



Session:

Implementation of regional names servers – the experience of EuroGeoNames

V1

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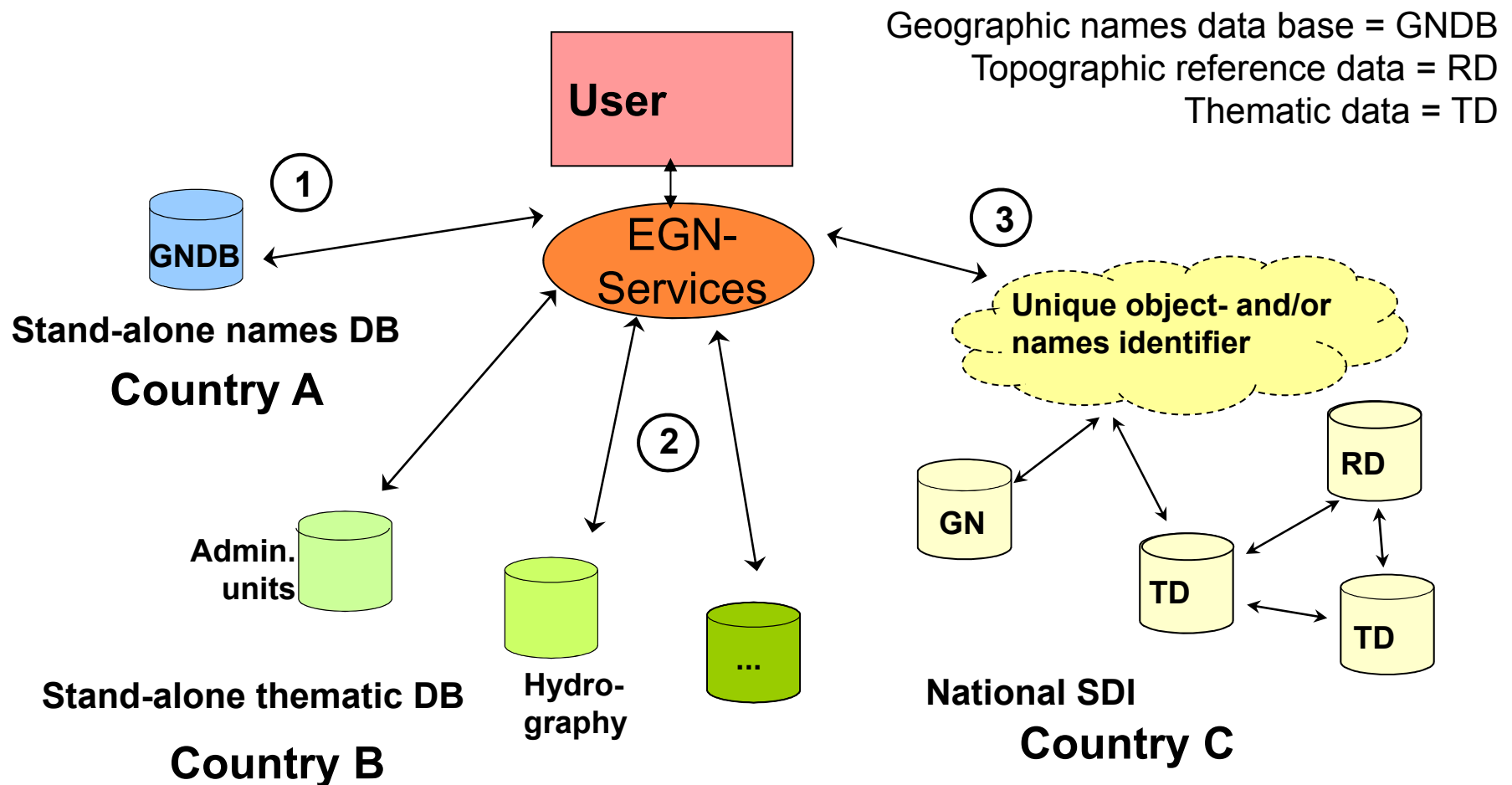


