

Webinaire SensorThings API

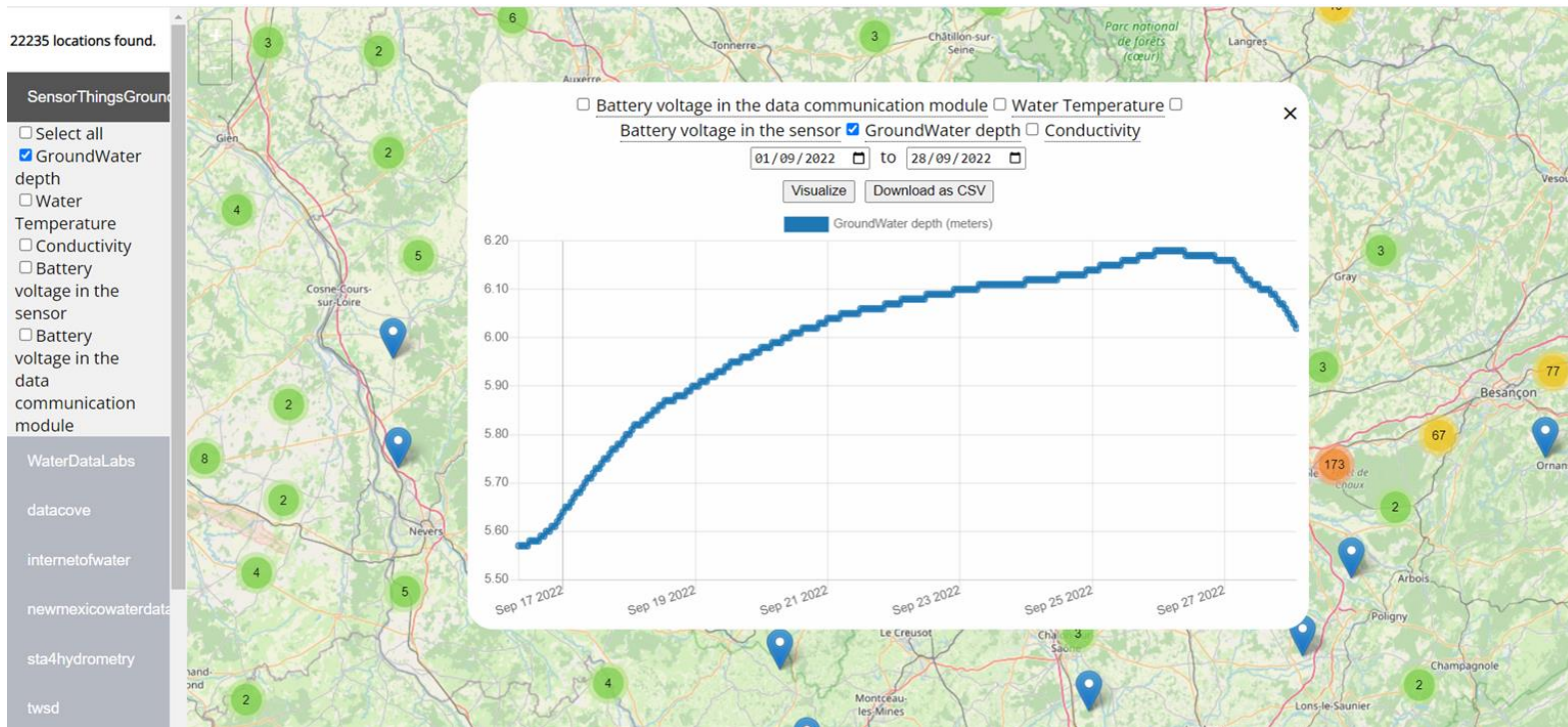
Some STA Clients for SensorThings - Collective
Brainstorming

Known Viewers

- Genesis
- STAM
- QGIS : https://github.com/AirBreak-UIA/SensorThingsAPI_QGIS-plugin
- Grafana : <https://grafana.com/grafana/plugins/iosb-sensorthings-datasource/>
- Geomatys Examind Community
- Many ad'hoc deployment (HTML, JS, R shiny): Internet of Water US, BRGM, UMR SAS (cf presentation)
- Jupyter Notebook
- And this list was only done in an hour...

