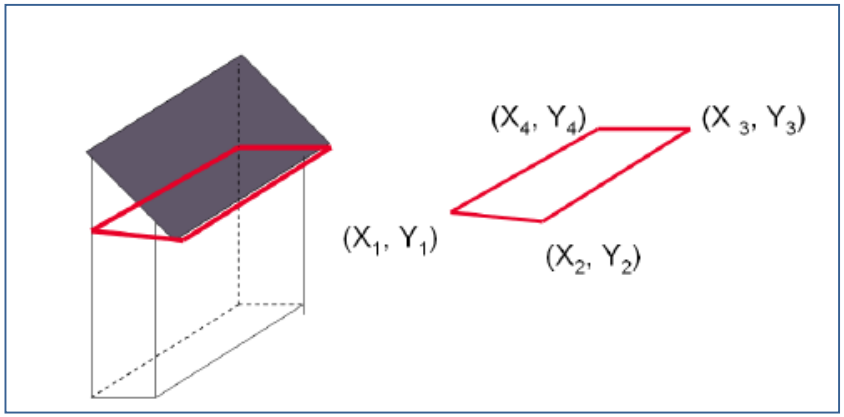
Edifícios com área ou altura significativos para serem usados como referencias (Igrejas, torres, estádios, ..)

What shall be in INSPIRE

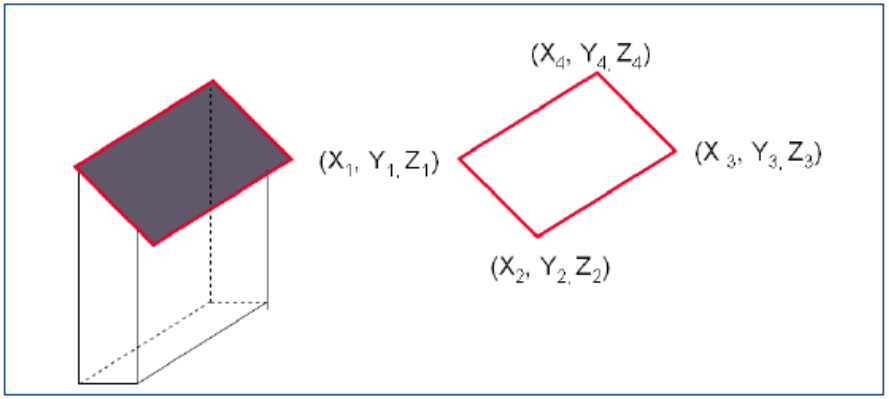
What should be in INSPIRE

What maybe in INSPIRE

Buildings

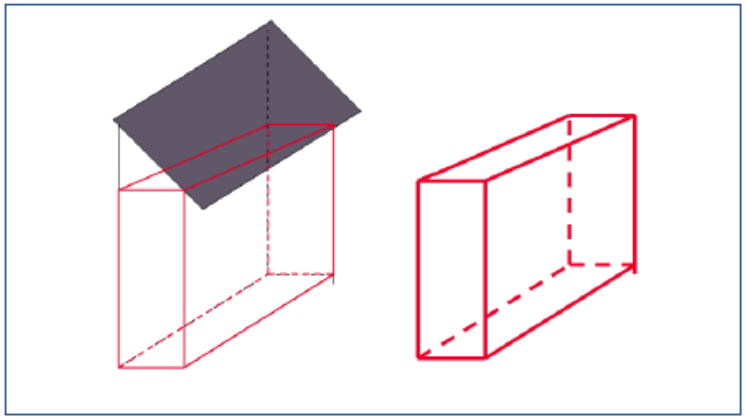


Edifício representado por dados a 2D



Edifício representado por dados a 2.5D

A cada para (X,Y) corresponde apenas um valor de Z



Edifício representado por dados a 3D

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Buildings

The types to be used for the exchange and classification of spatial objects from data sets related to the spatial data theme Buildings are defined in the following application schemas (see following sections):

- BuildingsBase application schema describes the concepts that are common to all other Buildings application schemas; it contains mainly the **core normative semantics** of theme Buildings

- Buildings2D application schema describes the **2D geometric representation** of the spatial object types defined in Buildings Base application schema, namely buildings and building parts; it inherits from the common semantics of Buildings base

