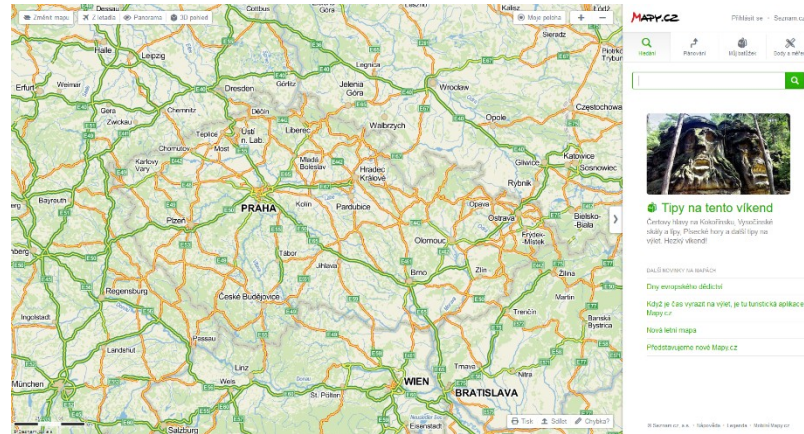
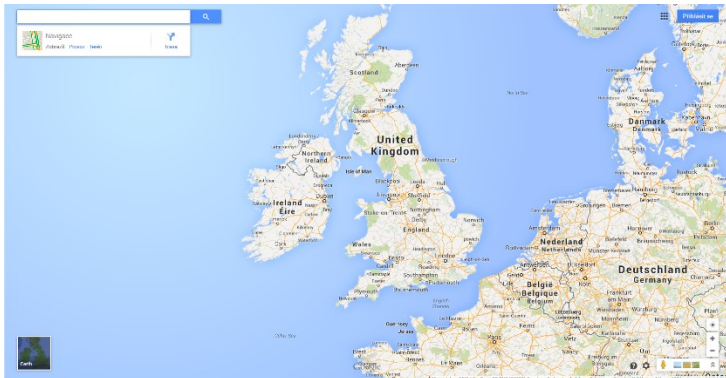


## **4. VIEW PROCESSES, PREVIEW OF DISCOVERED SPATIAL DATA**

# The concept of preview in ESDI

- *“View services making it possible, as a minimum, to display, navigate, zoom in/out, pan, or overlay viewable spatial data sets and to display legend information and any relevant content of metadata.”(Article 11 of the INSPIRE directive)*
- Sounds that familiar to you?
  - Sure, same functionality as Google Maps, Mapy.cz,...



# The concept of preview in ESDI

- *“Experience in the Member States has shown that it is important, for the successful implementation of an infrastructure for spatial information, that a **minimum number of services be made available to the public free of charge**. Member States should therefore make available, as a minimum and free of charge, the services for **discovering** and, subject to certain specific conditions, **viewing** spatial data sets.”*  
(Paragraph 19)

# The concept of preview in ESDI

- *“Data made available through the view services may be in a form preventing their re-use for commercial purposes.” (Article 14)*

