

The logo for GISPO, consisting of the letters 'GISPO' in a white, outlined, sans-serif font, centered within a solid purple circle. The background of the slide is a light gray, stylized map of a city grid.

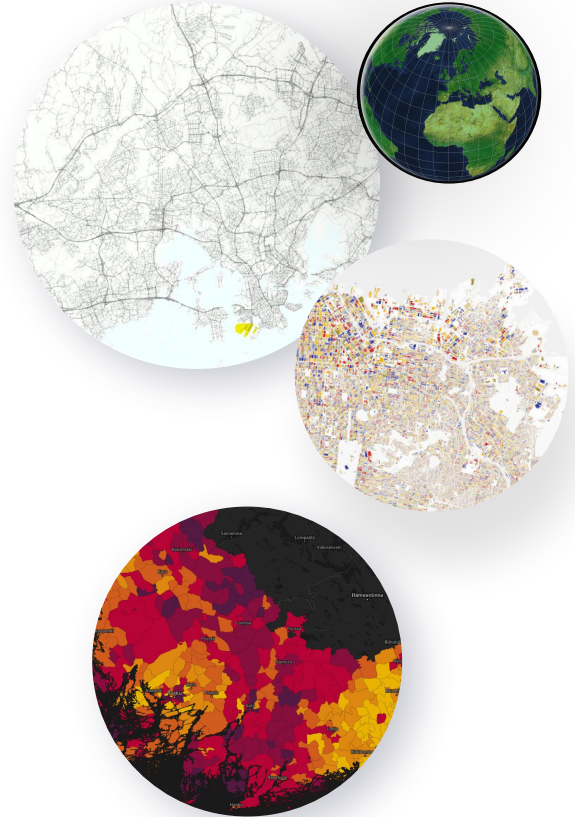
GISPO

Oskari Embedded Maps and integrations with RPC API

FOSS4G 2023 Prizren

Gispo Ltd.

- Founded in 2012
 - 20+ employees
- **We consult** our customers on how to utilize FOSS4G solutions and open data efficiently
- **We develop** software
 - QGIS plugins and QGIS core
- **We train** our customers in GIS - 100+ organizations and 1000+ people
- **We support** our customers who use FOSS4G
- Open source advocate and capacity building with open source





We support our customers so that they can gain competitive advantage with FOSS4G (Free and Open Source Software for Geospatial) and Open Data.

We support the development and usage of open source and open data and act as an open source advocate.

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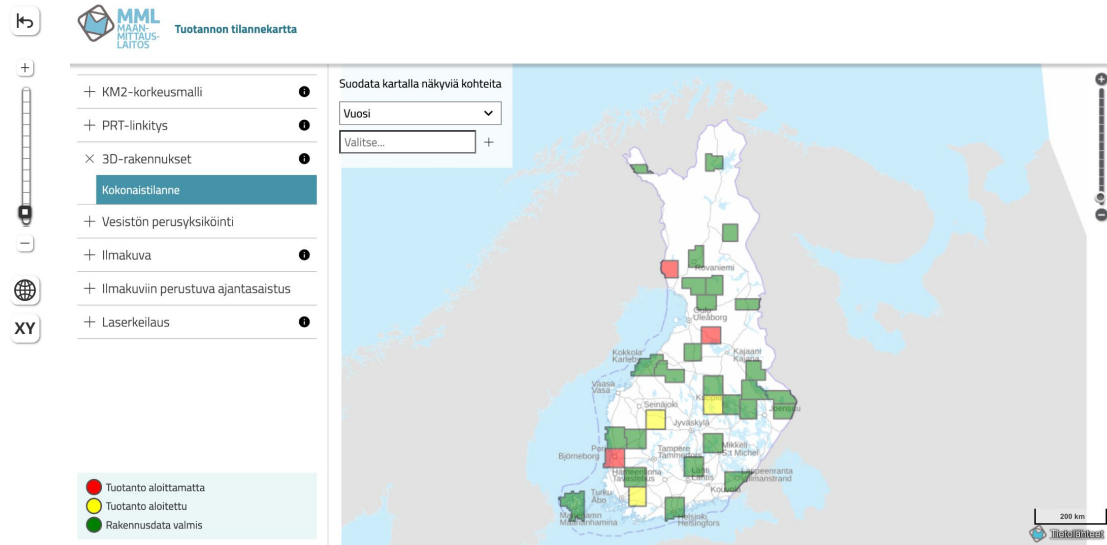
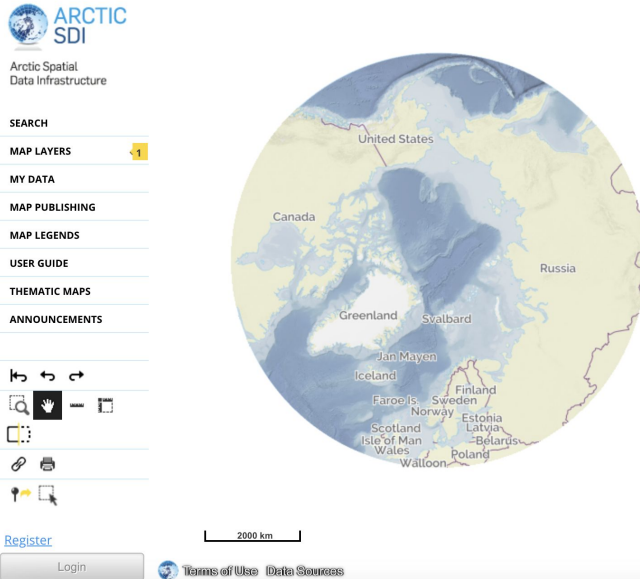
Introduction