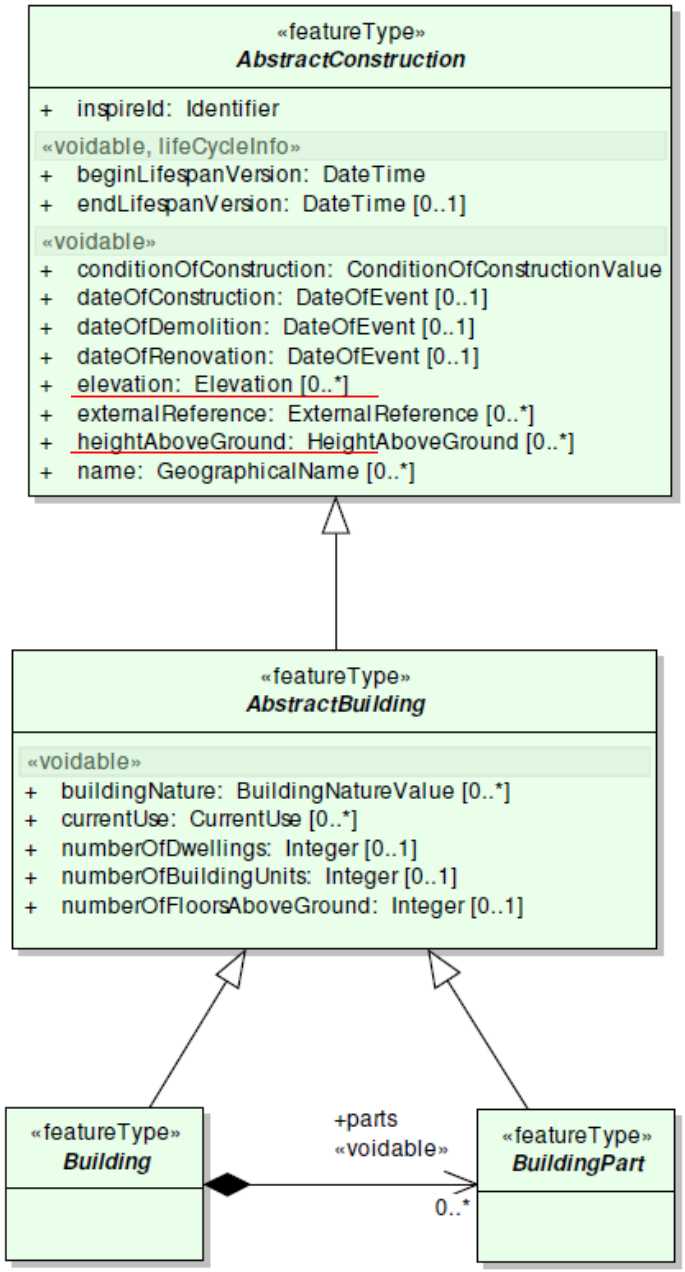
- Buildings3D application schema describes the **3D geometric representation** of the spatial object types defined in Buildings Base application schema, namely buildings and building parts; it inherits from the common semantics of Buildings base

BuildingsBase Aplicat

Tipos de elementos do esquema de aplicação "Buildings Base"

AbstractBuilding is an abstract feature type grouping the common properties of instanciable feature types Building and BuildingPart

AbstractConstruction is an abstract feature type grouping the semantic properties of buildings, building parts and of some optional feature types that may be added to core profiles, in order to provide more information about theme Buildings.

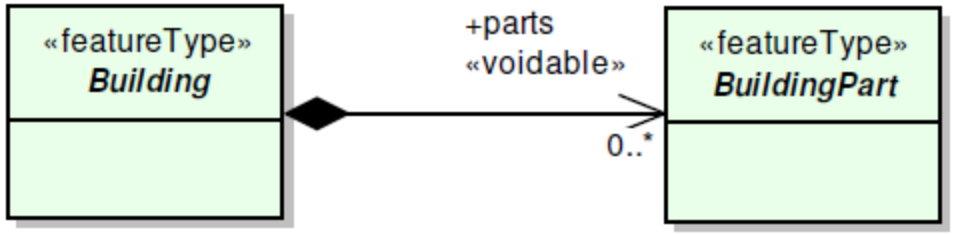


BuildingsBase Aplication Schema

Edificio composto por duas partes

From City GML

De acordo com o conceito do CityGML, um edificio complexo é considerado como uma agregação de "BuildingParts"