Watermark

Degradation of the image quality

Even required registration



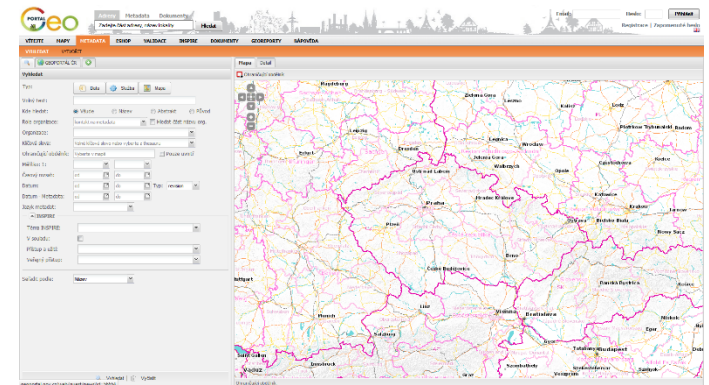
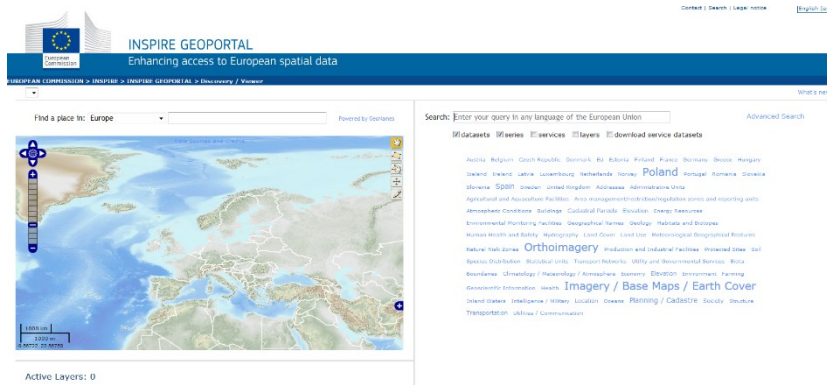
# INSPIRE View service

- Equals to ISO 19128
  - ISO 19128 equals to OGC Web Map Service 1.3.0
    - Only version 1.3.0!

# Two possibilities of connecting to a view service

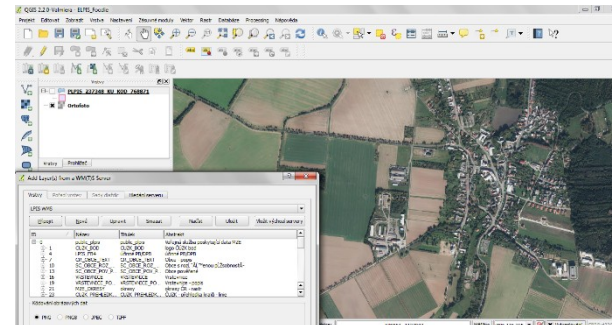
## 1. Through a “thin” client

– typically a Web browser...really like Google Maps



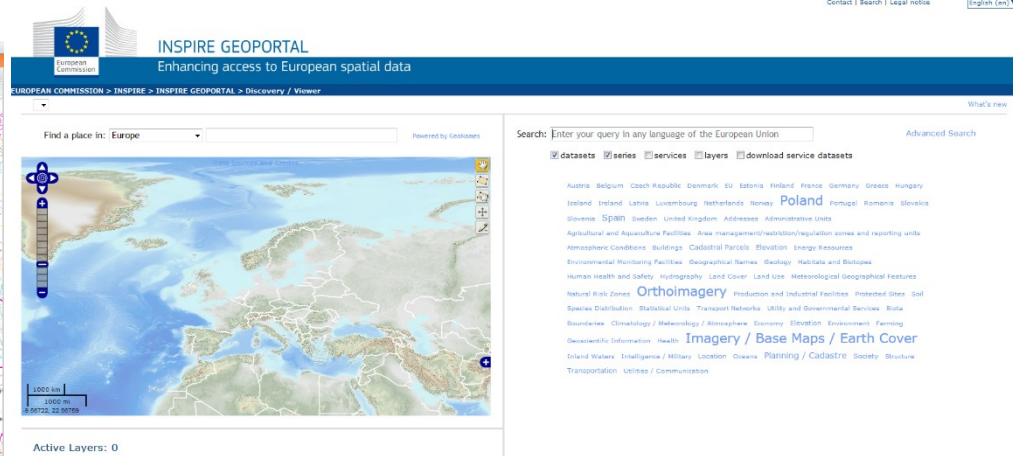
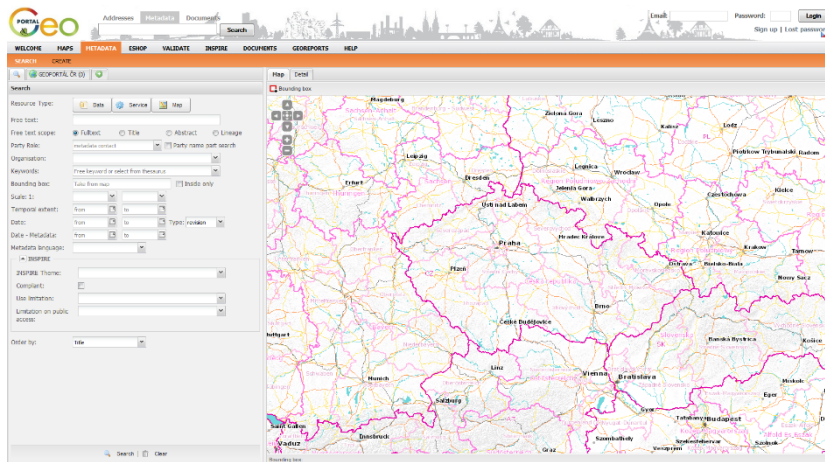
## 2. Through a “thick” client