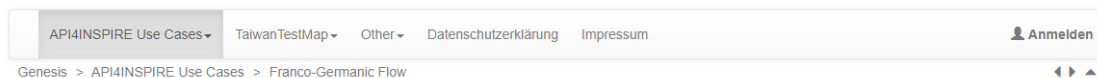
Same endpoint: different viewer

- Internet of water US

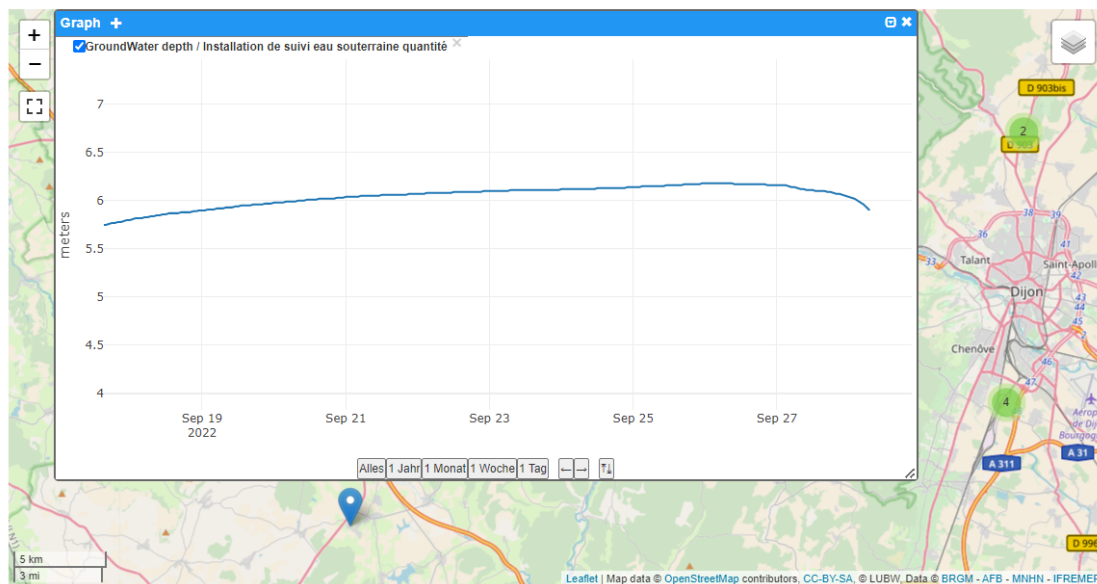


Same endpoint: different viewer

- Fraunhofer WebGenesis

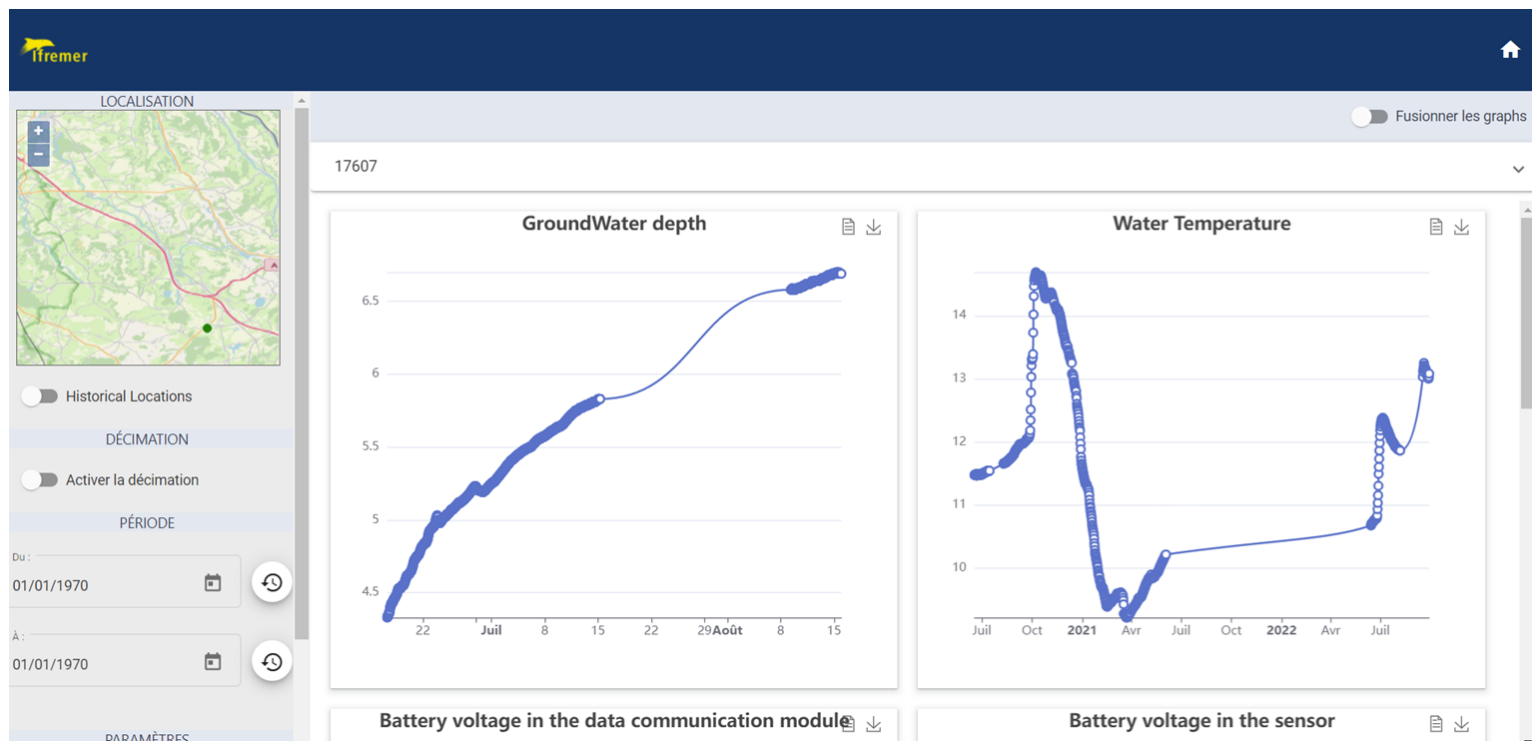


Franco-Germanic Flow



Same endpoint: different viewer

- Geomatys Examind Community