Instanciable feature types

Buildings Attributes

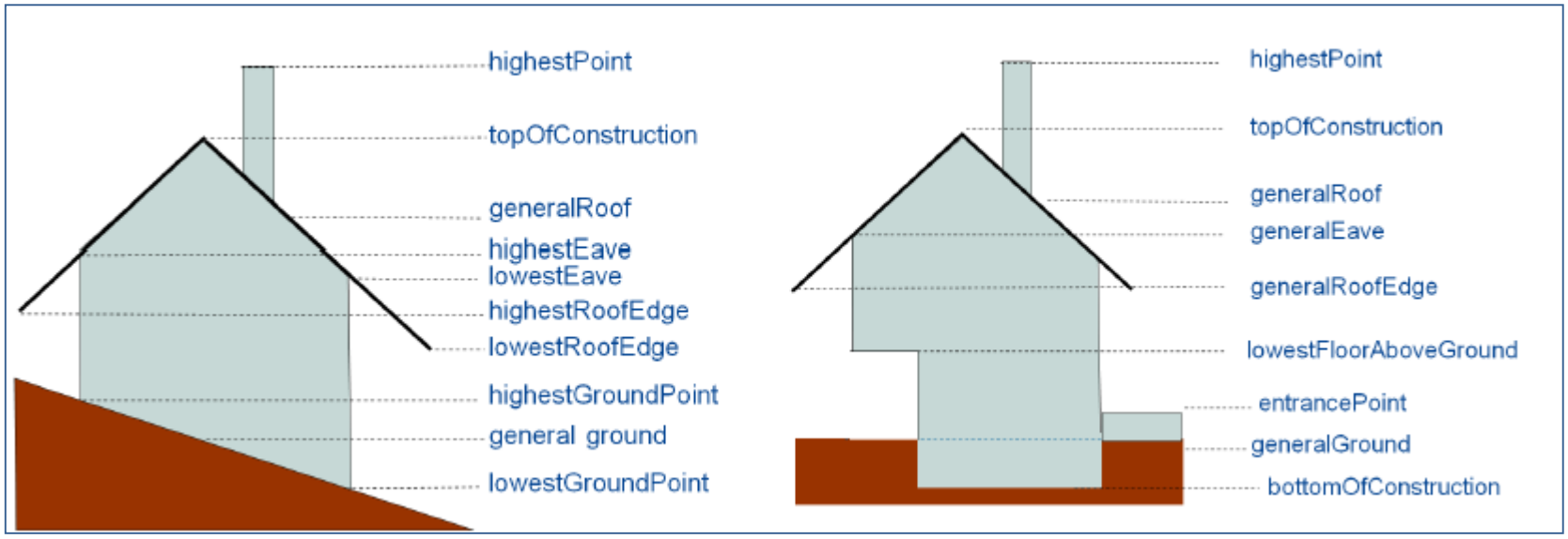
Elevation

«dataType»
Elevation

+ elevationReference: ElevationReferenceValue
+ elevationValue: DirectPosition

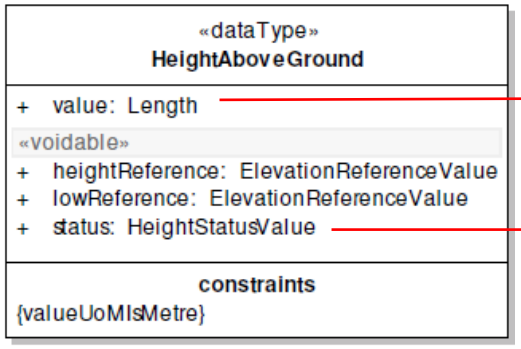
above ground envelope, bottom of construction, entrance point, general eave, general ground, general roof, general roof edge, highest eave, highest ground point, highest point, highest roof edge, lowest eave, lowest floor above ground, lowest ground point, lowest roof edge, top of construction.

Recommendation 7 For territories that are in the scope of EVRS, the use EVRS as elevation datum is recommended.