– e.g. a map client, typically GIS



# Legislation background

- Again, all this is originating from INSPIRE legislation (the same as for discovery services)



- 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

- <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009R0976>

# Let's make it simple...a use case with Web browser

- Type in <http://inspire-geoportal.ec.europa.eu/discovery/> or <http://geoportal.gov.cz/web/guest/map/>

The screenshot displays the Geoportal website interface. At the top, there is a search bar with the text "Zadejte část adresy, název lokality" and a "Hledat" button. Below the search bar, there are navigation tabs for "VÍTEJTE", "MAPY", "METADATA", "ESHOP", "VALIDACE", "INSPIRE", "DOKUMENTY", "GEOREPORTY", and "NÁPOVĚDA". The main content area shows a map of the Czech Republic with a "Topografická" and "Letecká" layer selection. On the right side, there is a "Vrstvy" (Layers) panel with a list of layers including "Stínování", "Popisky", "Katastrální mapy", "Automapa", "Přiblížit na vrstvu", "Průhlednost", "Planstudio", "Metadata vrstvy", and "Automapa". The "Automapa" layer is currently selected, and its properties are displayed in a pop-up window, showing a scale of "Měřítko: 1:3870720 - 1:15120". At the bottom of the page, there is a footer with the text "geoportal.gov.cz/web/guest/map/#" and a logo for "IGC".



# Legislation background

- Sure, all this is again originating from INSPIRE legislation

The screenshot displays the PORTAL.eo web application interface. The main map area shows a geographical region with several colored overlays: a blue outline, a pink outline, and a green area. The interface includes a search bar at the top with the text "Zadejte část adresy, názvu lokality" and a "Hledat" button. The top navigation bar contains links for "VÍTEJTE", "MAPY", "METADATA", "ESHOP", "VALIDACE", "INSPIRE", "DOKUMENTY", "GEOREPORTY", and "NÁPOVĚDA". The right side of the interface features a layer configuration panel for "HEIS VÚV - OpenGIS WMS WMS". This panel is circled in red and contains the following settings:

- Formát obrázků: image/png
- Formát dotazů: text/html
- Souř. systém: Krovak JTSK
- Dlaždicovat:
- Velikost dlaždice: 512
- Jméno složky: [empty field]

The layer configuration panel also shows a tree view with the following structure:

- HEIS VÚV
  - WMS
    - VÚV TGM, v.v.i.
    - Chráněné oblasti přirozené akumulace vod

The bottom of the interface shows a scale bar for 100 km and a copyright notice for "© CÚZK".

# Operations of an INSPIRE view service

- **Get View Service**
  - i.e. GetCapabilities
- **Get Map**
  - i.e. GetMap
- **Link View service**
  - an equivalent to OGC

## VIEW SERVICES

### PART A

#### Operations

##### 1. LIST OF OPERATIONS

In order to be in conformity with Article 11(1) of Directive 2007/2/EC, the View Service shall provide the operations listed in Table 1 of this Annex.

Table 1

Operation	Role
Get View Service Metadata	Provides all necessary information about the service and describes service capabilities
Get Map	Returns a map containing the geographic and thematic information coming from the available spatial datasets. This map is an image spatially referenced

In order to be in conformity with Article 12 of Directive 2007/2/EC, the view Service shall support the operations listed in Table 2 of this Annex.