- Oskari is an open-source Web Map Framework
 - Web GIS, web maps, Integrations to existing services
- Originally developed by National Land Survey of Finland
- Development started in 2009, open-sourced in 2011
- Java based backend and browser-based frontend
 - Runs in any web browser
 - Support for mobile devices
- Utilises Spatial Data Infrastructures
 - Data is fetched from APIs



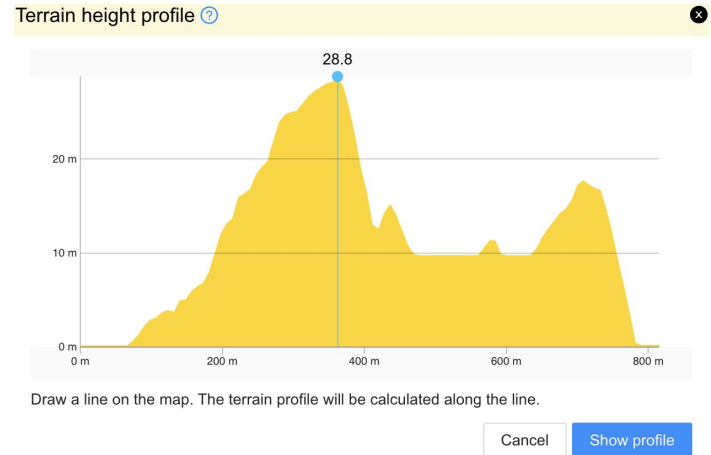
Two ways of using Oskari

- Oskari can be used in two ways
 - A full-fledged Web GIS solution
 - Embedded maps (and RPC API for integrations)



A full-fledged Web GIS solution

- Tools for data viewing, styling, analysis, publishing, printing
- Connects to most OGC standard APIs (WMS, WMTS, WFS, OGC API Features, etc.)
- Statistical maps supported via PX-Web API and other statistical APIs
- Some more advanced features
 - Routing
 - Terrain height profile
 - Geolocation
 - Time-series data
- For advanced and professional use





Embedded maps

- Users can publish maps and embed them onto websites
 - Can also be used as-is without a surrounding web page
- Usually for a specific use case
 - Limited in data and functionality
 - Less cluttered - easy to use and mobile friendly
- Public by default (anyone can access)



RPC API

- Published maps can be integrated with existing services with the use of RPC API
 - Enables communication between the map and the website
 - Data from external sources can be visualised
 - Website can react to user actions on the map component and vice-versa

RPC setup

- Utilises a tiny JavaScript library built on top of `window.postMessage()`

```
<script src='https://oskari.org/js/rpc/rpc-client.min.js'></script>
```

- The connection is initiated with a few lines of JS like so:

```
// init connection
var IFRAME_DOMAIN = 'http://www.mydomain.com';
var iFrame = document.getElementById('publishedMap');
var channel = OskariRPC.connect(
    iFrame,
    IFRAME_DOMAIN
);
```

RPC setup

- Once the channel is ready you can start doing your thing

```
channel.onReady(function() {  
    //channel is now ready and listening.  
    channel.log('Map is now listening');  
});
```



RPC API

- The API can be used to..
 - Listen to **events** - e.g. AfterMapMove, UserLocation, MapClicked, ...
 - Send **requests** - e.g. MapMove, StartUserLocationTracking, GetRoute, ...
 - Call **functions** - e.g. getMapBbox, zoomTo, getCurrentState, ...
- See the complete list with usage instructions

https://oskari.org/examples/rpc-api/rpc_example.html



Examples/Demo

Example: Fishing restrictions


Kalastuksen sähköiset asiointipalvelut | Kalastusrajoitus.fi | Saavutettavuusseloste [↗](#) Svenska

Haku Tietoa ▾ Karttatasot ▾

Kartalla Valitussa paikassa Hae

N 7214435.12, E 423440.38 (ETRS-TM35FIN)
N 65° 2' 41.4", E 25° 22' 25.0"


Rajoitukset

Oulujoen edustan trooli- ja nuottakielto  JS 5 ▾


Oulujoen kalaväylä KV ▾

Rauhoitusajat ja pyyntimitat


Poikkeavat

 Muista tarkistaa paikalliset kalastussäännöt rajajokialueella. Rajoitukset voivat poiketa alla olevista yleisistä rauhoitusajoista ja pyyntimitoista.

Yleiset



5 km

Valitettavasti kalastusrajoitusten päivitymisessä on ongelmia tietokantajärjestelmän virheen vuoksi. Pyrimme Näytä enemmän ... 

Example: Suomen Väylät (traffic infra)





Examples & resources

- Geoportals
 - [Finnish National Geoportal](#)
 - [Arctic SDI Geoportal](#)
 - [Oskari demo application](#)
- RPC API integration examples
 - National Land Survey's [Karttapaidikka](#) (English is available from the panel on the right)
 - [Fishing restrictions](#) (Only available in Finnish and Swedish)
 - [Finnish traffic infrastructure](#)
- [Oskari web page](#)
- [Oskari in GitHub](#)

That is all

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