Buildings Attributes

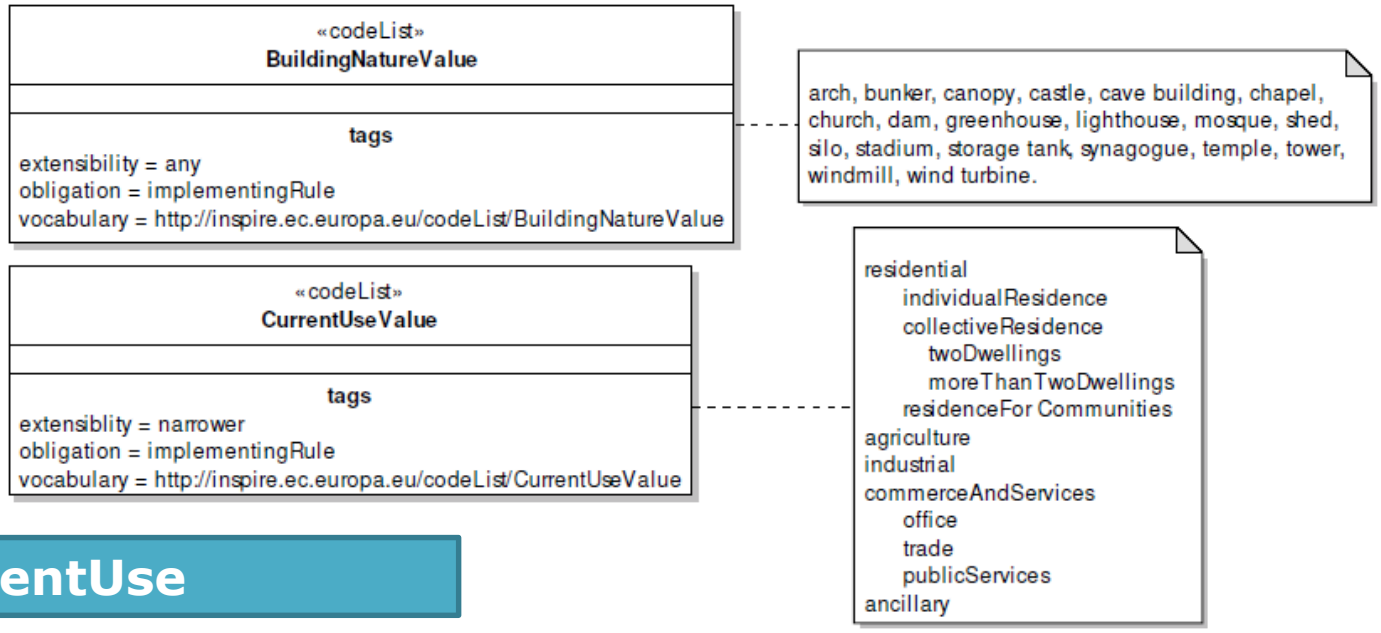
HeightAboveGround



Diferença de altitude entre *heightreference* e *lowreference*

Estimado ou medido

BuildingNature



CurrentUse

Building Geometry data type

«dataType»
BuildingGeometry2D

- \+ geometry: GM_Object
- \+ referenceGeometry: Boolean
- \+ horizontalGeometryReference: HorizontalGeometryReferenceValue
- \+ verticalGeometryReference: ElevationReferenceValue [0..1]

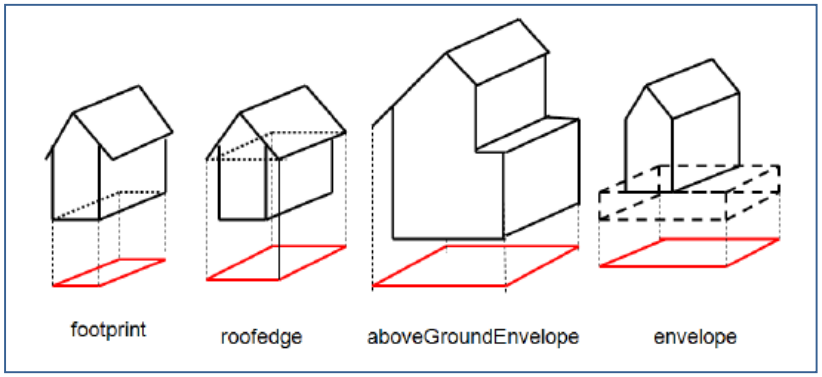
«voidable»

- \+ horizontalGeometryEstimatedAccuracy: Length
- \+ verticalGeometryEstimatedAccuracy: Length [0..1]

