

EuroGeoNames Workshop 6

Summary of actions since the last EGN workshop

Freising

3 June 2008

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Frankfurt am Main

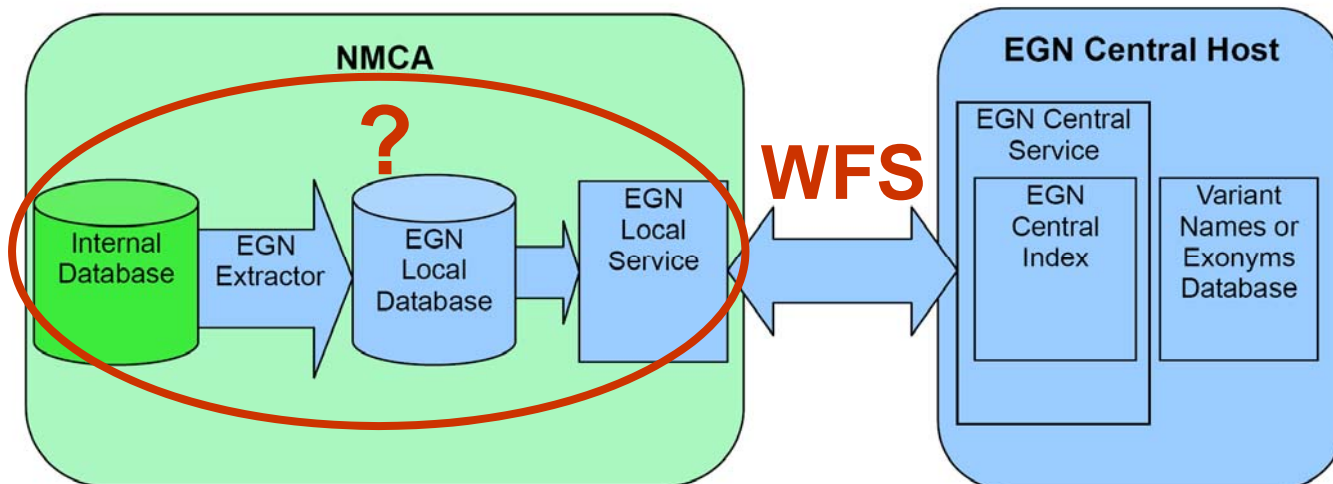
Actions concerning...

- EGN data model
- EGN implementation
- related initiatives
- impact

■ EGN data model – purpose

Purpose - Define a **harmonised data model** for the provision of geographical names **across European NMCAs**:

*“The essence of the harmonisation process is to enable the **access and use** of existing **heterogeneous datasets** and their collections of feature objects across currently separate domains. The challenge is to **define mappings** across domains as well as data and feature models.” (DoW, EGN)*



EGN data model – prerequisites



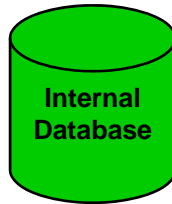
INSPIRE D2.5 v2.4 – Generic Conceptual Schema

*“The use of gazetteers and spatial reference systems using geographic identifiers in **INSPIRE** follows ISO 19112.*

*However, the schema from ISO 19112 is **not used as-is** to correct errors in that schema and allow for a better integration in **INSPIRE** as a spatial data infrastructure.” [...]*

*“Gazetteers are first of all needed for indirect spatial referencing, [...] i.e., it is crucial that **all geographic identifiers are unique.**”*

