SensLog – solution for sensors and VGI

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Content

• SensLog – application structure
• Data model
• Interface
• Applications on SensLog
• Future steps
SensLog application

- web-based sensor data management application
- provides receiving, storing, processing, analyzing and publishing of sensor data
- suitable for static in-situ sensors as well as sensors deployed on mobile carrier
- recently handles VGI
SensLog technically

• modular server-side application
• written in Java language
• database part – data model in PostgreSQL 9+ with spatial extension PostGIS 2+
• server-side part – Java servlets
• REST API, various encoding formats
SensLog structure
Data model

• stores raw sensor data, results of analyses, metadata of sensor networks
• based on ISO 19156:2011 (Geographic information - Observations and measurements)
• enhanced by hierarchy of users, alerts, structure of sensor network
• improved on partitioning of large tables
• extendable by other profiles (VGI, telemetry)
Interfaces

• REST API – system of web services
  – proprietary services
  – receiving and publishing of data
  – encoding in JSON, CSV, plain-text
  – services goal-directed, self-describing documents

• standardized – OGC SOS 1.0.0
  – core profile of services
  – data publication only
  – XML encoded
Application based on SensLog

• several applications built on SensLog
• SensLog as data storage, analytical module
• from light web clients to standalone mobile applications
• using different modules from SensLog
Groundwater monitoring

- monitoring of ground water in protected area Litovelské Pomoraví (CZ)
- static in situ sensors in shallow boreholes
- evaluation of annual cycles, alerts on rapid changes to both trend
FarmTelemetry

- monitoring meteorological phenomena
- tracking of agricultural machinery
- source data for evaluation and economy of farms in CZ, IT, LV
VGI collecting

- mobile application for collecting user-defined POIs in terrain directly
- POI with variable structure of attributes
- additional multimedia content
- RDF encoding for integration with SDI4Apps SPOI data
Future steps

• implementation of NGSI-9/10 interface – connection to FIWARE tools
• adding user-defined RDF encoding of VGI
• closer integration with sensor catalogue (IoT Discovery, SensorDCAT)
Thank you for attention

Questions?

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