Same endpoint: different viewer

- QGIS new ST API plugin

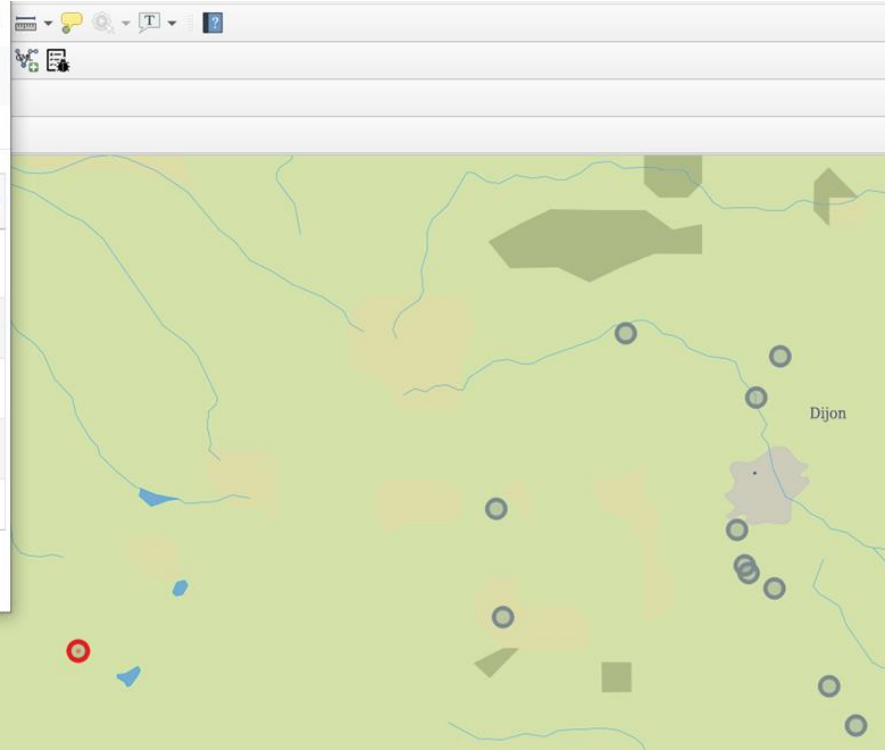
Location

Installation de suivi eau souterraine quantité
Installation de suivi eau souterraine quantité

Installation de suivi eau souterraine quantité - GroundWater Quantity Environmental monitoring facility monitoring ground water level