■ EGN data model – prerequisites



1. Support of ISO 19112



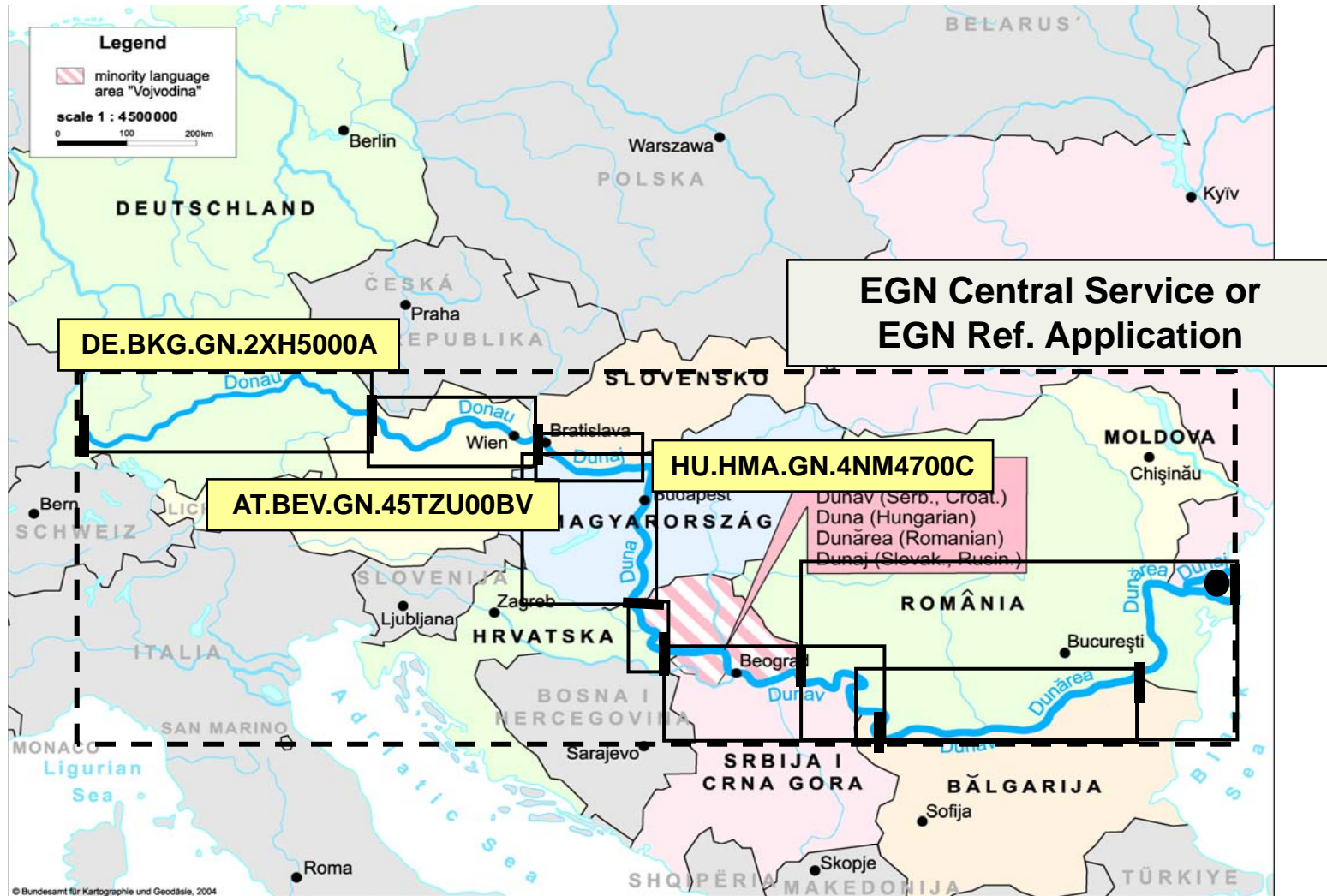
2. Subtyping (a)

INSPIRE D2.5 v2.4 – Generic Conceptual Schema

The generic application schema contains [...] **changes to the ISO 19112 model** based on requirements of INSPIRE and implementation experiences:

- ***PT_FreeText** has been used as a data type instead of **CharacterString**. [...] explicitly as all gazetteers in INSPIRE are assumed to be multilingual.*
 - ***Multiple alternative geographic identifiers** are supported. [...]*
- a) Geographical names **understood as gazetteer location instances?**
⇒ subtyping the gazetteer types (or specifying realisations) appropriate.
- b) Geographical names **not understood as gazetteer location instances?**
⇒ mapping the GN schema to the gazetteer schema maybe more appropriate.