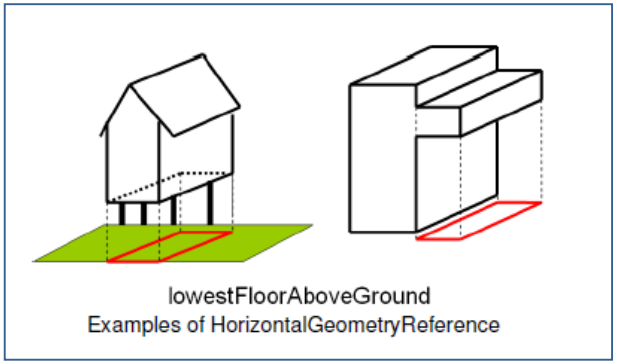
constraints

{referenceGeometry}
{geometryIsPointOrSurfaceOrMultiSurface}
{horizontalGeometryEstimatedAccuracyUoMIsMetre}
{verticalGeometryEstimatedAccuracyUoMIsMetre}

above ground envelope, combined, entrance point, envelope, footprint, lower floor above ground, point inside building, point inside cadastral parcel, roof edge.

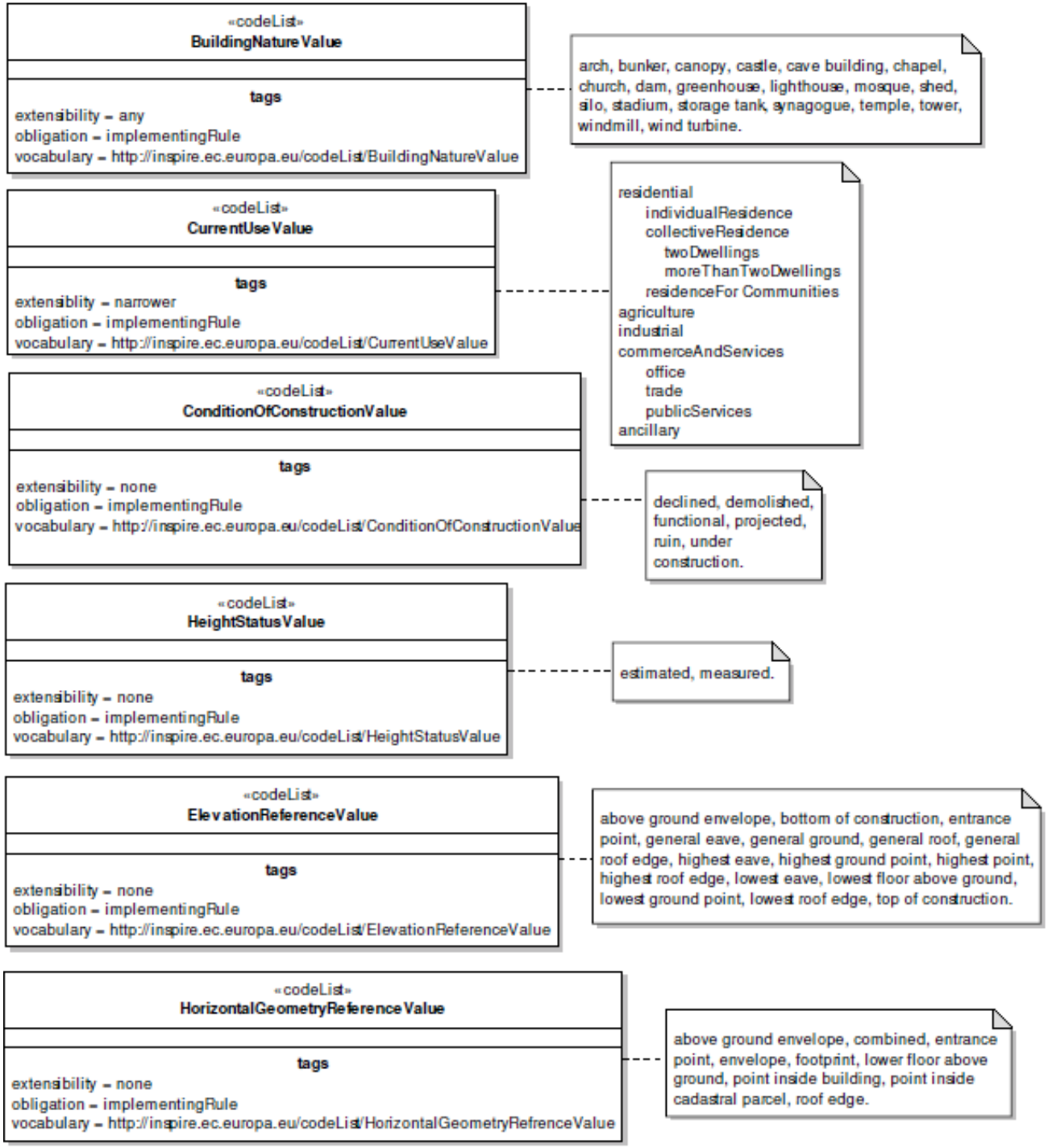


above ground envelope, bottom of construction, entrance point, general eave, general ground, general roof, general roof edge, highest eave, highest ground point, highest point, highest roof edge, lowest eave, lowest floor above ground, lowest ground point, lowest roof edge, top of construction.

