



# INSPIRE View Service

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Input provided by Network Services Drafting Team

# Content



Network services Drafting team

- Fundamental rules
- Roles
- Standards
- GETCAPABILITIES operation
- SRS
- GETMAP operation
- GETFEATUREINFO operation
- Performances

# View Service – Fundamental Rules

- **Requirements** : View services to display, navigate, zoom in/out, pan, overlay viewable spatial data sets, to display legend and any relevant content of metadata (Art. 11).
  - Art. 14 (e-commerce / protection)
  - Art. 15-2 (EU portal access)
  - Art. 16-a (performances / reporting)
  - Art. 20 (interoperability)
- **Layers** : INSPIRE well-known features – DS & MD IR
- **Styling** : INSPIRE by default – DS & NS IR
- **Well-known SRS** : ETRS89
- **Web Map Service 1.3.0** : ISO 19128:2005(E) + SOAP
- **Multilingualism** : mandatory LANGUAGE parameter
- **Client viewer** : out of scope

# View Service – Roles

- Publisher : allows displaying of layers within INSPIRE framework
  - ISO 19115 Metadata about INSPIRE datasets (Discovery Service)
  - INSPIRE datasets in conformance with INSPIRE DS
- Administrator : manages viewing in accordance with IR
  - GetCapabilities response tuning (Metadata, Legend, Styles, ...)
  - Datasets preparation (supported SRS)
  - ISO 19119 Metadata about View service (optional)
- View service : manages requests / responses
  - GETCAPABILITIES : mandatory
  - GETMAP : mandatory
  - GETFEATUREINFO : optional
- Viewer : interacts with View service

# View Service – Standards

- WMS 1.3.0 : ISO 19128:2005 (EN)
  - Addition of LANGUAGE parameter
- Protocols
  - HTTP GET/POST binding
  - SOAP in all upcoming OGC standards
    - SOAP binding (HTTP/POST) : document/literal
    - WSDL versus GetCAPABILITIES vers ISO 19119 Metadata
    - <http://www.w3.org/TR/SOAP>

# View Service – GETCAPABILITIES operation

- Response content (1) :

```
<WMS_Capabilities version="1.3.0">
```

```
<Service>
```

```
...
```

```
<ContactInformation> <!-- Mandatory in INSPIRE : one of the following -->
```

```
<ContactAddress></ContactAddress>
```

```
<ContactVoiceTelephone></ContactVoiceTelephone>
```

```
<ContactFacsimileTelephone></ContactFacsimileTelephone>
```

```
<ContactElectronicMailAddress></ContactElectronicMailAddress>
```

```
</ContactInformation>
```

```
...
```

```
</Service>
```

```
<Capability></Capability>
```

```
</WMS_Capabilities>
```

# View Service – GETCAPABILITIES operation

- Response content (2) :

```
<WMS_Capabilities version="1.3.0">
```

```
<Service>
```

```
...
```

```
<!-- Geo Right Management : optional in INSPIRE -->
```

```
<Fees></Fees> <!-- "no fees" when free -->
```

```
<AccessConstraints></AccessConstraints> <!-- enumeration (not yet defined) -->
```

```
...
```

```
</Service>
```

```
<Capability></Capability>
```

```
</WMS_Capabilities>
```

# View Service – GETCAPABILITIES operation

- Response content (3) :

```
<WMS_Capabilities version="1.3.0">
```

```
<Service></Service>
```

```
<Capability>
```

```
<Request>
```

```
<GetCapabilities></GetCapabilities> <!-- Mandatory in INSPIRE -->
```

```
<GetMap></GetMap> <!-- Mandatory in INSPIRE -->
```

```
<GetFeatureInfo></GetFeatureInfo> <!-- optional in INSPIRE -->
```

```
</Request>
```

```
<Exception></Exception>
```

```
<Layer></Layer>
```

```
</Capability>
```

```
</WMS_Capabilities>
```

# View Service – GETCAPABILITIES operation

- Response content (4) :

```
<WMS_Capabilities version="1.3.0">
```

```
<Service></Service>
```

```
<Capability>
```

```
<Request></Request>
```

```
<Exception>
```

```
<Format>XML</Format> <!-- Mandatory in INSPIRE, default in ISO 19128 -->
```

```
<Format>BLANK</Format> <!-- Mandatory in INSPIRE -->
```

```
<Format>INIMAGE</Format>
```

```
</Exception>
```

```
<Layer></Layer>
```

```
</Capability>
```

```
</WMS_Capabilities>
```