Content

- **Objectives and their realisation** [EGN movie](#)
 - Introduction (Partner, finances, etc.)
 - Distributed EGN services' architecture
 - Implementation status: services & applications
 - Supposed sustainability
- **Lessons learned in terms of**
 - Management and partnership aspects
 - User related aspects
 - Technical aspects
- **Current setup for EGN in 2014**



Concept - Geographical names data to be aggregated





Project EuroGeoNames (EGN) –

Developing a European geographical names infrastructure and services based upon the decentralized kept and maintained national data bases

= distributed OGC Web Feature Services architecture

Co-funded by the eContent*plus* programme of the EC

Budget: 1.900.000 Euro (50% co-funded)

Co-funded duration: Sep' 2006 to Feb' 2009



Partners – EGN Consortium



- BKG, Frankfurt am Main (Co-ordinator)
- Bundesamt für Eich- und Vermessungswesen, Wien
- Surveying and Mapping Authority of Slovenia
- EuroGeographics Head Office, Paris
- Universiteit Utrecht, Geographic Department
- EDINA National Data Centre, Edinburgh
- Geodan Holding, Amsterdam
- ProDV AG, Dortmund
- ESRI Geoinformatik GmbH, Kranzberg

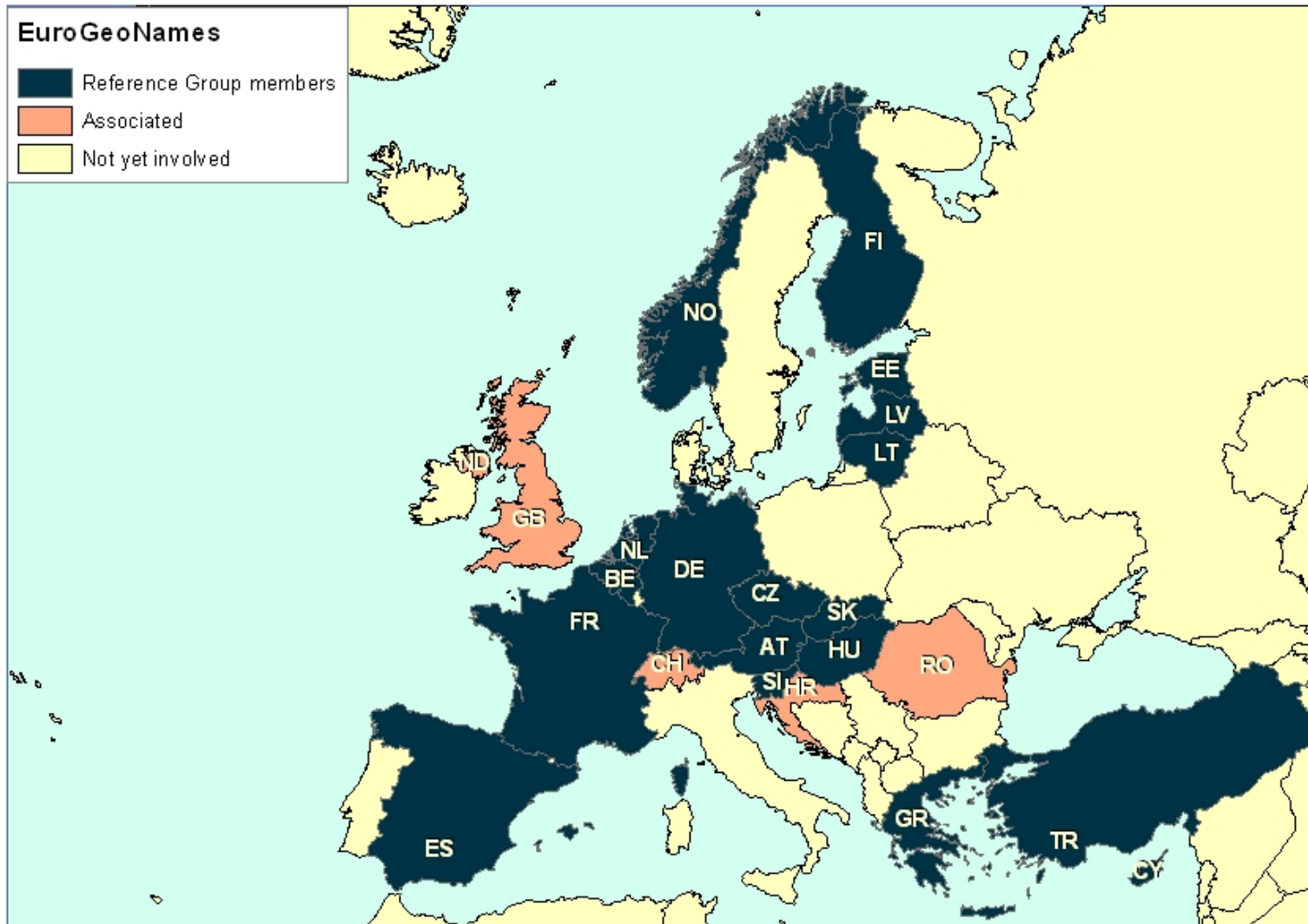
**Public
sector**

**Academic
sector**

**Private
sector**



Partners – EGN Reference Group (NMCAs)





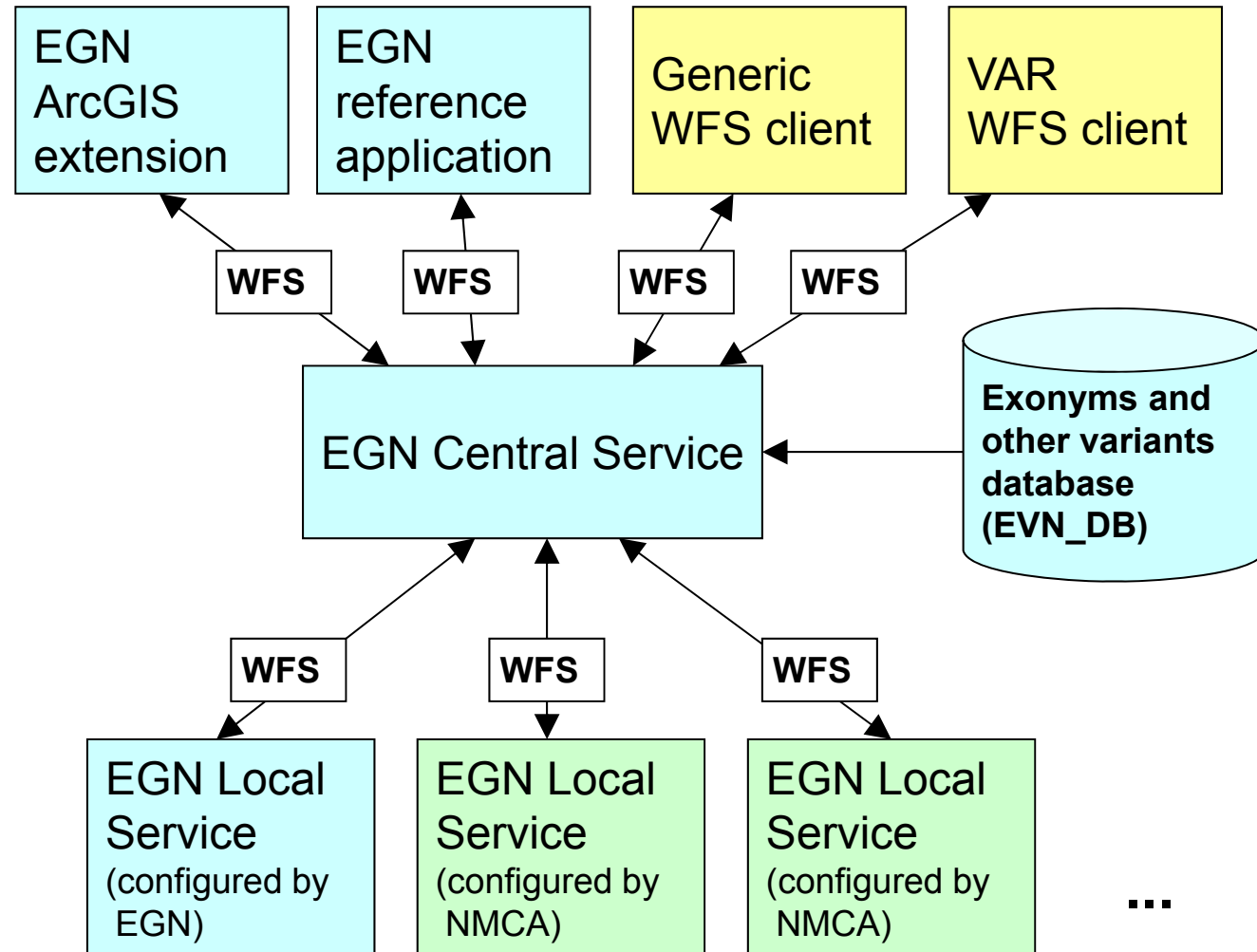
Distributed Web Feature Services' architecture