Table 2

Operation	Role
Link View Service	Allows a Public Authority or a Third Party to declare a view Service for the viewing of its resources through the Member State View Service while maintaining the viewing capability at the Public Authority or the Third party location

**Aren't you missing anything?**

The request and response parameters of each operation complete the description of each operation and form an integral part of the View Service technical specification.

- *Note: OGC GetFeatureInfo is not intended under the INSPIRE standardization framework*

# Get View Service Metadata

- Intended for “thick” clients
- Not applicable for an ordinary user with a Web browser

```
<WMS_Capabilities version="1.3.0" xsi:schemaLocation="http://inspire.ec.europa.eu/schemas/inspire/inspire-1.3.0.xsd">
  <Service>
    <Name>WMS</Name>
    <Title>HEIS VÚV - OpenGIS WMS</Title>
    <Abstract>
      Hydroekologický informační systém VÚV T.G.M. - mapový server OpenGIS WMS (WebMap)
    </Abstract>
    <MaxWidth>5000</MaxWidth>
    <MaxHeight>5000</MaxHeight>
    <OnlineResource xlink:type="simple" xlink:href="http://heis.vuv.cz/">
    </OnlineResource>
    <Fees></Fees>
    <AccessConstraints></AccessConstraints>
  </Service>
  <ContactInformation>
    <ContactPersonPrimary>
      <ContactPerson>
        <ContactOrganization>VÚV TGM, v.v.i.</ContactOrganization>
      </ContactPerson>
    </ContactPersonPrimary>
    <ContactPosition>
    </ContactPosition>
    <ContactAddress>
      <AddressType>postal</AddressType>
      <Address>Podbabská 30</Address>
      <City>Praha 6</City>
      <PostCode>16000</PostCode>
      <Country>Česká republika</Country>
    </ContactAddress>
    <ContactVoiceTelephone>
    </ContactVoiceTelephone>
    <ContactFacsimileTelephone>
    </ContactFacsimileTelephone>
    <ContactElectronicMailAddress>
    </ContactElectronicMailAddress>
  </ContactInformation>
</WMS_Capabilities>
```

<b>Title</b>	Hydroecological information system – map server OpenGIS WMS
<b>Service type</b>	INSPIRE View Service (WMS – Web Map Service according to the OGC)
<b>Service version</b>	1.3.0
<b>Supported languages</b>	Czech, English
<b>Fees</b>	Free of charge
<b>Responsible Party</b>	VÚV TGM, v.v.i.
<b>E-mail</b>	info@cenia.cz
<b>Supported operations</b>	Get View Service Metadata Get Map Link View service GetFeatureInfo