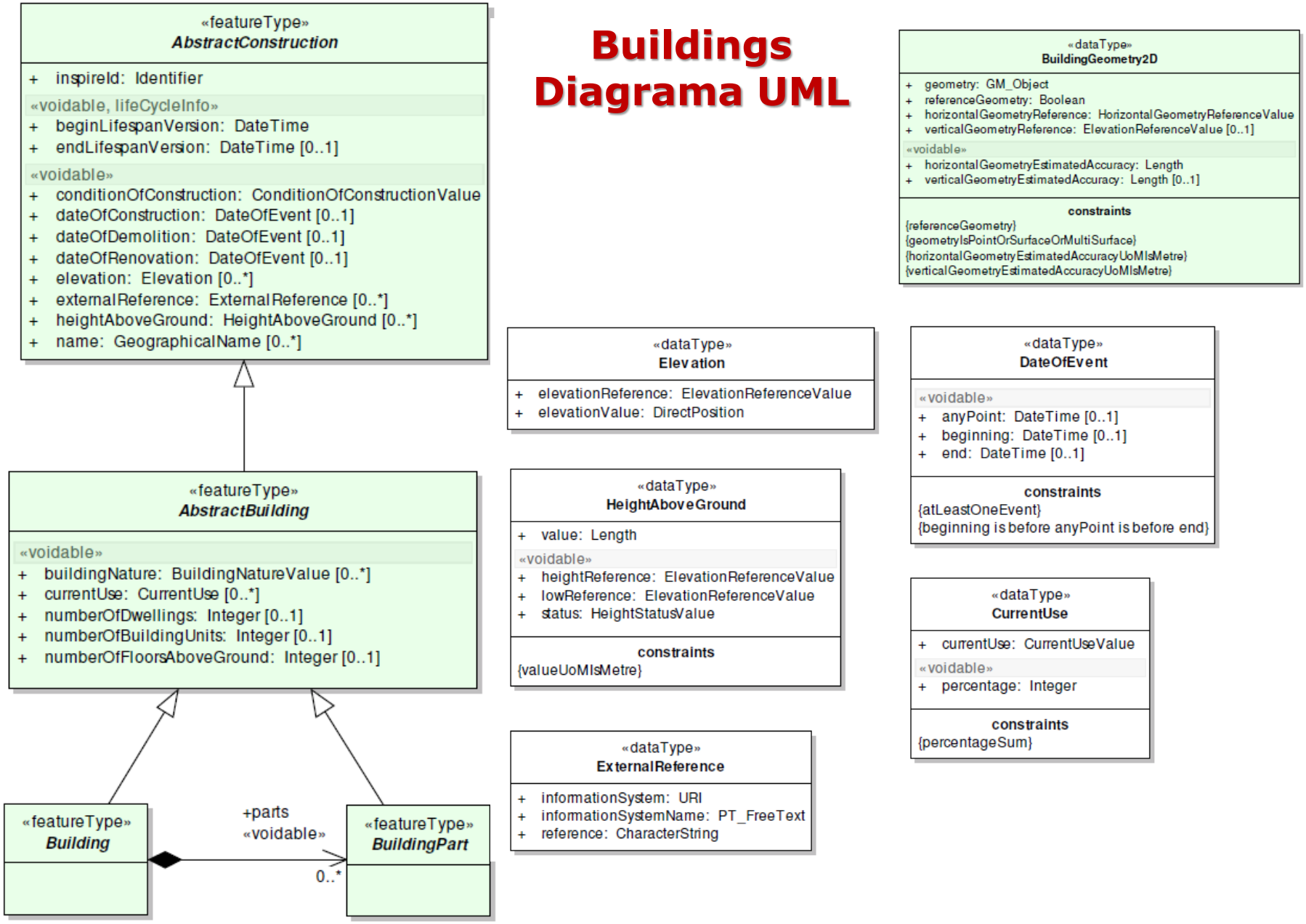


Buildings Diagrama UML

Code List



Buildings
Diagrama UML



Buildings - Feature Catalogue

Feature catalogue metadata

Application Schema	INSPIRE Application Schema	BuildingsBase
Version number	3.0rc3	