Internationalization

# View Service – GETCAPABILITIES operation

- Response content (5) :

```
<WMS_Capabilities version="1.3.0">
```

```
<Service></Service>
```

```
<Capability>
```

```
<Request></Request>
```

```
<Exception></Exception>
```

<!--Mandatory support for internationalization => provide relevant XSD -->

```
<INSPIRE:SupportedLanguages>
```

```
<OnlineResource href="****"/>
```

```
</INSPIRE:SupportedLanguages>
```

```
<Layer></Layer>
```

```
</Capability>
```

```
</WMS_Capabilities>
```

```
<complexType name="SupportedLanguages_Type">
  <complexContent>
    <extension base="wms:_ExtendedCapabilities">
      <sequence>
        <element ref="wms:OnlineResource" minOccurs="1"/>
      </sequence>
    </extension>
  </complexContent>
  <element name="SupportedLanguages"
    type="INSPIRE:SupportedLanguages_Type"
    substitutionGroup="wms:_ExtendedCapabilities"/>
</complexType>
```

URL of a file that contains :

FRE=<http://url/CapabilitiesInFrench.xml>

ENG=<http://url/CapabilitesInEnglish.xml>

...

# View Service – GETCAPABILITIES operation

- Response content (6) :

```
<WMS_Capabilities version="1.3.0">
<Service></Service>
<Capability>
<Request></Request>
<Exception></Exception>
<Layer queryable="1">
<Name>Harmonized name</Name> <!-- Mandatory in INSPIRE -->
<Title>For human beings</Title>
<Abstract></Abstract> <!-- Mandatory in INSPIRE -->
<KeywordList></KeywordList> <!-- Mandatory in INSPIRE -->
<CRS></CRS> <!-- Mandatory in INSPIRE -->
<EX_GeographicBoundingBox></EX_GeographicBoundingBox> <!-- Mandatory in INSPIRE -->
<BoundingBox></BoundingBox> <!-- Mandatory in INSPIRE -->
<MetadataURL></MetadataURL> <!-- Mandatory in INSPIRE -->
<Style></Style> <!-- Mandatory in INSPIRE -->
</Layer>
</Capability>
</WMS_Capabilities>
```

Linked with :

- GETMAP.LAYER parameter
- //coupledResource/\*/ScopedName in optional ISO 19119 Service Metadata

Linked with Discovery Service,  
GETRECORDBYID operation

## View Service – SRS

- European Terrestrial Reference System (ETRS) :
  - Continental Europe
  - CRS parameter :
    - Label : CRS, EPSG or AUTO namespaces
    - URL : <http://crs.bkg.bund.de/crs-eu/#identifier> ?
- International Terrestrial Reference System (ITRS) :
  - Outside Continental Europe
  - CRS:84 support as a minimum
- Geographical coordinates
  - mandatory
- Projected coordinates
  - application driven, optional

# View Service – GETMAP operation

- LANGUAGE : **internationalization purpose**
- LAYERS :
  - //Layer/Name in GETCAPABILITIES
- STYLES :
  - No value : INSPIRE:DEFAULT portrayal (black dots, transparent background)
- FORMAT :
  - PNG, image/png : **mandatory in INSPIRE**
  - GIF, image/gif : **mandatory in INSPIRE**
- CRS : Label values (examples)
  - Geographic : EPSG:4258, CRS:84
  - Lambert Conic conform : EPSG:3034
  - Lambert azimuth equal area : EPSG:3035
  - Transverse Mercator : EPSG:3038 to EPSG:3051

# View Service – GETFEATUREINFO operation



- LANGUAGE : internationalization purpose (exception, content)
- INFO\_FORMAT :
  - HTML, text/html : mandatory in INSPIRE

# View Service – Performances

- Performance :
  - 800x600 pixels, 8 bits GETMAP response sent 5s upon request reception
  - 90% of the running time
- Availability :
  - 99% of the time (3.7 days per year), no more than 15mn downtime per day during working hours
- Capacity :
  - 20 incoming requests per second without performance lost
- Reliability : reference tests and datasets recommended
- Security : certification recommended
- Regulatory : reference tests recommended



Thank you for your attention

Questions ?