



The INSPIRE Network Services Drafting Team

Jean-Jacques SERRANO, BRGM

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Outline

Network services Drafting team

- > 1- Objectives and scope**
- > 2- Meetings**
- > 3- Organisation**
- > 4- Deliverables**
- > 5- Progress and issues**

1- Objectives of the Drafting team (1)

Objective of the Network services drafting team

- To draft Implementing rules for INSPIRE network services

> Scope

- To define functional and non-functional requirements to support the following functionalities:

Upload services

Download services

Discovery services

Transformation services

Data view services

“Invoke spatial data service” services

Notes

- A drafting team is not expected to develop new specifications
- Implementing rules should be based on standards (when exist)

1- Objectives of the Drafting team (2)

> Network services must be accessible through a EU geo-portal

Therefore the geo-portal software architecture shall enforce the interoperability with the Member States network. In particular the following issues will be addressed:

- General architectural model
- Security (access to the service and data transfer) when applicable
- Multilingualism as requested by INSPIRE.
- Metadata for services
- Technical architectures and protocols
- End-users' needs

> Activities

- Clarification of definition and scope of INSPIRE Network services
- Analysis of reference material
- Define interface specifications for INSPIRE network services
- Draft Implementing rules

2 - Meetings

To run these activities:

- The DT organises meetings:
 - Paris - December 2005 (focus on Reference model)
 - Bonn - March 2006
 - Vienna - April 2006
 - Innsbruck - June 2006
 - Munster - July 2006 (workshop on “horizontal services” with Data Sharing DT)
- and JRC supports the DT by organising “state-of-the-art” workshops:
 - on discovery services (Frascati - October 2005 – JRC + ESA)
 - on transformations services and chaining services (Vienna - April 2006)
 - on download services (Innsbruck - June 2006)

3 – Organisation (1)

DT Members:

Network Services <u>Core</u> Drafting Team	
Olaf Østensen	NO
Markus Müller	DE
Didier Richard	FR
Tapani Sarjakoski	FI
Jean-Jacques Serrano (Chair)	FR
Graham Vowles (Co-Chair)	UK

Network Services <u>Support</u> Drafting Team	
Pedro J. Álvarez Pérez-Aradros	ES
Tomasz Berezowski	PL
Bernhard Buckl	DE
Yves Coene	BE
Dominique Flandroit	BE
Michel Grothe	NL
Wernher Hoffmann	AT
Corrado Iannucci	IT
Martin Tuchyna	SK

3 – Organisation (2)

To run this activity:

- Sub-groups has been created in the DT:
 - One for Reference model and “horizontal services” (UAA, DRM, e-commerce)
 - One for each service
- We have audioconferences twice a month
- We share documents on Circa portal

Link with other Drafting Teams	
Dominique Flandroit	Monitoring and Reporting DT
Michel Grothe	Metadata for spatial data and services DT
Olaf Østensen	Spatial data specifications and harmonisation DT
Graham Vowles	Data and service sharing DT

3 - Deliverables

Deliverable	Title
D 3.1	Network service definition - Clarification of scope: <u>Part 1</u> :Reference model, View, Discovery, Upload services <u>Part 2</u> : Download, Transformation, Invoke service” services
D 3.2	Reference Material analysis
D 3.3	Interface specifications for Network Services
D 3.4	Test plan
D 3.5	Draft Implementing Rules v 0.x
D 3.6	Tests n°1 and report test results
D 3.7	Draft Implementing Rules v 1.0
D 3.8	Tests n°2 and report test results
D 3.9	Draft Implementing Rules for reviewing by SDIC/LMO

4 - Progress and issues (1)

The NS DT is currently working on:

> **D 3.1: Detailed definition of INSPIRE network services**

- The clarification of scope and detailed definition have been done for:
 - A reference model, including “horizontal services” (UAA, DRM, e-commerce),
 - Discovery and upload services,
 - View services

> **D 3.2: Analysis of reference material from SDICs/LMOs**

- More than 100 documents and projects relating to network services
- A template to help evaluation has been defined
- A part of the reference material has been analysed

SDIC/LMO are:

- Standardisation organisations
 - ISO, CEN, OGC, OASIS, W3C
- Users or data/services providers

