

Open Source for Sensor Web

Overview of Open Source products
implementing OGC SWE

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Overview

- What is available?
 - 52° North SWE Implementations
 - 52° North
 - Services
 - Sensor Observation Service (SOS)
 - Sensor Alert Service (SAS)
 - Sensor Planning Service (SPS)
 - Web Notification Service (WNS)
 - Clients
 - Rich Client
 - Thin Client
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What is available?

- VAST, University of Alabama in Huntsville
 - XML Parser, Data Processing API and Specific Implementations for SensorML
 - <http://vast.uah.edu/SensorML>
 - UMN Mapserver
 - SOS implementation
 - <http://mapserver.gis.umn.edu>
 - Seagis
 - SOS implementation
 - <http://constellation.codehaus.org>
 - OOSTethys
 - Perl, Java & Python SOS implementations
 - <http://www.oostethys.org>
 - 52°North
 - Implementations of all SWE services
 - <http://www.52north.org>
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52° North

- Only source of implementations of all SWE standards
 - Open Source Initiative
 - Based in Münster, Germany
 - Founded by
 - Westfälische Wilhelms-Universität, Münster, Germany
 - con terra GmbH, Münster, Germany
 - International Institute for Geo-Information Science and Earth Observation (ITC), Enschede, Netherlands
 - ESRI Inc., Redlands, USA
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52° North

- Dual licensing model
 - GNU General Public License Version 2 (GNU GPL V2)
 - Licenses for commercial use
 - Strong focus on the implementation of SWE standards
 - Other areas of interest include: Processing, Security and Digital Rights Management
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52° North SOS

- Access to sensor data and metadata
 - OGC CITE compliant to the 1.0.0 SOS specification
 - Features
 - Built-In PostGIS support
 - Support of the transactional profile
 - Feeder framework for data input into the SOS
 - In development: Support for mobile sensors
 - In addition: Special SOS version for video data
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52° North SAS

- Subscription to user defined alert conditions
 - Compliant to OGC SAS specification 0.9.0 RFC
 - Features
 - Dispatch alerts via XMPP (extensible messaging and presence protocol)
 - Support of other communication protocols through gateway services like WNS
 - New version under development according to ongoing discussions within the OGC SWE WG
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52° North SPS

- Tasking of sensors and simulation models
 - OGC CITE compliant to the 1.0.0 SPS specification
 - Features
 - Modular plug-in architecture allows the easy integration of new sensor types
 - Exemplary plug-in available for Axis network camera
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52° North WNS

- Supporting asynchronous communication processes between services and clients
 - Based on OGC best practice paper (OGC 06-095)
 - Features
 - SMTP (E-Mail) notification support
 - XMPP notification support
 - SMS notification support
 - Fax notification support
 - Phone notification support
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52° North Rich SWE Client

- Java-based Client framework for SWE and other OGC web services
 - Broad range of visualisation functionality (e.g. map view, chart view, management of map layers, zooming and panning, temporal animations, interpolation)
 - Ability to act as a WMS
 - Supported web services
 - SOS versions: 0.0.0 and 1.0.0
 - SAS version: 0.9.0
 - SPS version: 1.0.0
 - WMS versions: 1.0.0, 1.1.0 and 1.1.1
 - WCS versions: 1.0.0, 1.1.0 and 1.1.1
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52°North

Project Connect Selection Options

Context

- IFGI SOS
 - Water_Sachsen
- ICEDS (Integrated CEOS Eur
 - srtn

BoundingBox:

SRS: EPSG:4326

ur-x: 14.584029759263354

ur-y: 51.3084639208406

ll-x: 13.5588127454106

ll-y: 50.62086147534281

30

SPS Camera Client

Camera urn:ogc:object:feature:Sensor:IFGI:ifgicam_Flur Camera details

Camera settings

Frequency 24 Resolution 352x288 Position floor1

Tasks

Exclusive access

Save picture

Cancel task

Legend

- Unallowed field of vision
- Allowed field of vision

Vertical

Not set

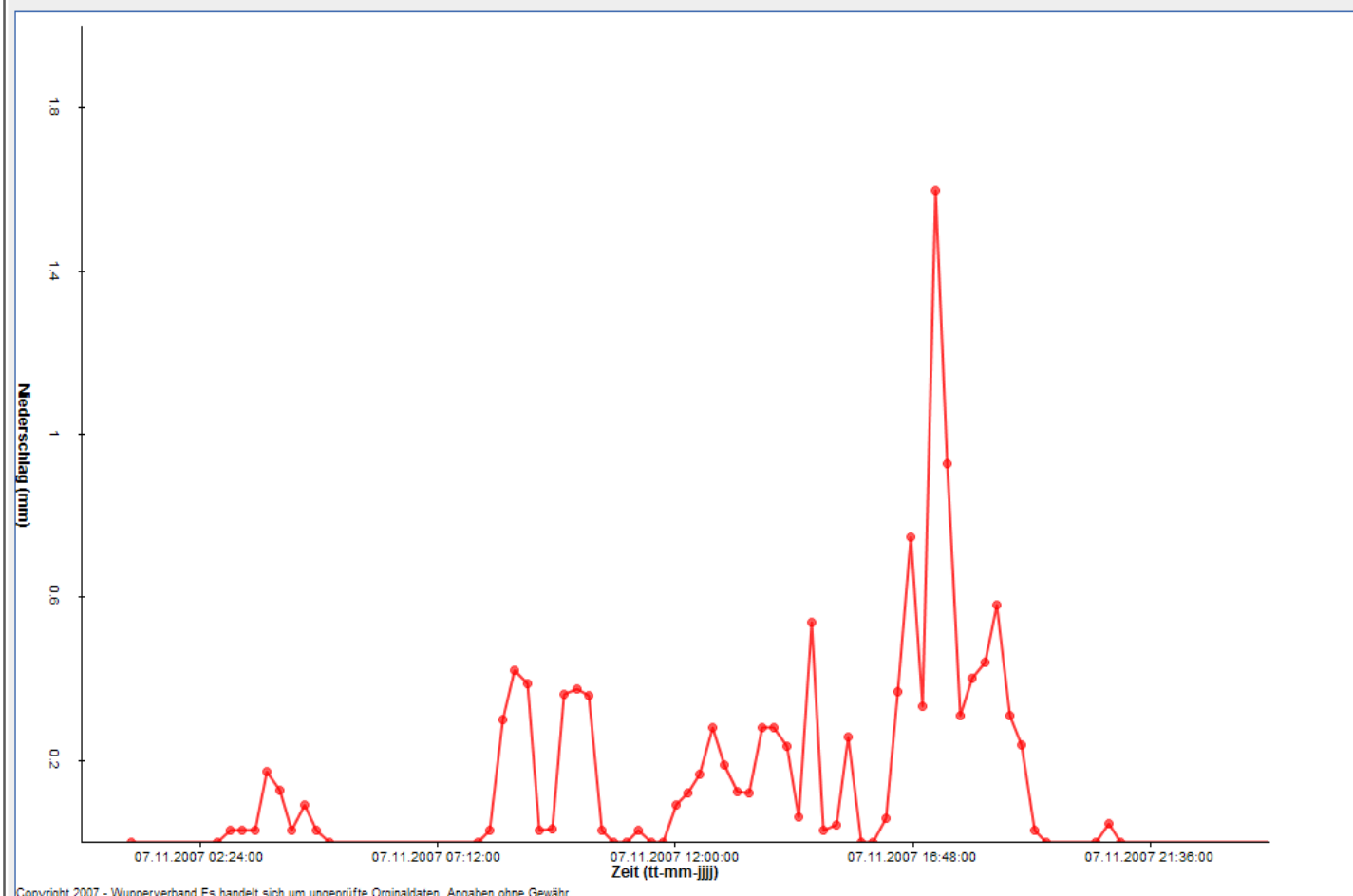
Horizontal

Not set

2008-05-13T 09:18:25.18 UTC

52° North Thin SWE Clients

- Light-weight Ajax-based web clients
 - SOS Client
 - Access to sensor data
 - Display time series in form of diagrams or tables
 - Data export as PDF, Excel or CSV files
 - SOS-Connector: version: 1.0.0
 - SAS Client
 - Defining and submitting alert conditions and notification information
 - SAS-Connector: version: 0.9.0
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VON 07.11.2007 00:00 BIS 08.11.2007 00:00

TAG WOCHEN MONAT JAHR

Info Metadata
13.05.2008 11:01:43 SOS Client gestartet

Niederschlag (Gklw. Hüdeswagen)

Zeitreihe hinzufügen

Thank you for your attention

<http://52north.org/>

<http://www.osiris-fp6.eu/>

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