Samplings and Monitoring Programs
Synchronizing Well-defined CSV Files with the New Sensor Web Data Model

Christian Malewski
MuDak-WRM

- Numerous models for hydrological ecosystems
  - complex and data intensive
  - low data availability
  - limited adaptability
- Model for water quality change prediction in reservoirs
- Trade-off among less key-parameters and reliability
- Key-parameters should be mostly derived from remote satellite sensing

Passauna reservoir, Curitiba, Brasil
1. Development of components for interoperable data communication
2. Further development of components for measure data visualisation
3. Integration of samplings and satellite images with the Sensor Web
Our operative Sensor Web since 15 years

Simple Measurements and SensorThings API
Samplings and Measuring Programs
Samplings and Measuring Programs

sos3/api/samplings
sos3/api/samplings/13999
sos3/api/measuringPrograms
sos3/api/measuringPrograms/231
Requirements

KEEP IT SIMPLE, STUPID

use the Sensor Web without realising it.
# Data Template for in-situ Sampling Data

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>#META</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQUIPMENT</td>
<td>Used equipment for data collection (UNKNOWN, Several, U:50PC, etc.).</td>
<td></td>
</tr>
<tr>
<td>PRODUCER</td>
<td>Producing organization of data (UFPR, Tros, e.g.)</td>
<td></td>
</tr>
<tr>
<td>CONTACT</td>
<td>Email address of the person, who should be contacted in case of questions</td>
<td></td>
</tr>
<tr>
<td>AUTOMATIC</td>
<td>NULL</td>
<td></td>
</tr>
<tr>
<td>TIMEZONE</td>
<td>UTC-3 / UTC-2 / UTC+1 / UTC+2</td>
<td></td>
</tr>
<tr>
<td>SOURCE_DATA</td>
<td>These very sheets were generated from raw data, which is in a manufacturers data format. Most of the original data should be</td>
<td></td>
</tr>
<tr>
<td>COMMENT</td>
<td>Any further describing comments to this dataset</td>
<td></td>
</tr>
<tr>
<td>#VALUES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SITE_ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WGS84_LAT</td>
<td></td>
<td>WGS84_LON</td>
</tr>
<tr>
<td>Measures with same site id are grouped</td>
<td>Latitude</td>
<td>Longitude</td>
</tr>
<tr>
<td></td>
<td>DATE</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td>Collection date</td>
<td>Collection time</td>
</tr>
</tbody>
</table>
Data Template for in-situ Sampling Data

Considers:

• Simple Measurements
• Profile Measurements
• Trajectories
• Profile Trajectories
• Samplings (Multiple phenomena measure parameters at a single location)
Data Template for in-situ Sampling Data

PhD’s format ➔ Integrated format ➔ FTP
Data Template for in-situ Sampling Data

FTP ➔ Sensor Web Feeder ➔ Sensor Web Schema 3.0
Samplings and Monitoring Programs

Use the Sensor Web without realising it.

Christian Malewski (cmi@wupperverband.de)