buildingsBase.xsd

Types defined in the feature catalogue

Type	Package	Stereotypes
AbstractBuilding	BuildingsBase	«featureType»
AbstractConstruction	BuildingsBase	«featureType»
Building	BuildingsBase	«featureType»
BuildingGeometry2D	BuildingsBase	«dataType»
BuildingPart	BuildingsBase	«featureType»
CurrentUse	BuildingsBase	«dataType»
DateOfEvent	BuildingsBase	«dataType»
Elevation	BuildingsBase	«dataType»
ExternalReference	BuildingsBase	«dataType»
HeightAboveGround	BuildingsBase	«dataType»

5.3.2.1. Spatial object types

5.3.2.1.1. AbstractConstruction

AbstractConstruction (abstract)	
Name:	Abstract construction
Definition:	Abstract spatial object type grouping the semantic properties of buildings, building parts and of some optional spatial object types that may be added in order to provide more information about the theme Buildings.
Description:	The optional spatial object types that may be added to core profiles are

HUMBOLDT

Towards the Harmonisation of Spatial Information in Europe

HUMBOLDT contributes to the implementation of a European Spatial Data Infrastructure (ESDI) that integrates the diversity of spatial data available for a multitude of European organisations. It is the aim to manage and advance important parts of the implementation process of this ESDI.

The main goal of the HUMBOLDT project is to enable organisations to document, publish and harmonise their spatial information. The software tools and processes created will demonstrate the feasibility and benefits of an Infrastructure for Spatial Information in Europe as planned by the INSPIRE initiative (♂ INSPIRE), meeting the goals of Global Monitoring for Environment and Security (♂ GMES).

The technical goal of HUMBOLDT is to support Spatial Data Infrastructure (SDI) enablement by providing the functionalities for covering the data hamonisation process as a whole. The HUMBOLDT Tools and Services are built on current state of the art and standards, designed to provide solutions to all types of users, data custodians as well as private end-users. HUMBOLDT enables the use of single functionalities as part of your own infrastructure.

Learn more about HUMBOLDT

At a Glance provides a concise overview on the project's benefits.

Scenarios present example use cases explaining the application areas of HUMBOLDT.

Get Involved! Find out about possibilities to participate in and benefit from HUMBOLDT.

Please also visit our ♂ Community Website and the ♂ HUMBOLDT Training Platform.

HUMBOLDT Video

Download the HUMBOLDT Video: [MP4] [OGV] [WEBM]

Humboldt

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Test drive HALE 2.8.0

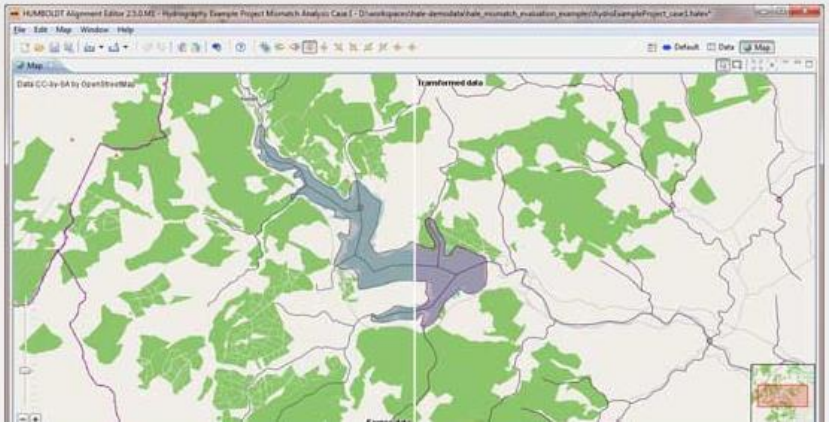
Recent blog posts:

HALE – The HUMBOLDT Alignment Editor

Status: Stable, active development

The mapping of elements such as Feature Types and Attributes of one conceptual schema (e.g. GML Application Schemas, Database Schemas or UML models) to another is a cornerstone of data harmonisation. The HUMBOLDT Alignment Editor (HALE) is a tool for defining and evaluating conceptual schema mappings. HALE allows domain experts to create logically and semantically consistent mappings and to transform geodata based on these mappings. Furthermore, a major focus is put on the documentation of the schema transformation process and its impacts, e.g. in the form of lineage information attached to the resultant transformed data.

