



Project no. 018340

Project acronym: EDIT

Project title: Toward the European Distributed Institute of Taxonomy

Instrument: Network of Excellence

Thematic Priority: Sub-Priority 1.1.6.3: “Global Change and Ecosystems”

C5.65 Point occurrence map generation webservice for online and print quality maps released and online available

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Duration: 5 years

Organisation name of lead contractor for this component: 4 CSIC and 14 RMCA

Revision: final

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

C5.65 Point occurrence map generation webservice for online and print quality maps released and online available

The EDIT MapViewer

MNCN Madrid (*Museo Nacional de Ciencias Naturales*) has been developing a web-application (*EDIT MapViewer*) that currently allows these actions:

The visualization of user point data in a specified map context

This ability is based on the insertion in a PostgreSQL/postGIS database of user information uploaded in a comma-separated-values text file. EDIT MapViewer can now "print" this data in the form of maps.

The input file must have at least *latitude* and *longitude* fields in decimal degrees, with datum WGS84 (the GBIF standard). A third field in the csv is required for further classification and symbolization. The tool is currently designed to work with *Genus* and *Species* fields but this may change in the future.

Filtering and symbolization (colour, symbol and size) of the uploaded data, with a dynamically generated legend. It allows the user to visually identify his data, and make distinction between different data sets.

The identification of user data through two different tools:

+ query by point: click on a point (user point data)

+ query by area: user can draw a box to query all the data points within that box

Add different WMS layers coming from the EDIT Web Map Server (data stored by the CSIC server)

Make thematic searches in remote WMS servers, adding these layers to the tool

Load and display layers from a pre-defined list of WMS Servers: user can also insert a WMS Server URL where to get data from

An easy-to-use management of the layers to visualize

The basic GIS operations on the interactive map: zoom in / zoom out / pan / drag

The tool has been designed to be easy to use and have a good performance, allowing a nice interaction with the user. Various technologies were used, but all are open source and standards compliant:

The web-mapping application is Javascript code (Mapbuilder) .Other components are based on the jQuery library, allowing the use of different plug-ins (jqModal and farbtastic)

Geo-information (maps) is served using Geoserver, getting data from postGIS. The actions that require a database interaction are based on PHP code and pHPgsq functions running on PostgreSQL/postGIS

Future development of the mapView tool:

New functions could be integrated to facilitate the printing of the resulting maps / possible functions are:

- + a scalebar tool
- + a tool to set the scale of visualizing the maps
- + a legend with all the layers the user is visualizing

Some functionality should be improved such as:

- + make the mapView tool a fully cross-browser webapplication
- + increase the performance (when loading the mapView and working with it)

Printing maps:

- + printing directly from the webapplication
- + generating a PDF file for saving and/or printing.
- + generating an image from the map to download (if it's possible TIFF format)

The Tool can be found at: http://edit.csic.es/edit_geo/prototype/edit_project.html

The ItinTool

RMCA (Royal Museum for Central Africa) Tervuren has developed a webtool for geospatial dataset analysis, taking in a host of data formats, such as .kml, .gpx, .csv and .gml

The uploaded data in this tool are parsed into a PostgreSQL/PostGIS database, with a direct connection to a MapServer WMS service

This WMS layer constructed from the input data points can be used as a data source within the MapViewer tool. The screenshots present such a construction, where a GML dataset (that can not be used as input for the MapViewer at the moment) is uploaded to the ItinTool, and served dynamically through a WMS. The MapViewer can then connect to that WMS and use the layer directly.