EGN data model – „INSPIRE_UID“ within EGN



■ EGN data model – open issues tbd

- Some **additional attributes** relevant for the INSPIRE TWG-GN should be introduced in EGN (e.g. “Script”) in class *EGN::LocationInstanceName*?
- *EGN::ComplexGeometry* is not transferred within the first implementation. What are the „correct“ coordinates in **position: GM_Point** for area or line features/spatial objects?
- Some ‘**optional**’ **associations** might be too weak and should be specified? (e.g. *spatialObject* [0..1] to *SI_LocationInstance* [1..*])
- Is the “**INSPIRE_UID**” (as it is understood within EGN) clear to all? This has to be verified with INSPIRE Drafting Teams. Better to change its name to “**EGN_spatialObject_UID**”?
- ...

Discussion either under **TOP 4 to 6** (Geodan) or under **TOP 12** (Optional technical session).

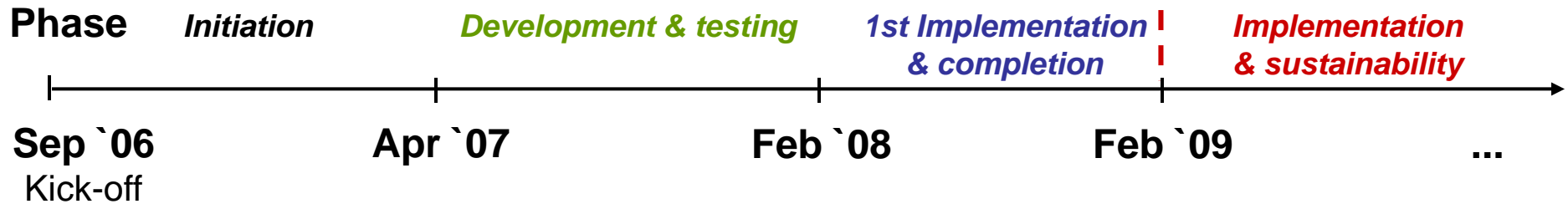
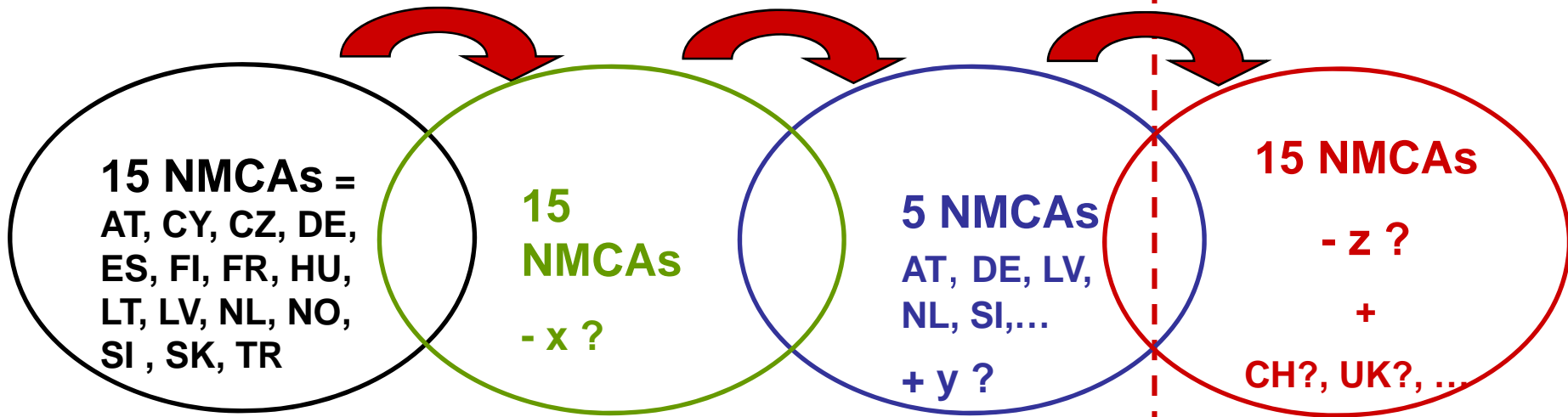
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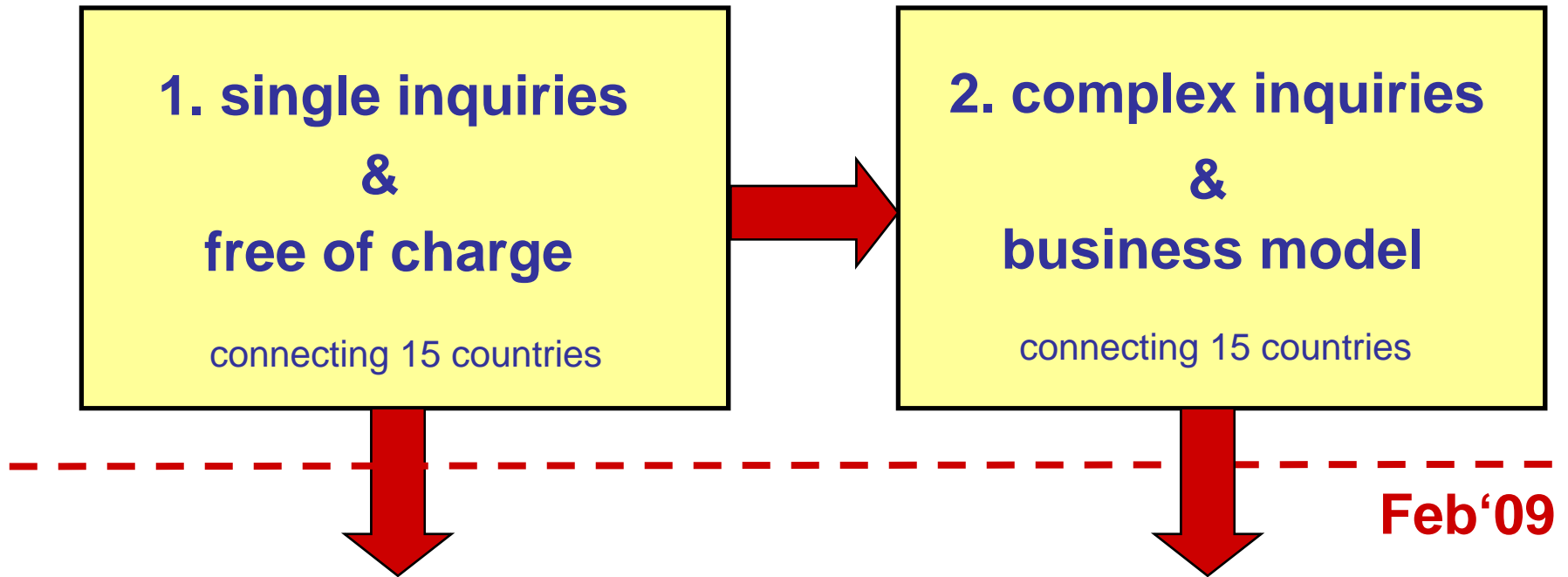
Phased implementation - status