OGC Web Feature
Services – WFS

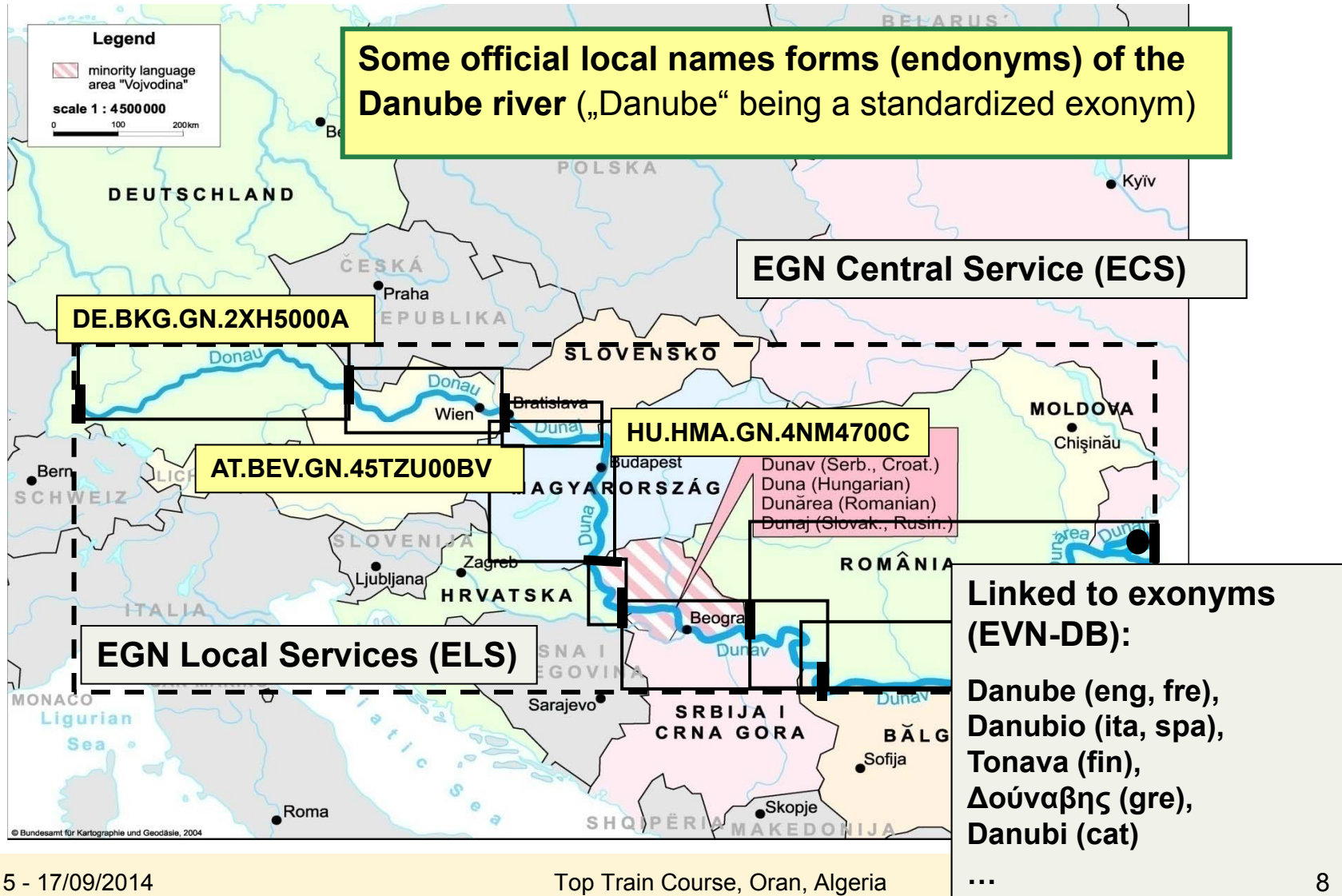
Support of
ISO 19112 and
compliance with
the INSPIRE
requirements
(D2.5 v3.2)

