

Course code:	OLAYERS
Course title:	Development of dynamic maps on Web pages using OpenLayers
Days:	2

Description:

Course intended for:

The training is intended for beginner programmers, wanting to get familiar with the issue of development of dynamic maps on Web pages.

Course objective:

The training objective is to get the participants familiar with theoretical and practical aspects of building of a Web application based on an interactive map using the OpenLayers library.

The training participants will learn to:

- Add a dynamic map functionality to the Web page
- Use the external formats for saving of spatial data
- Manage the OGC (WMS, WFS) standards via the library
- Effectively use the library inside the Web application

After the training, the participants will be able to develop a Web application based on a dynamic map on their own.

Requirements:

The participants are required to have the basic knowledge on JavaScript and familiarity with Web application development. Basic knowledge of geographic information systems will make it easier to grasp the training material.

Course parameters:

2*8 hours (2*7 net hours) of lectures and workshops (with a visible emphasis on workshops).



Group size: no more than 10 participants.



1. Training curriculum Introduction – what is GIS, WebGIS and OpenLayers?
2. Syntax OpenLayers
 - Classes and options
3. Layers and layer handling
 - Base Layer mode
 - Raster layers
 - Overlay type layers
4. Map behavior control
 - Default functions
 - Functional key panels and their configuration
 - Map controllers
 - Map movement (NavToolbar, Navigation, NavigationHistory, PanPanel, PanZoomBar, ZoomBox, ZoomPanel)
 - Displayed layer management – LayerSwitcher
 - Entry and edition of new objects (EditingToolbar, DrawFeature, DragFeature, ModifyFeature, Split, Snapping, SelectFeature)
 - Map measurements (Measure)
 - Other controllers (Scale, ScaleLine, Permalink, Attribution, OverviewMap, KeyboardDefaults)
5. Adding data to map –Overlays mechanism
 - Vector Overlay and Marker Overlay type objects
 - Vector, GML, PointTrack, WFS, Marker, GeoRSS, Text type layers

- Displaying of attribute information in popup windows

6. Symbolization

- Classes and symbolization objects
- Symbolization based on attribute rules
- Use of SLD mechanisms

7. Use of data from external servers

- GET and POST methods
- same origin policy and ProxyHost

8. Systems of coordinates

- Unification of systems from various sources – Spherical Mercator
- transformations

9. OpenLayers functionality for mobile devices

10. Library configuration and optimization for use in a Web application

11. Introduction to GeoExt