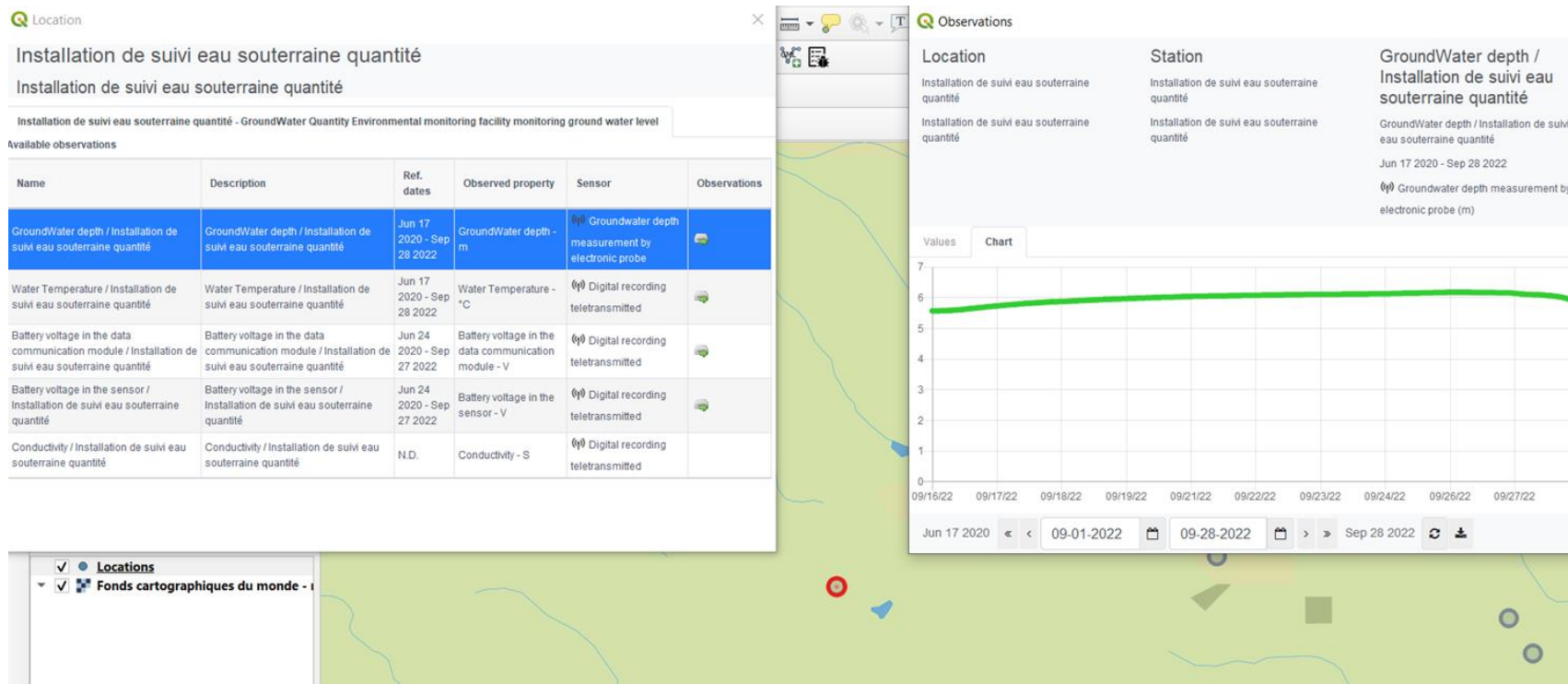
Available observations

Name	Description	Ref. dates	Observed property	Sensor	Observations
GroundWater depth / Installation de suivi eau souterraine quantité	GroundWater depth / Installation de suivi eau souterraine quantité	Jun 17 2020 - Sep 28 2022	GroundWater depth - m	📡 Groundwater depth measurement by electronic probe	📡
Water Temperature / Installation de suivi eau souterraine quantité	Water Temperature / Installation de suivi eau souterraine quantité	Jun 17 2020 - Sep 28 2022	Water Temperature - °C	📡 Digital recording teletransmitted	📡
Battery voltage in the data communication module / Installation de suivi eau souterraine quantité	Battery voltage in the data communication module / Installation de suivi eau souterraine quantité	Jun 24 2020 - Sep 27 2022	Battery voltage in the data communication module - V	📡 Digital recording teletransmitted	📡
Battery voltage in the sensor / Installation de suivi eau souterraine quantité	Battery voltage in the sensor / Installation de suivi eau souterraine quantité	Jun 24 2020 - Sep 27 2022	Battery voltage in the sensor - V	📡 Digital recording teletransmitted	📡
Conductivity / Installation de suivi eau souterraine quantité	Conductivity / Installation de suivi eau souterraine quantité	N.D.	Conductivity - S	📡 Digital recording teletransmitted	



