Publishing and Data Sharing for INSPIRE

A Prototypical Demonstration
Project Team

SAFE SOFTWARE

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Agenda

Overview of Swedish EPA Project

Prototype Goal

Prototype Requirements

Prototype Technical Approach

Future Development

Summary
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 Summary
Overview

Swedish Environmental Protection Agency (EPA) INSPIRE projects

- INSPIRE implementation strategy
- Transformation testing
- Metadata portal
- INSPIRE view services
Overview

Next Step

INSPIRE download service supporting the datasets:
- Natura 2000
- National designated areas
- Helcom

Prototype development by Metria and Safe
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Summary
Prototype Goal

Build a **scalable** INSPIRE compliant data publishing and distribution system
Prototype Goal

Scalable:

- Easy to add new data contributors
- Easy to add more processing power
- Easy to add additional data types
Prototype Goal

INSPIRE compliant:

- Data available thru OGC WFS
- Data in “INSPIRE compliant” GML
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Prototype Requirements

System must be non-intrusive

- Existing workflows, tools & data models must not be impacted
- Can’t dictate how work is to be done. Contributing organizations must be able to innovate
Prototype Requirements

System must provide value

- “Give back value” to the participating organizations
- Better data sharing across organizations
Prototype Requirements

System must be able to:

- Deliver data in Complex GML Structure required of INSPIRE
- Perform complex schema transformations
- Meet the performance requirements
Prototype Requirements

- Transform INSPIRE WFS (complex GML structure) “back to” a format that can be used in existing workflows, tools and data models

- Ensure and describe the data quality (data provider), so it is of value to the data consumer
Prototype Requirements

- To integrate data from different organizations that use different data procedures, tools, and data models
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Prototype Technical Approach

Transformation is the Key!

- Data model reconciliation is the problem
- Complex operations required to meet data requirements
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Separate data publishing and data distribution workflows

Publishing Workflow → Staging Database → Distribution Workflow

OGC WFS
Prototype Technical Approach

Publishing Workflow

Data model transformation to unified database schema

Target Model
Prototype Technical Approach

Publishing Workflow

- Transform data from source data to “Staging” database
- New sources added without impacting existing sources
- Not time sensitive so as much work as possible done here to make distribution flow faster

Target Model

Schema optimized for fast export to INSPIRE GML schema
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Staging Database

- Relational database

- Schema dictated by INSPIRE GML schema

- Schema optimized for fast export to GML schema
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Distribution Workflow

- Delivers data via WFS in INSPIRE GML schema
- Independent of data provider(s)
- Performance sensitive
- This workflow dictates “staging” database schema
Software Choice

FME and FME Server

“link to movie”
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- Add more data sources
- Add support for more INSPIRE themes
- Integrate with OGC CSW Metadata prototype that was developed in parallel
Metadata

- FME Server metadata
- Swedish EPA metadata portal
  http://gpt.vic-metria.nu/GeoPortal/kartregister.jsf
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Summary

Successfully built a prototype of a scalable INSPIRE compliant data publishing and distribution system
Contact Us

Safe demo site
www.safe.com/INSPIRE

Demonstration of prototype at the Safe Software booth throughout the conference.

Contact Metria
http://www.metria.se

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