catalogue

Laboratory on Geoinformatics and Cartography

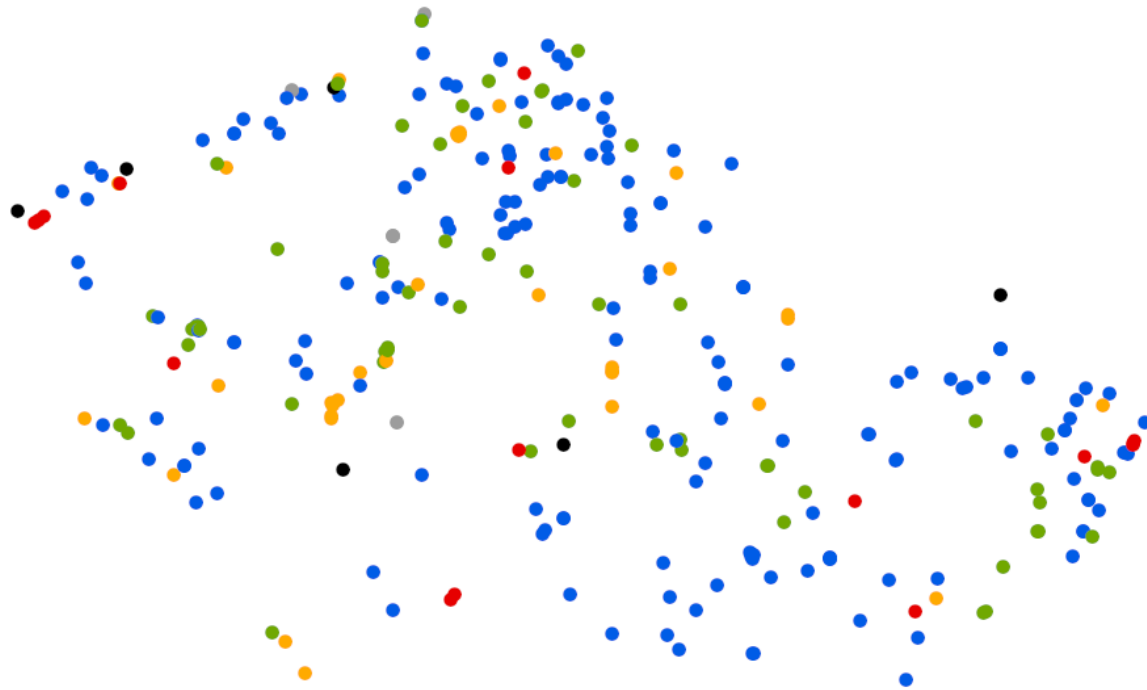
<http://heis.vuv.cz/data/webmap/isapi.dll?SERVICE=WMS&REQUEST=GetCapabilities>



client



# Get Map



# Thick client – a GIS platform

QGIS 2.2.0-Valmiera - ELPIS\_Foodie

Projekt Editovat Zobrazit Vrstva Nastavení Zásuvné moduly Vektor Rastr Databáze Processing nápověda

