The European Location Framework

Presentation to: TN-ITS/INSPIRE session at INSPIRE Conference

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The ELF project

- 15 national mapping authorities
- Private sector
- Universities
- CIP ICT PSP programme
- 3 years – 13 million euros

Not only a project – a sustained activity for the future
INSPIRE – harmonizing geospatial content across Europe

34 thematic domains including transportation networks
The European Location Framework creates a single point of access to key INSPIRE data
Our vision

★ ELF is providing a geospatial reference infrastructure
★ Interoperable data and services
★ Full coverage of Europe
★ Support International Standards and INSPIRE
★ Quality and metadata
★ Management of national data through interoperable processes
ELF – key features

Beyond INSPIRE

★ Single point of access
★ Data from authoritative (public) sources
★ Quality assured
★ Cross-border – edge-matched
★ Up to date (webservices)
★ Incremental updates
★ Easy to use (cloud)
★ Links to thematic data (spatial / non spatial)
★ A pool for developing applications
The ELF thematic domains

Cadastral Parcels
Addresses
Administrative Units & NUTS statistical units
Hydrography and Sea regions
**Transport Networks**
Geographical Names and Populated places
Elevation
Land Cover - Populated places and Vegetation
Buildings
Protected Sites
Miscellaneous other content
The ELF platform was launched today – 2 hours ago!
Technical Architecture

ELF Geo-Tools for Reference Data: edge matching, generalisation, transformation, change detection visualization, data quality analysis and improvement service testing

National Mapping & Cadastral Authorities

NSDIs

Other Data Providers

ELF Platform: Reference Data & Services

- NMCA data
- NMCA data
- NMCA data
- European data
- Other Reference Data

ELF Oskari
Geo Product Finder
Geo Locator
INSPIRE/ELF data

Applications: Use Reference Data and other data in any application environment

Map applications Value-added Web Services

GIS Platforms: Data and Application Hubs of the ELF Infrastructure

feature data, gridded data, map tiles

Web Services JavaScript APIs Mobile SDKs Map Applications

Other Data Providers

Web Services
JavaScript APIs
Mobile SDKs
Map Applications

locationframework.eu
elf.maps.arcgis.com

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GeoLocator Service

- Georeferencing service
- Geographical names, addresses and administrative units
- Central database and service in the cloud
GeoTools: Edge-matching Tool

*Diagram showing geographical features*: springs, watercourses, point connecting features, line connecting features, agreed state boundaries, Lake/Pond.
Geo-tools: Consistency of data

★ Unique identifiers and Generalization
★ Implementation of UIDs for the regional data
★ Automatic generalization from national level to regional
Geo-tools: Automatic Online Quality Validation

- Implementation of ESDIN Data Quality Web Service
- Enable use of the Quality validation for national, regional and global data

![ES DIN approach to quality](image-url)
Geo-tools: GeoProduct Finder

- Finding the dataset or service
- Find the access terms
  - licence
  - price model (if applicable)
- Bind the agreement
- Agree and access

The users perspective is our focus

- Users are not interested in our struggles for finding the perfect license
- The users focus is fit for purpose
- Users want automated processes to find and acquire datasets and services
- Technical, legal and administrative concerns should work seamlessly in the back

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EUROPEAN LOCATION FRAMEWORK
A scenario – ELF-EULF-ITS

ELF (INSPIRE) TN information as WFS, WMS

pan-European seamless platform

compelling transportation pilot(s)
ITS map providers – application providers

TN data coming from mapping agencies and road administrations - combined

or, not necessarily pan-European seamless platform for the pilot

TN-ITS (enhanced ROSATTE) feed

national road databases

ELF platform

TN-ITS ’platform’
Transformation of Inspire theme: Example: Transport Networks

Kartverket:
National node for distribution of Inspire datasets and services

Geo-Synchronization
- ChangeLog
- update
- ...

INSPIRE specification
Transformation
Specialized software

National specifications
Norwegian Public Roads Administration
Jernbaneverket
Avinor
Norwegian Coastal Administration

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Many thanks for your attention!

For more information, contact the ELF team

www.elfproject.eu  
locationframework.eu