 Made by EGN
 Made by NMCA
 Made by others





Complexity – linkage between ECS & ELS & EVN-DB





Implementation – harmonized feature types



- **8 classes and 27 subclasses** defined by EGN Reference Group
- essentially for the purpose of **query-filtering**
- EGN gazetter model allows for different feature classifications to be used (e.g. INSPIRE IFCD)

Code	Feature Type	Short Definition	Feature Type Examples	
1	COUNTRIES, ADMINISTRATIVE UNITS AND OTHER AREAS	Countries, territorial units of a country for administrative purposes and other man-made areas		
	1.1	Country	Country of Europe	
	1.2	Administrative units	Territorial units of every country for statistics and administrative purposes	
			<i>Including:</i> Nomenclature of Territorial Units for Statistics in EU (NUTS 1, 2 and 3)	länder (Germany) autonomous region (Spain) province
Local Administrative Units (LAU 1 and 2)			municipality	
	Other administrative units			
1.3	Other non-administrative units	Other type of man-made areas like economic, cultural, linguistic or tourist areas		
2	POPULATED PLACES	Buildings for housing of any category like cities, towns, villages, etc.		
	2.1	Administrative capitals	Populated places with capital status	

...



Reference application – search & visualization



“1st window”

end-user interface
defines name
searches, displays
results and
demonstrates
functionality of the
EGN infrastructure

