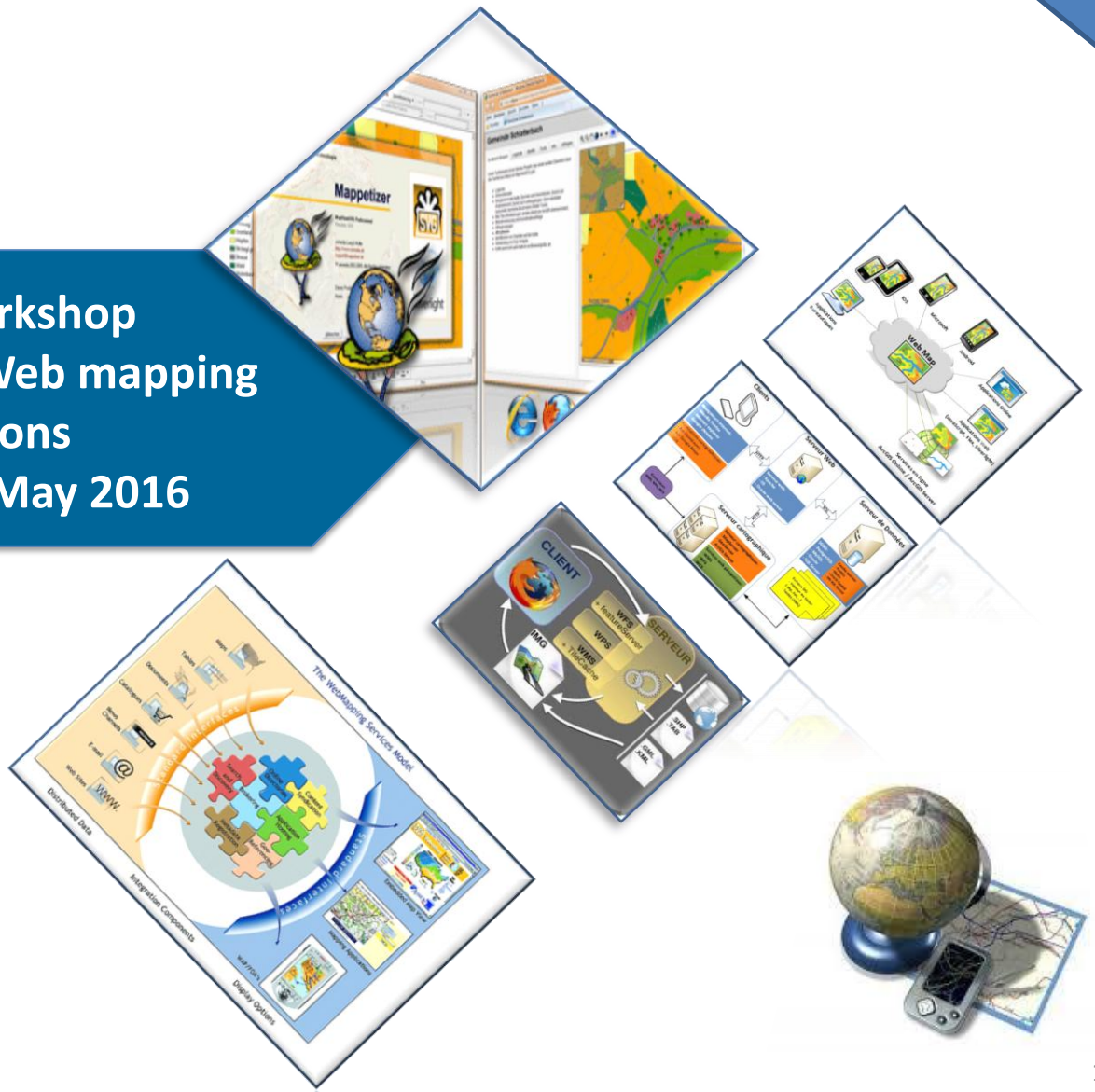
المركز الجهوي للإستشعار عن بعد لدول شمال إفريقيا

Regional Center For Remote Sensing Of North Africa States (C.R.T.E.A.N)

CRTEAN
www.crtean.org.tn

Training Workshop
Developing Rich Web mapping Applications
Tunis, 10 – 12 May 2016







Introduction

With the advance of web mapping services and web technology, creating and publishing high-performing, modern-looking Web maps has become easier and rich with options.