4 - Progress and issues (2)

Detailed definition of INSPIRE network services:

- The Reference model and “horizontal” services
- Discovery and upload services
- View services
- Transformation services
- “Invoke service” services
- Download services

4.1 - Reference model (1)

The current proposal for the INSPIRE Reference model

> **In the INSPIRE Reference Model, Network services are used by:**

- The EU Geoportal
- INSPIRE Applications
- Member states portals and services

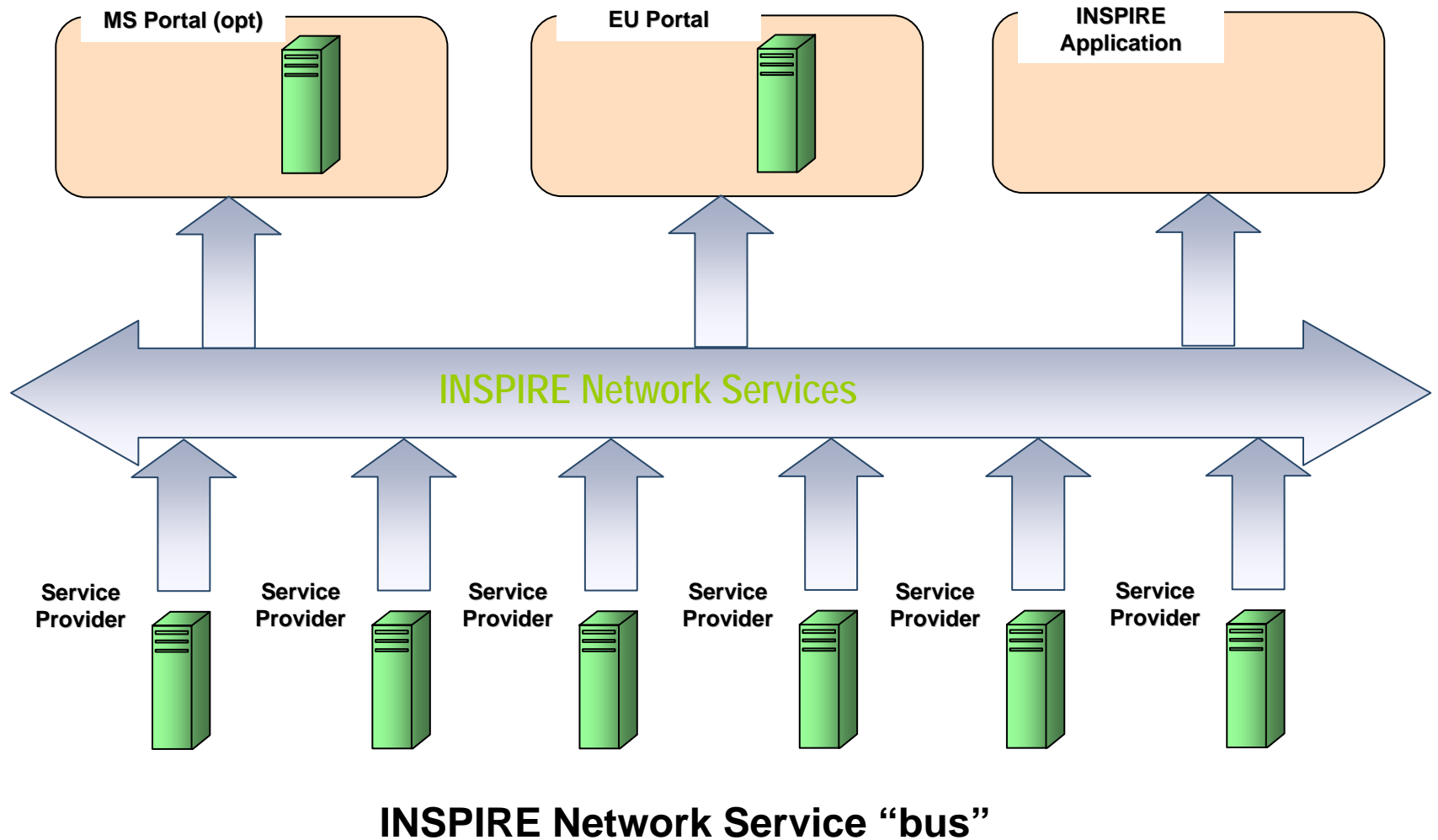
> **To take into account e-commerce services, we have to deal with:**