**8 languages
supported**

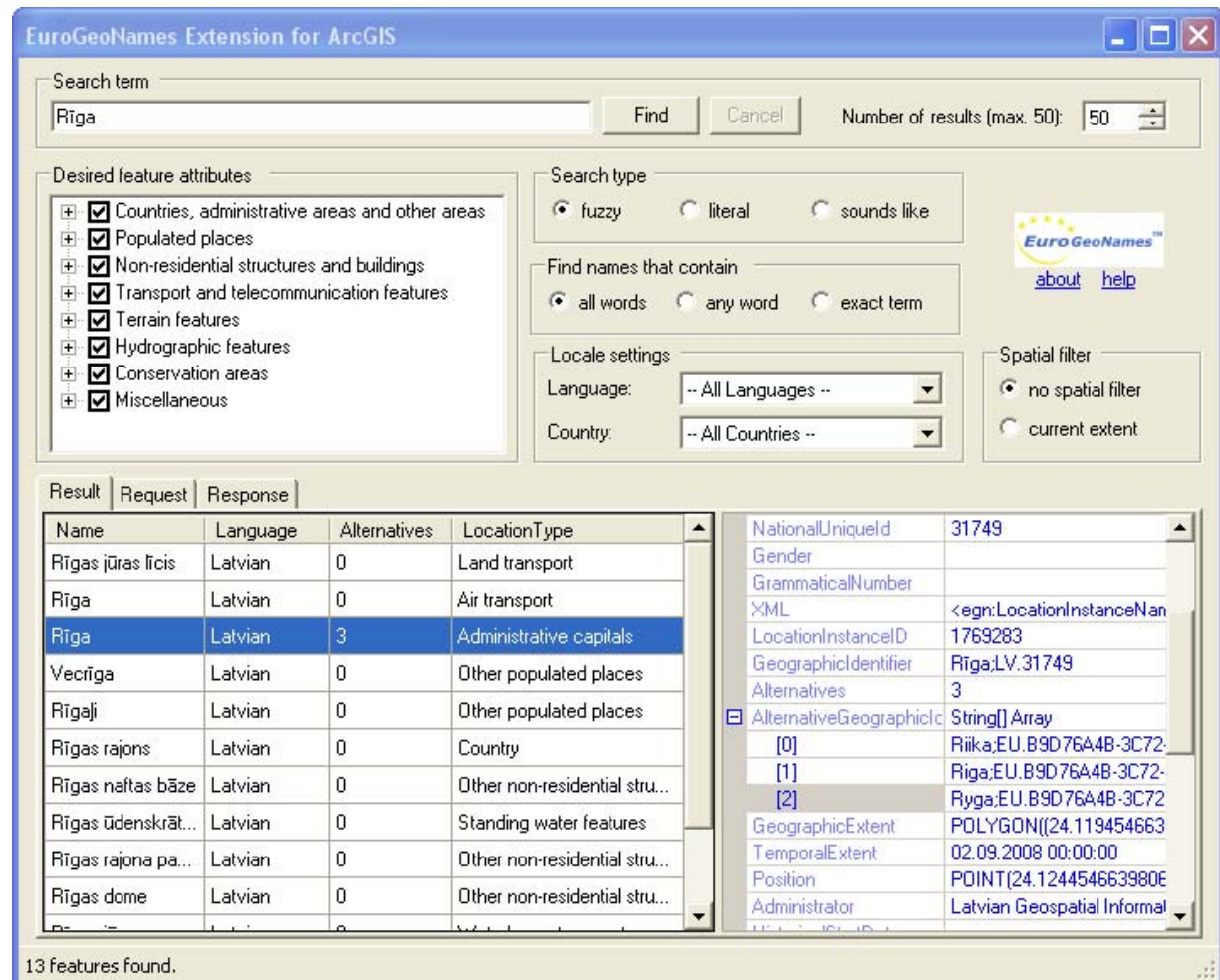


“2nd window”

enables **ESRI
ArcMap** to perform
name searches, to
analyze, visualize and
save the results in a
standard commercial
GIS

**1 million ArcGIS
user base**

available as free
download



EuroGeoNames Extension for ArcGIS

Search term: Find Cancel Number of results (max. 50):

Desired feature attributes:

- Countries, administrative areas and other areas
- Populated places
- Non-residential structures and buildings
- Transport and telecommunication features
- Terrain features
- Hydrographic features
- Conservation areas
- Miscellaneous

Search type: fuzzy literal sounds like

Find names that contain: all words any word exact term

Locale settings: Language: Country:

Spatial filter: no spatial filter current extent

Name	Language	Alternatives	LocationType
Rīgas jūras līcis	Latvian	0	Land transport
Rīga	Latvian	0	Air transport
Rīga	Latvian	3	Administrative capitals
Vecrīga	Latvian	0	Other populated places
Rīgaji	Latvian	0	Other populated places
Rīgas rajons	Latvian	0	Country
Rīgas naftas bāze	Latvian	0	Other non-residential stru...
Rīgas ūdenskrāt...	Latvian	0	Standing water features
Rīgas rajona pa...	Latvian	0	Other non-residential stru...
Rīgas dome	Latvian	0	Other non-residential stru...

13 features found.



Sustainability – Implementation Plan 2009 - 2012



A joint venture, mainly between **BKG** and **EuroGeographics**:

- Host the EGN Central Service **BKG**
- Host the EGN Reference Application **BKG**
- Continuing technical support for NMCAs (EGN Local Services) **BKG**
- Technical support for EC (in integrating the EGN Central Service in applications or services) **BKG**
- **Project management and administrative support for pilot customers** (development of business model) **EuroGeographics**
- Further development of the EGN infrastructure & services **XY**
(development of new functionality requested by pilot customers/VARs)

... on a tendering process



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Management and partnership aspects (1/2)

- ✓ **strong consortium** with different views (public, academic and private institutions), which worked very effectively together.
- ✓ **high esteem with many European NMCA**s has been very important and a prerequisite for setting up the infrastructure on a voluntary basis!
- ✓ **GI community and geographical names experts got closer** and worked effectively together.



Management and partnership aspects (2/2)



sustainability became a problem without **technical and organizational agreements with the NMCAs** (distribution agreements, service level agreements / objectives, etc.).



implementation plan for 2009 – 2012 had been prepared. But, its adoption by EuroGeographics was needed for sustainability!