Web mapping is the process of designing, implementing and deploying web applications that use spatial data. To implement web mapping applications many JavaScript APIs exist and with the combination with other web technologies like HTML5, bootstrap, Jquery, etc., you can deliver very rich and performing web mapping products. Among these tools, Openlayers is a powerful, community-driven, open source, pure JavaScript web mapping library.

The CRTEAN organizes in Tunis from 10 to 12 May 2016, a training workshop to develop this kind of technology. This training will let you learn developing web mapping applications using Openlayers from scratch. It will walk you through the OpenLayers API in the easiest and most efficient way possible. It teaches the basics of how to build attractive, sophisticated internet mapping applications using OpenLayers API.

Topics include designing and publishing web mapping services using OpenLayers ; consuming Web map services using the OpenLayers API ; integrating functionality (queries, geoprocessing, etc.) for more interactive applications; and tools and techniques for rapid application development.

Workshop format: Approximately 50% lecture, 50% application development.

Practical exercises, as well as moments of discussion, are foreseen in order to improve skills of the participants and favor cooperation among them.

Objectives

The training programme aims to give participants the opportunity to be initiated and / or deepen knowledge on Webmapping, as well as mastery of the most used software and skills in their use.

By attending this training workshop, participants will:

- Develop an understanding of web mapping design using OpenLayers ;
- Learn core concepts in developing web mapping applications ;
- Develop strategies for integrating multiple Server map services in a web application for the visualization and query of spatial data ;
- Learn about integrating specialized tasks and tools including geocoding, geometry operations, and geoprocessing tools ;





•Learn basic customization of a web mapping application ;
•Promote the exchange between participants and speakers, alternating theoretical contributions, case studies and group work, with aims to stimulate collective learning process ;
•Provide participants with the opportunity to create a network of partners for Knowledge exchange and longer-term experiments.

Main areas

•Introducing to web mapping applications development: Architecture and technologies
•OpenLayers Key-concepts
•Serving Spatial data with Geoserver via WMS protocol
•Developing web mapping applications using Openlayers API, in Javascript and HTML5

Organization by

Regional Center for Remote Sensing of North Africa States

Beneficiaries

The training workshop is open to both beginners and experienced users, who developing bases and who wish to represent and distribute the map data, whatever the field. It is intended for technicians and engineers : IT engineer, geographer, town-planner, demographer, topographer, surveyor, Public Works, highway department, environment, forest management, agriculture, fishing, land settlement, public health...

The training workshop is geared to suit the needs of public and private organizations dealing with mapping. It is also geared toward GIS analysts and others who want to create rich internet mapping applications to publish GIS content throughout an organization or to the public via the Internet.

Attendees do not need to be highly experienced programmers but a basic understanding of spatial database, GIS and HTML as well as exposure to programming and familiarity with JavaScript are recommended.





IT tools and all the components of a computer and Windows handling or practical knowledge of a computer language will be an advantage.
NOTE: Basics of computer technology will not be taught. Each trainee will be considered capable to follow this training workshop and takes the responsibility to do it at a sustained pace.

Dates

the International Conference on Advanced Geospatial Science & Technology, scheduled to take place in Tunis, Tunisia, October 18-20, 2016.

Registration

All conference participants, including speakers / authors, are required to register and pay the full participant registration fee. Conference badges will be required for all activities. Full payment must accompany registrations. Each participant requires individual registration. Participants are strongly advised to register in advance of the Conference online.
*Students must upload Student ID (JPEG or PDF) to our online registration system to qualify for student rates.

Correspondances and communications

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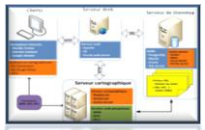


Programme

Day 1

- Architecture of a web mapping solution
- Existing technologies for web mapping development
- Introducing Openlayers API
- Preparing a developing environment with openlayers
- Connecting to Openstreetmap and Creating a first map

Day 2

- Serving spatial data with Geosever via WMS
    1. Introducing to Geoserver
    2. Setting up vector and raster data from the GeoServer administration control
    3. Publishing vector shapefile data and raster data on GeoServer via WMS, WFS and WCS
    4. Styling layers on GeoServer using desktop tools
- Adding GeoServer published vector and raster Layers with Openlayers
- Using layer manager with Openlayers
- Dealing with data source and map projections in Openlayers
- Styling Vector Layers

Day 3

- Interacting with features
- Interacting with map
- Using controls
- Getting features information on click
- Using Overlays on map
- Using interactions with map to draw features
- Export and import KML data