vision → concept → implementation → impact

end of the eContent+
project duration



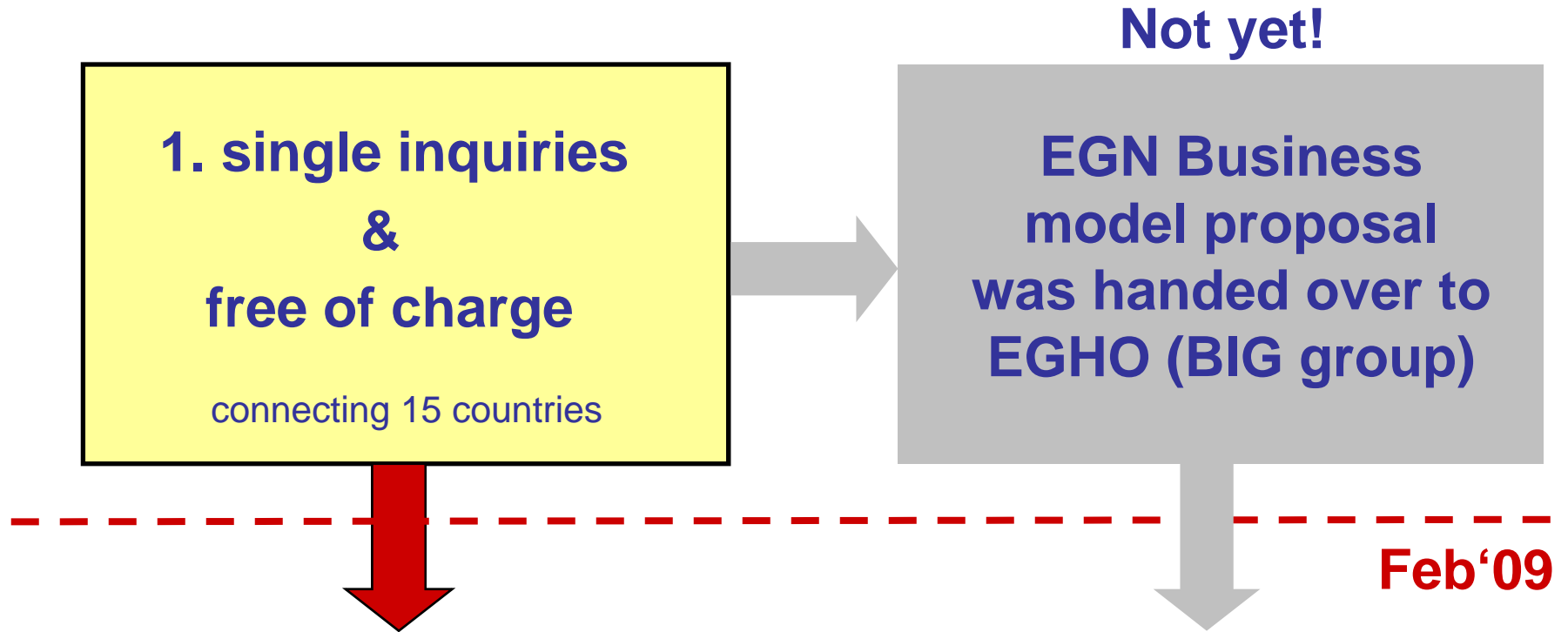
- **Phased implementation – 2 scenarios considered**



Implementation Plan aiming at full European coverage

(for beyond the funded period - at least for 3 years)

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- **Related initiatives – INSPIRE Thematic Working Group on Geographical Names, TWG-GN** (since Feb'08)

Goal:

To develop an **Implementing Rule** for the theme “Geographical Names” according to Directive 2007/2/EC of 14 March 2007.

The TWG-GN consists of nominated experts for 'Geographical Names':

- 3 experts from ES, FI, DE are members of the TWG and also the contact persons within the 'EGN Reference Group'.
- Andreas Illert (BKG) is the so-called facilitator (chair) of the INSPIRE-TWG-GN.