- Access control, Terms of use, Pricing and ordering, ...
 - => “Horizontal services”
- There are no standard for interoperability (do we have to standardise them?: each MS has its own E-Government strategy)
- We need a standard way to identify the user of a service

> **The Reference model is still in discussion**

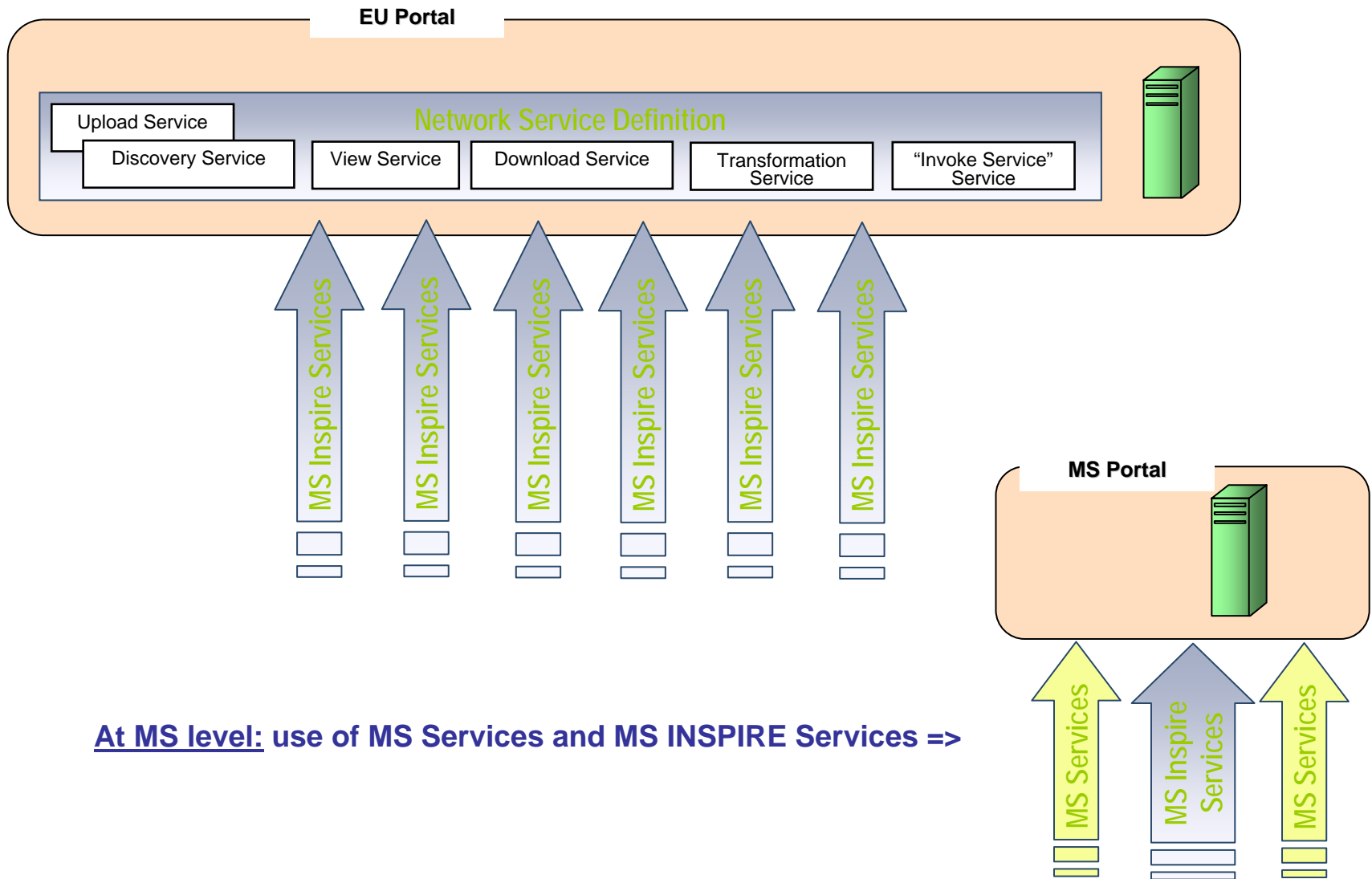
4.1 - Reference Model (2)