Vrstvy

- PLPIS 237348 KU KOD 768871
- Ortofoto

Vrstvy Prohlížeč

Add Layer(s) from a WM(T)S Server

Vrstvy Pořadí vrstev Sady dlaždic Hledání serveru

LPIS WMS

Připojit Nové Upravit Smazat Načíst Uložit Vložit výchozí servery

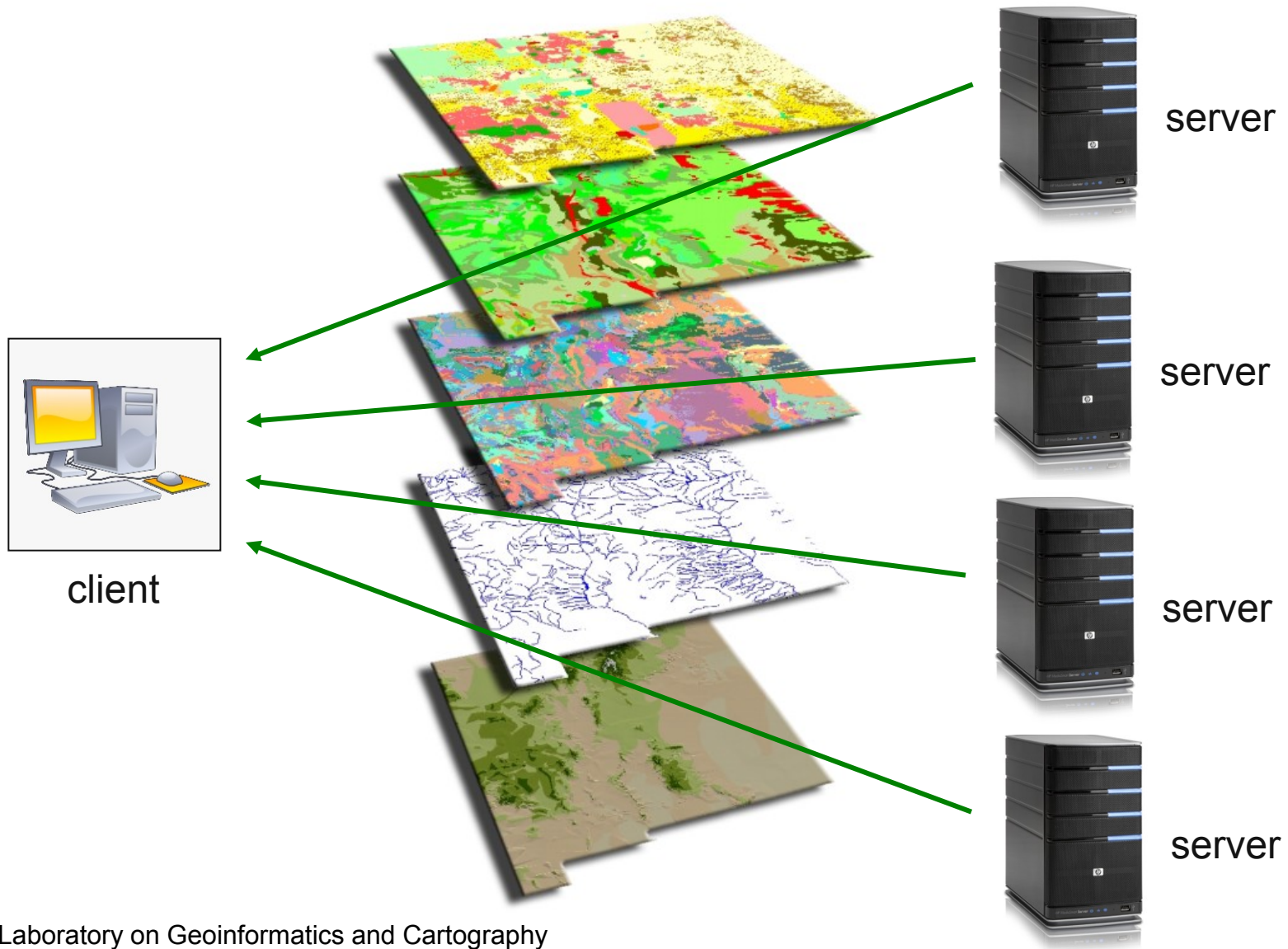
ID	Název	Titulek	Abstrakt
0	public_plpis	public_plpis	Veřejná služba poskytující data MZE
1	CUZK_BOD	CUZK_BOD	logo ČUZK bod
4	LPIS_FB4	účinné PB/DPB	účinné PB/DPB
7	CR_OBCE_TEXT	CR_OBCE_TEXT	Obce - popis
10	SC_OBCE_ROZ...	SC_OBCE_ROZ...	Obce s rozl. "ÁĽ"menou p.řsobnostĀ-
13	SC_OBCE_POV_P...	SC_OBCE_POV_P...	Obce pověřené
16	VRSTEVNICE	VRSTEVNICE	Vrstevnice
19	VRSTEVNICE_PO...	VRSTEVNICE_PO...	Vrstevnice - popis
21	MZE_OKRESY	okresy	okresy ČR - rastr
23	CUZK_PREHLEDK...	CUZK_PREHLEDK...	ČUZK - přehledka krajů - linie

Kódování obrázkových dat

PNG  PNG8  JPEG  TIFF

snice: -536854,-1127947 Měřítko :806 116 295 Vykreslování EPSG:4326

# Chaining of catalogues (through Link View Service Operation)



# Quality of service

- Again defined in legislation
- For a **470 Kilobytes image** (e.g. 800 × 600 pixels with a colour depth of 8 bits), the response time for sending the initial **response to a Get Map Request** to a view service shall be **maximum 5 seconds** in normal situation. Normal situation represents periods out of peak load. It is set at 90 % of the time.
- The **minimum number of served simultaneous requests** to a view service according to the performance quality of service shall be **20 per second**.
- The probability of a Network Service **to be available** shall be **99 % of the time**.

# Quality of service...still the same

Uptime [%]	Maximum downtime		
	Per week	Per month	Per year
95	8.4 hours	36.00 hours	18.25 days
98	3.4 hours	14.40 hours	7.30 days
99	1.7 hours	7.27 hours	3.63 days
99.9	10 minutes	0.73 hours	8.76 hours