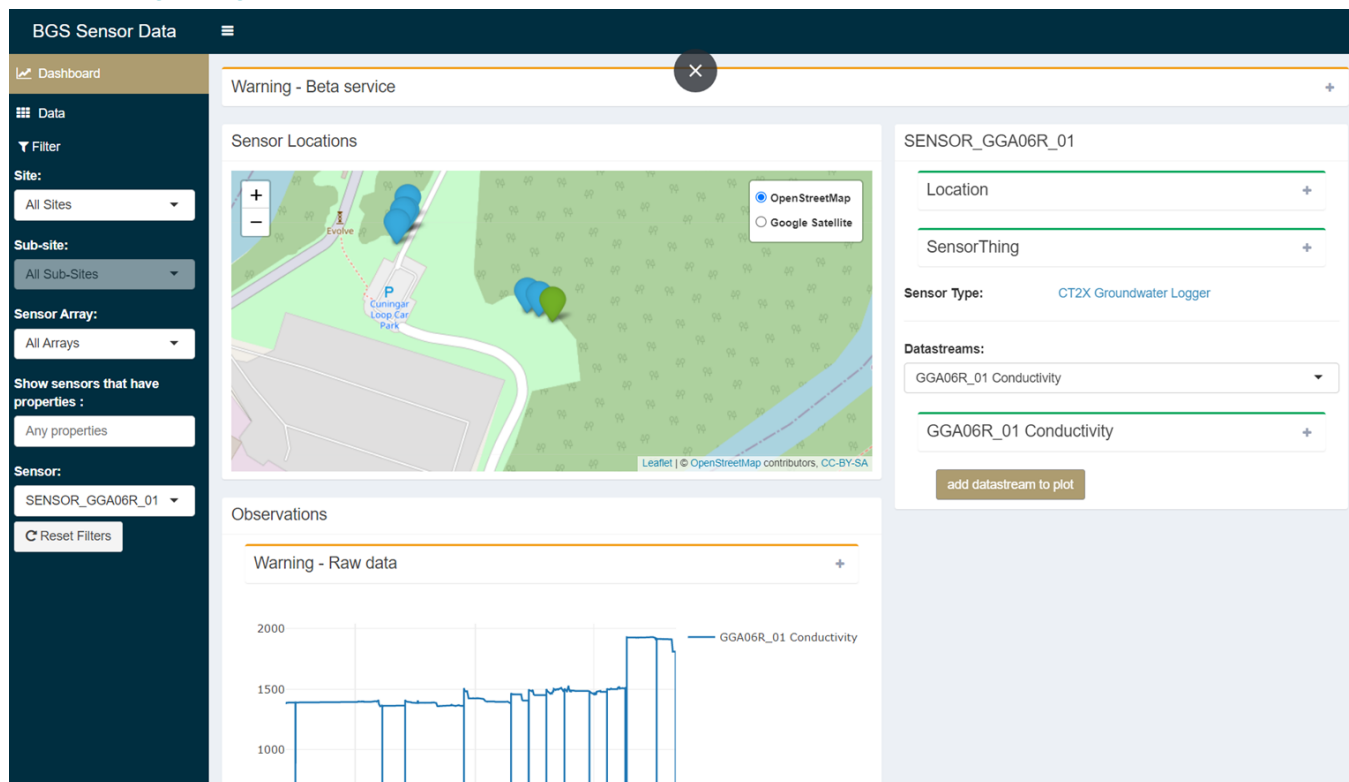
Same endpoint: different viewer

- QGIS new ST API plugin



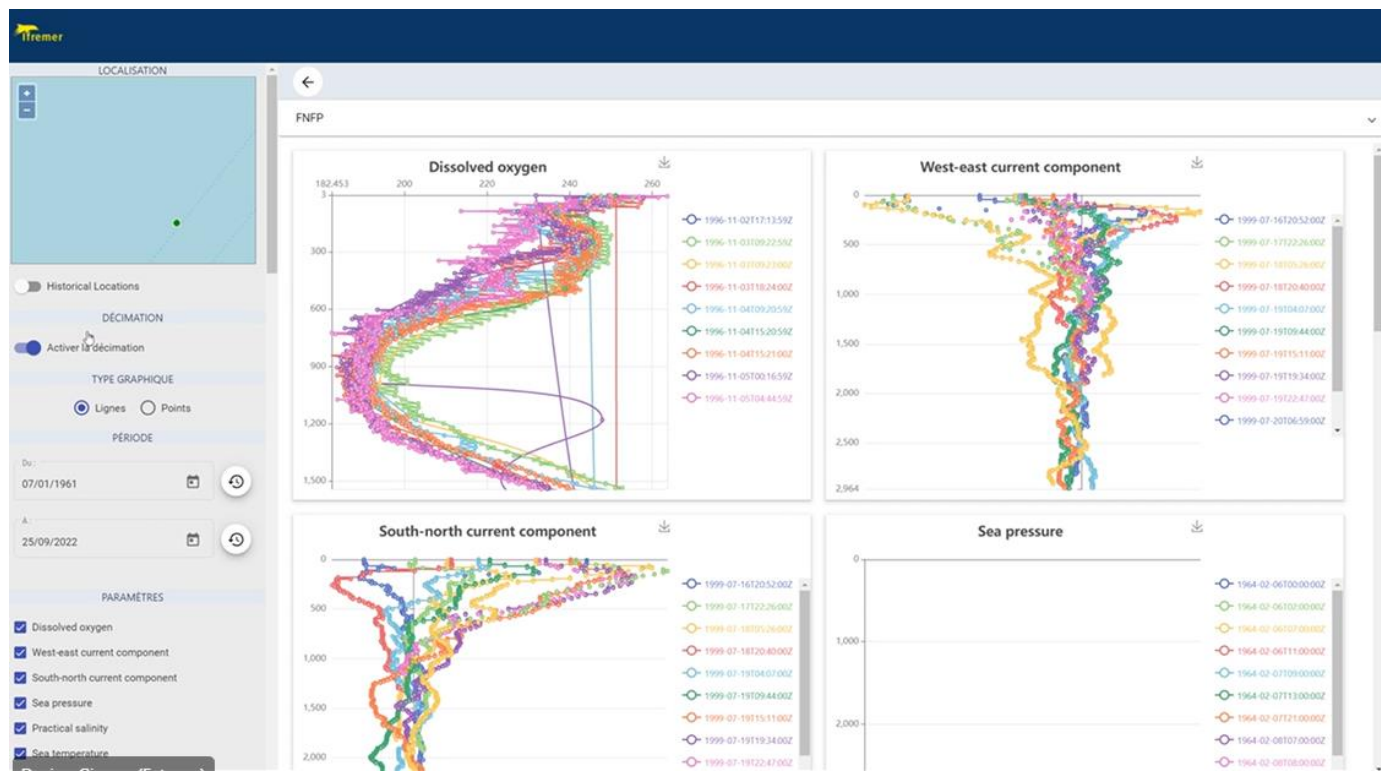
Non related examples

R Shiny Dashboard > <https://sensors-gui.bgs.ac.uk/>



Non related examples

IFREMER ST API Client (Examind playground) on ARGO buoy demoed live



Non related examples

<https://github.com/BritishGeologicalSurvey/sensor-things-api-demo/blob/main/sensor-things-api-demo.ipynb>

```
# Plot
fig, ax = plt.subplots(figsize=(8, 6))

for i, datastream in enumerate(json_data):
    data = parse_datastream(datastream)
    # Data are noisy so we smooth by applying a rolling mean filter
    smoothed = data['observations'].rolling(window=24).mean()
    smoothed.dropna(inplace=True)
    smoothed.plot(ax=ax, label=data['name'])

ax.grid()
ax.set_ylabel(f"{data['unit_name']} ({data['unit_symbol']})")
ax.set_title("Water temperature from UKGEOS Groundwater Loggers")
ax.legend(loc='center left', bbox_to_anchor=(1, 0.5))

fig.savefig('water_temperature.png', facecolor="white", bbox_inches="tight")
```