Watch the HALE Tutorial for getting started!



HALE uses a high-level language for expressing the mappings. They can later be used by the Conceptual Schema Transformer processing component to execute a data transformation, e.g. from a non-harmonised data source to a INSPIRE-compliant data set.

To make this complex process

News

GeoServer App-Schema Integration: HALE 2.9.4 is out

2015-11-02: HALE has been supported well by the community in the past months with contributions, through support subscriptions and projects. ...

» more

AGILE 2013 workshop on Data Harmonisation

Members of the data harmonisation panel and the wider community will host the «Data Complexity Challenge – New Approaches to Data Harmonisation» preconference workshop at AGILE 2013, 14th of May, Leuven, Belgium.

» more (blog post)

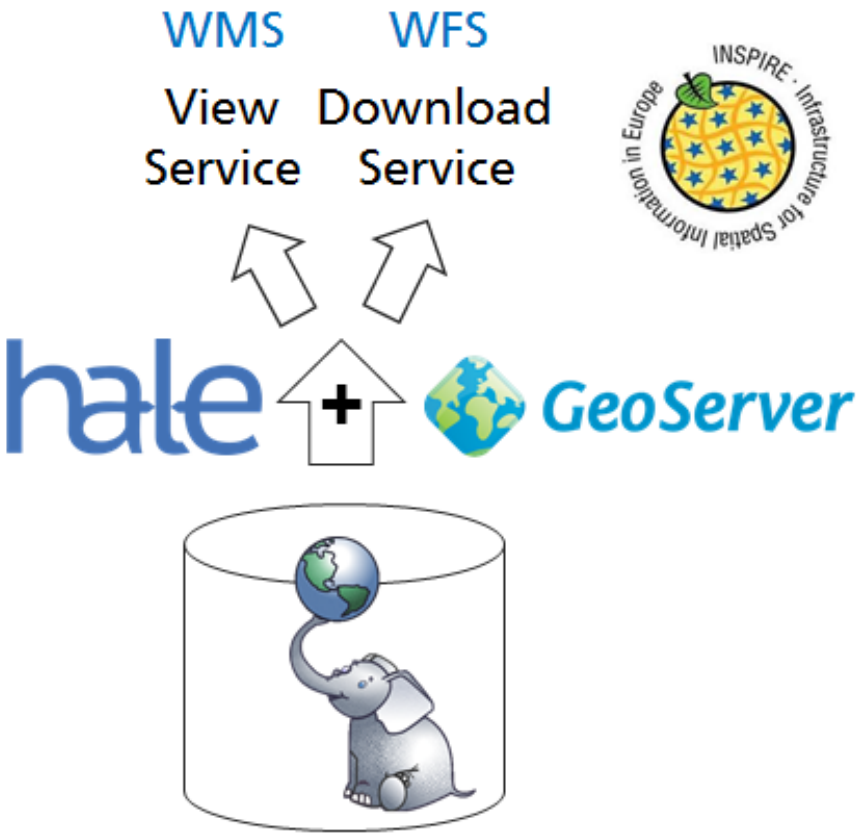
» more (AGILE WS paper)

HALE Evaluation

2012-04-20: The HUMBOLDT Alignment Editor Usage Evaluation and Comparison Questionnaire is online now. If you are a HALE user, please consider participating

GeoServer App-Schema configuration

Publishing OGC services based on GML Application Schemas and Complex Features with GeoServer is now easier than ever. Use HALE to define the mapping from your data store to an application schema, such as INSPIRE or NAS. Then, upload the resulting configuration for the GeoServer App-Schema plugin directly to your GeoServer instance. This feature was developed together with GeoSolutions S.R.L, Italy. More information on the new feature including future plans is available at the GeoSolutions Blog.



Ver programa HALE

SNIT e SNIG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http://www.dgterritorio.pt/sistemas_de_informacao/snit/igt_em_vigor__snit_/acesso_simples/

INSPIRE

Página Inspire (ver vídeo)

http://inspire.jrc.ec.europa.eu/

Data Specifications

http://inspire.jrc.ec.europa.eu/index.cfm/pageid/2

Ver datamodels
Descarregar XML

Projecto Humboldt

http://www.esdi-humboldt.eu/home.html

Importar BuildingsBase no HALE