EGN material submitted to INSPIRE:

- D4.2 – Conceptual schema & documentation (→ gazetteer profile)
- D2.1 – Final Report on user/business requirements (→ use cases)
- D3.3 – Metadata profile
- EGN feature classification

■ **Related initiatives – OGC Standards Working Group, OGC SWG** (since Mar'08)

Goal:

New OGC Standards Working Group (SWG) on a WFS Gazetteer Profile is being formed in order to formalize the adaptation of ISO 19112 to carry geographical names information in XML format (based on document version 0.9.3, OGC 05-035r2).

EGN Consortium represented by EDINA and BKG (,observer' status)

EGN concept integrated in 'Change Request', CR 08-052:

- *“ISO 19112 LocationInstance is not sufficient, i.e. [...] extend the 'LocationInstance' type. [...] **usefulness of subtypes** of LocationInstance [...].”*
- *“This would allow generic clients without schema analysis capability to connect to any WFS-G [...].”*

■ Related initiatives – www.Geonames.org

Goal:

Aggregate **free geographical names data** from various sources and make it available as a **database** or via a range of **web services**.

Content:

- GeoNames includes over **8.5 million toponyms** for 6.5 million places with **2 million alternate names in up to 200 languages**.
- The information covers **coordinates, administrative divisions, postal codes, population, elevation, timezone** amongst others.
- Geonames aggregates data from **NMCAs** (no European!), **national statistical offices, national postal services** as well as the **US Army** (GNS Server = main source), **Wikipedia** and **gtopo30** (elevation data).

■ Related initiatives – www.Geonames.org

Functionality:

Geonames answers questions such as

- *where is a place? what are its coordinates?*
- *which region or province does the place belong to?*
- *what city or address is near a given GPS latitude/longitude?*

→ Typing in ‘Hasselt’:

- **versions of the name in other languages** (e.g. exonyms) are presented, including esperanto. (Hasselt: exonyms in 18 languages).
- All names have **most important attributes associated** (feature codes, names numbered, indication of country, etc).
- map option shows the location of all entries **using GoogleMaps**.

In **April 2007** Geonames reported **15,000 downloads** of the database and **30 million web service requests**.

■ Related initiatives – www.Geonames.org

GeoNames Home | Postal Codes | Download / Webservice | About [login](#)

Donau all countries

Feature Class: stream, lake, ...

Continent: all

fuzzy search :

14 records found for

Name	Country	Feature class	Latitude	Longitude
1 Alte Donau Alte Donau Arm,Altes Donaubett,Old Danube	Austria , AT.09,03	anabranch	N 48° 14' 3"	E 16° 00' 0"
2 Ludwig-Donau-Main-Kanal Ludwig-Kanal,Ludwigs Kanal,Main-Danube Canal	Germany , Bavaria	canal	N 49° 26' 0"	E 11° 00' 0"
3 Donau	Germany , Brandenburg	stream	N 51° 48' 0"	E 14° 00' 0"
4 Rhein-Main-Donau-Kanal Europa Kanal,Main-Donau-Kanal	Germany ,	canal	N 49° 52' 0"	E 10° 00' 0"
5 Alte Donau	Germany , Bavaria	lake	N 48° 58' 0"	E 12° 00' 0"
6 Alte Donau	Germany , Bavaria	channel	N 48° 43' 0"	E 13° 00' 0"
7 Donau Kanal Danube Canal	Austria , AT.09,03	navigation canal(s)	N 48° 15' 23"	E 16° 00' 0"
8 Neue Donau	Austria , Wien	section of stream	N 48° 9' 18"	E 16° 00' 0"
9 Neue Donau	Austria , AT.09,03	anabranch	N 48° 15' 51"	E 16° 00' 0"
10 Danube Danube,Danubio,Danubius,Danubo,Donau,Duna,Dunai,Dunaj,Dunarea,Dunav,Dunay,Dunărea	RO,HU,DE,CZ,AT,BG,HR,SK,UA,YU,MD	stream	N 45° 20' 0"	E 29° 00' 0"
11 Mosoni-Duna Kis Duna,Kis Dunaag,Kis Dunaág,Klein Donau,Kleine Donau,Little Danube River,Maly	HU,SK	anabranch	N 47° 44' 0"	E 17° 00' 0"