Users of INSPIRE Network Services



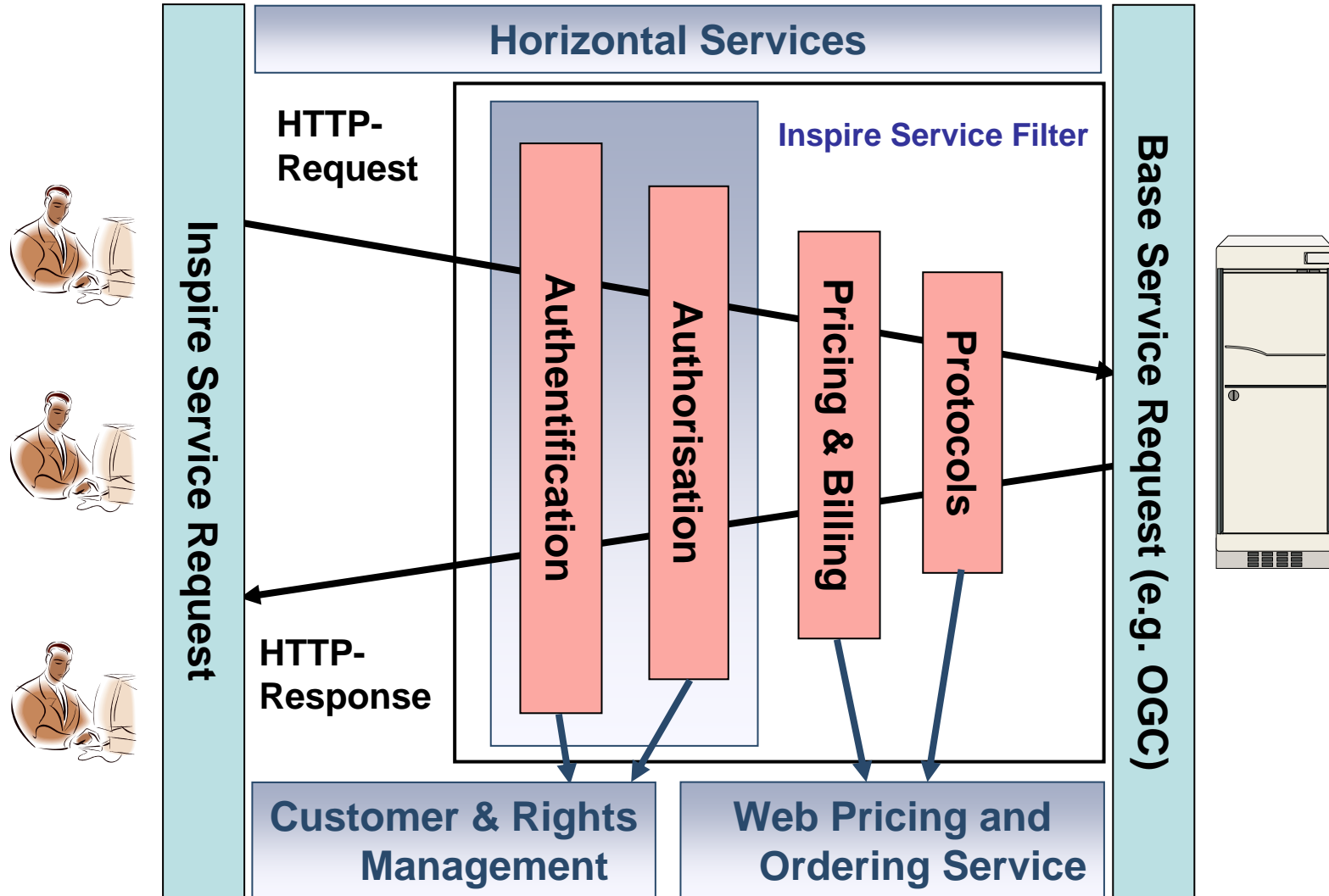
4.1 - Reference Model (3)