User related aspects (1/2)

- ✓ **good approach of further GI stakeholders' involvement** within the *EGN Group of Interest* (e.g. private companies, UNGEGN, INSPIRE, etc.).
- ✓ provision of **official endonyms linked to standardized exonyms are needed** and requested mainly by public institutions (e.g. European Statistical Office – Eurostat).
- ✎ business and pricing model proposed by EGN was based on a **too optimistic cost/benefit analysis**. No amendments to user/business requirements provided by the pilot customers was done.



User related aspects (2/2)



Existing competition with free-of-charge initiatives / services (geonames.org, google, etc.).

Most end-users seem not to need standardized exonyms and official endonyms or aren't even aware of the fact that they can be provided in a standardized/official form!

⇒ UNGEGN has to stronger promote the necessity of disseminating authoritative/standardized names data!



Technical aspects (1/1)

- ✓ **harmonization of official data and channeling of this information** within a distributed approach has been demonstrated to be possible.
- ✓ **harmonized feature classification was intensively discussed** and finally a general one – satisfactorily for the purpose of query filtering – could be agreed with the NMCAAs.
- ☞ **different understanding** on how a “**gazetteer profile**” should look like (ISO 19112 does not facilitate multi-names and multilingualism → INSPIRE profile, OGC Gazetteer profile).



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- EGN was reorganised by the Finnish Geodetic Institute as a **Cloud service in Amazon** in 2013.
- All national services had been re-connected in 2014
- New technical features since 2014
 - OGC standardised Web Map Tile Service (WMTS)
 - access to EGN content in Java Script Object Notation (JSON) format
 - support for KML-encoded output. In addition the service can be accessed directly from a network link that could be visualised in the Google Earth
 - Output of EGN Central Service is available as Core Location Vocabulary (CvL) via the Web Feature Service (WFS), or the Gazetteer Service AP of WFS, interface



Current setup of EGN in 2014



**Coverage
17 countries**



Current setup of EGN in 2014



Search for places: Search for exonyms: Language:

Divisions administratives:
[Leuven](#) [Louvain](#) [Löwen](#)
[Leuven](#) [Leuven](#) [Leuven](#) [Leuven](#) [Leuven](#)

Autre lieu habité:
[Leuven](#)
[Leuven](#)

Divers:
[Leuven](#)

Name	Name ID	Language	Type	Primary	Date modified	Administrator	Location type	Spatial object ID
Leuven	Leuven;BE.657.3	dut	official	true	2009-08-01	Institut géographique national, Bruxelles = Nationaal Geografisch Instituut, Brussel – Nationalgeografisches Institut, Brüssel	Divisions administratives	BE.NGI.491



Diversity of EGN data content

Country	Number of location instances	Number of place names	Percentage of alternative names	Percentage of the total nbr of names	Notes
Spain	3668	4042	9,3	0,2	Very few names
Lithuania	28176	28206	0,1	1,3	
Estonia	38863	38863	0,0	1,8	By file data transfer
Switzerland	0	0		0,0	No successful access so far
The Netherlands	169895	182615	7,0	8,7	Many repeated names
Germany	68153	69168	1,5	3,3	
Czech Republic	260465	260465	0,0	12,4	
Slovenia	54952	55106	0,3	2,6	
Croatia	10859	11098	2,2	0,5	
France	326879	327339	0,1	15,5	
Finland	797967	808488	1,3	38,4	Too dense data set
Belgium	66228	80865	18,1	3,8	
Latvia	51279	51442	0,3	2,4	
Cyprus	45299	46114	1,8	2,2	
Austria	109187	110196	0,9	5,2	
Great Britain	26636	26919	1,1	1,3	Partial coverage
Norway	0	0		0,0	No access allowed
Greece	0	0		0,0	No data available
Exonym DB	1892	4894	61,3	0,2	
Total	2060398	2105820		100,0	



“Production Plan” since 2014

- Request to members for links to national services on geographical names
 - New EGN database – 6 tables instead of 22, spatial indexes, conforms ISO10112 and OGC Gazetteer Application Profile
 - Main technical requirement - INSPIRE compliant national webservice
 - Right to data use – Framework License Agreement
- EGN will serve EuroGeographics as GeoProduct Finder
 - Compliant specifications
 - NO downloads
 - NO dissemination as a product



Thank you for your attention!