■ Related initiatives – www.Geonames.org

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Map center : N 45° 19' 58" E 29° 40' 1"

[ExploreOurPla.net](#) [google earth](#) [taqzania](#) [mapquest](#)



Karte Satellit **Hybrid** Gelände

GeoNames Wikipedia

- features**
- city, village,...
 - mountain, hill, rock,...
 - stream, lake, ...
 - country, state, region,...
 - parks, area, ...
 - road, railroad
 - spot, building, farm
 - forest, heath, ...
 - undersea

Rank	Icon	Name	Country	Feature	Distance
1	H	Danube River	Romania	stream	0.04 km
2	H	Gura Stambul' vechni	Romania	marine channel	3.67 km
3	H	Kiliys'ke Hyrlo	Ukraine	stream	3.67 km
4	I	Ostrov Stambul'skiy	Ukraine	island	3.74 km
5	I	Ostrovul Popina	Romania	island	3.9 km

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■ Impact

EuroGeoNames.org

vs.

Geonames.org

- ✓ Accessibility of the **primary sources** of **official** geographical names data and their related **multi-lingual attributes**
- ✓ **Continuous updating** by the EU countries themselves, i.e. **no secondary data sets**
- ✓ **Endonym** (NMCAs) as the primary entry, linked to the (**standardized**) **exonyms** and other names
- **Comprehensive**, but **not full European coverage yet**
- Provision of information through a **cascading WFS infrastructure & services** (complex)
- ✓ Support of (at least simple) **spatial relationships** (bounding boxes, full geometry possible)
- ✓ Link to **spatial objects (UIDs)** of NMCA datasets and **Metadata** of the national sources available
- ✓ Facilitate **quality control** through **official national cooperation** on a European level
- Accessibility of the **third-hand official source** (e.g. US army) and **unofficial data** (e.g. Wikipedia) and some **multi-lingual attributes**
- ✓ **Continuous updating**, but of a **secondary data set**
- **Endonyms** and **exonyms** and other names not systematically collected and not standardized
- ✓ **Comprehensive** and **full European (World) coverage**
- ✓ Provision of information through a **easy-to-implement web service** (based on a central DB)
- **No direct spatial relationships** (point coordinates)
- **No link to NMCA data** (point coordinates) and **Metadata not satisfactorily** available
- Facilitate **quality control** through **'ambassadors'**, (most of them unknown within UNGEGN)

■ Impact

*“I prefer the data from **Geonames.org**, which has a simple [...] service for geocoding names, finding locations [...] and some other great geographical backend calculations. The Geonames database is **one of the best available**, based on multiple data sets, and it uses a liberal Creative Commons Attribution license for its data output. It's also **quick and responsive**.”*

(NN user, Forum ‘LinuxWorld.com’, Dec’06)

The questions are now:

*Is the **content** provided by Geonames.org (et al.) **sufficient for all use cases?** (particularly referring to governmental decision-making-processes in the EU)*

*Or is there rather a **need (use cases?)** for getting/using the **original, regularly updated and more detailed data**, which has been quality checked through official national cooperation on European level?*

■ Impact

Prerequisites for the success of EuroGeoNames:

1. full European coverage needed!

- NMCAs have to be motivated to be connected to EGN,
- maybe, declaration as *test/first implementation* for the “3 years guarantee” of the “free-of-charge-implementation”(DoW)?
- after the 3 years (mid-2011), negotiations with the NMCAs!
EGN Business Model proposal could be the starting point...

2. High performance of EGN services needed!

- NMCAs would have to accept a certain common denominator for the EGN services' maintenance (= agreements).

... Questions?

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