EU Portal between Member States INSPIRE services and EU level users



4.1 - Reference Model (4)

Embedding architecture for INSPIRE services



4.2 – Discovery services – Upload services (1)

- Discovery services to search for ***spatial data sets*** and ***spatial data services*** on the basis of the content of the corresponding metadata and to display the content of the metadata.
- As a minimum the following combination of search criteria shall be implemented:
 - keywords;
 - classification of spatial data and services;
 - spatial data quality and accuracy;
 - degree of conformity with the harmonised specifications
 - geographical location;
 - conditions applying to the access to and use of spatial data sets and services;
 - the public authorities responsible for spatial data sets and services.
- Search metadata and response metadata are defined by the Metadata Drafting Team

4.2 – Discovery services – Upload services (2)

- The most relevant specifications for INSPIRE discovery services:
 - OGC CAT 2.0 with the ISO profile for the Web: CS-W 2.0 ISO AP 19115/19119.
 - With a set of queryables and response properties (to be defined)
 - Which query language?
 - Which level of discovery? Dataset only or feature types, properties (need to know the data model => Feature Catalogue)
- The service metadata should be based on ISO19119
 - but not as well developed as ISO19115 is for data metadata
- Other application profiles for services?
 - ebRIM Profile for CS-W? (OGC Specification)
 - UDDI Profile for CS-W?

- Upload services

Possible view as a link defined in the dataset metadata stored in the catalogue on an remote data repository. When a user wants to upload a dataset he uses the publish function of the catalogue service.

4.3 – View services

- *Article 18 (b)* :“**View services making it possible, as a minimum, to display, navigate, zoom in/out, pan, or overlay spatial data sets and to display legend information and any relevant content of metadata**”
- **The most relevant specification for INSPIRE view services is:**
 - Web Map Service - ISO 19128
 - Using the draft CEN TC287 profile of ISO 19128 / WMS 1.3
 - Two profiles general (level 0) and restricted (level1) are defined in the CEN document
 - Need to reach common CEN / INSPIRE profiles
- There is still discussion in the drafting team about parameters:
 - WMS version? 1.3 possible?
 - Output format? PNG, GIF, SVG, WebCGM, ...
 - List of CRS supported? => CRS registry, issue to share with other DTs
 - How to manage the legend?
 - Availability of metadata of a dataset displayed by a view service?
 - How to use CEN profiles?

4.4 – Download services

- *Article 18 (c)* : “download services, enabling copies of complete spatial data sets, or of parts of such sets, to be downloaded”
- **Download services could be understood as:**
 - Download predefined datasets (=download files)
 - Download features through a WFS
- **A workshop on this topic is organised by JRC (19th June):**
 - Download with links to business e-commerce, conceptual models and metadata
 - Presentation of operational experiences

4.5 – Transformation services

- *Article 18 (d)* :“**Transformation services, enabling spatial data sets to be transformed**”
 - The definition of transformation services has to be completed
- **A first instance of transformation services is to operate Spatial Reference System transformations**
- **The most relevant specification for this service is:**
 - OGC WCTS: Web Coordinate Transformation Service (still in draft)
 - Will need a European SRS Registry
- **Other transformation services?**
 - Application schema transformation and/or Feature (set) generalisation service?
 - as a separate service or as a translating WFS (if so, standard needed)?
 - strongly dependent on how implementation rules for data harmonisation will be defined
 - especially the scope generalisation service difficult to define - the state of the art is still predeveloped

4.6 – “Invoke spatial data service” services

- *Article 18 (e)* : “invoke spatial data services” services, enabling data services to be invoked.
- **“Invoke service” services are understood as the possibility to chain services**
- **Some first remarks:**
 - Geoservices chaining is in a early stage
 - There is a strong need for SOAP WSDL UDDI for service chaining
 - There is a need for both CS-W and UDDI
 - Service orchestration should be described using BPEL
- The detailed definition of “invoke service” services has to be refined by the DT



Thank you for your attention

Questions ?