The ItinTool can be found at: <http://synthesys.africamuseum.be/itin/>

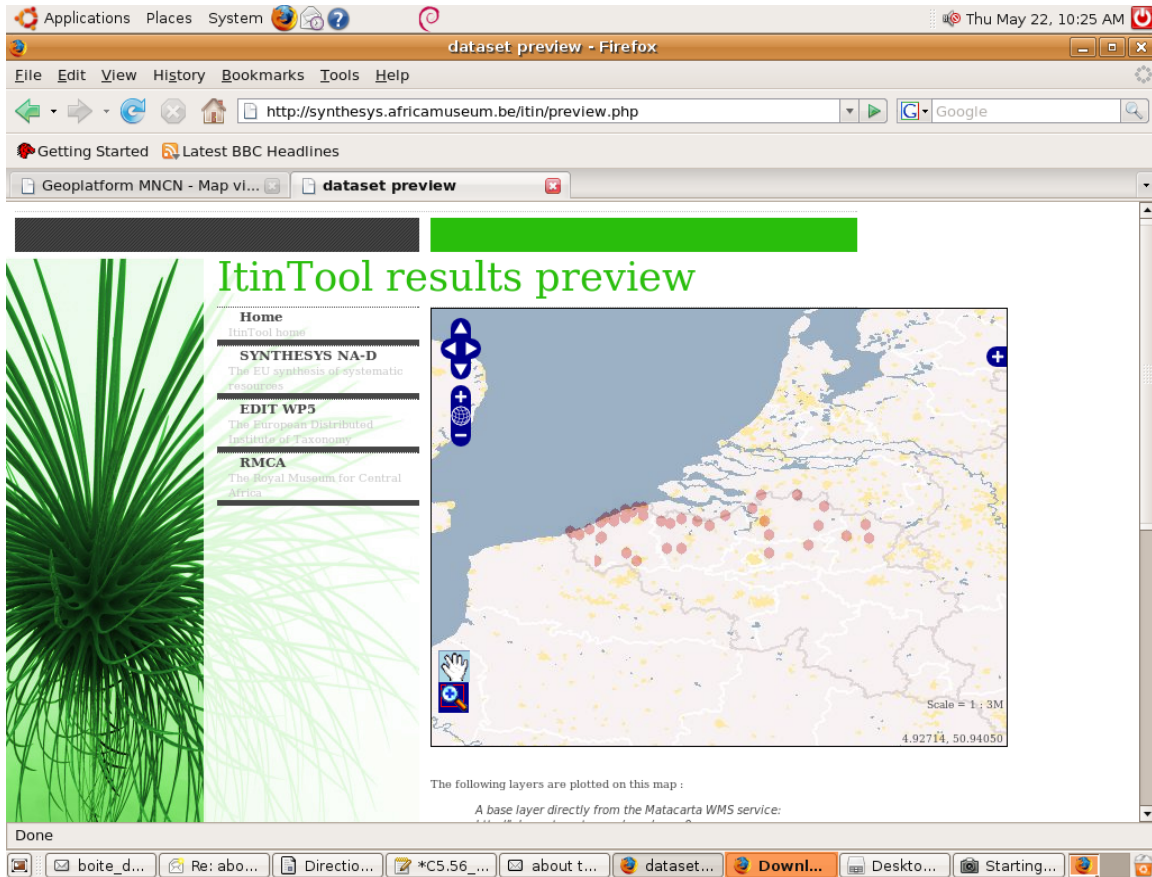


Illustration 2: Data points from a GML input file as displayed through a WMS in the ItinTool.

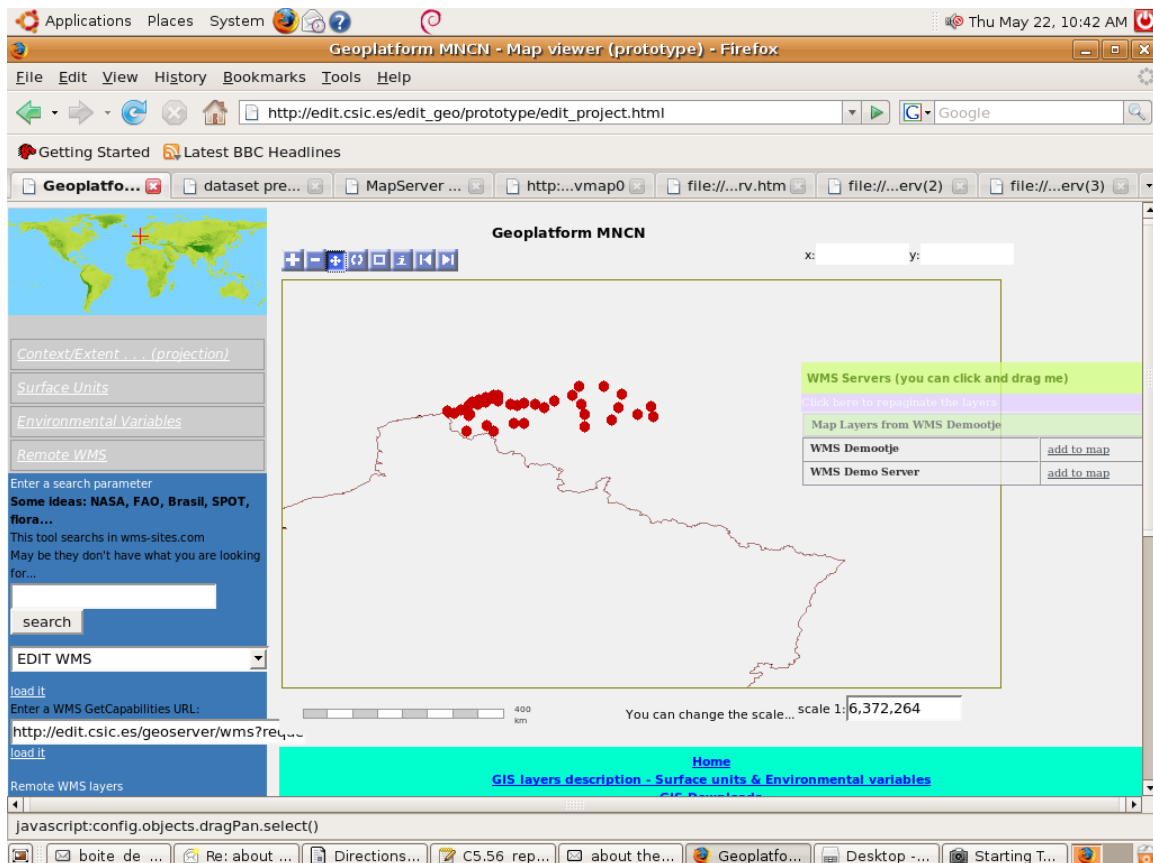


Illustration 1: The same data points in the MapViewer, directly taken from the ItinTool WMS.

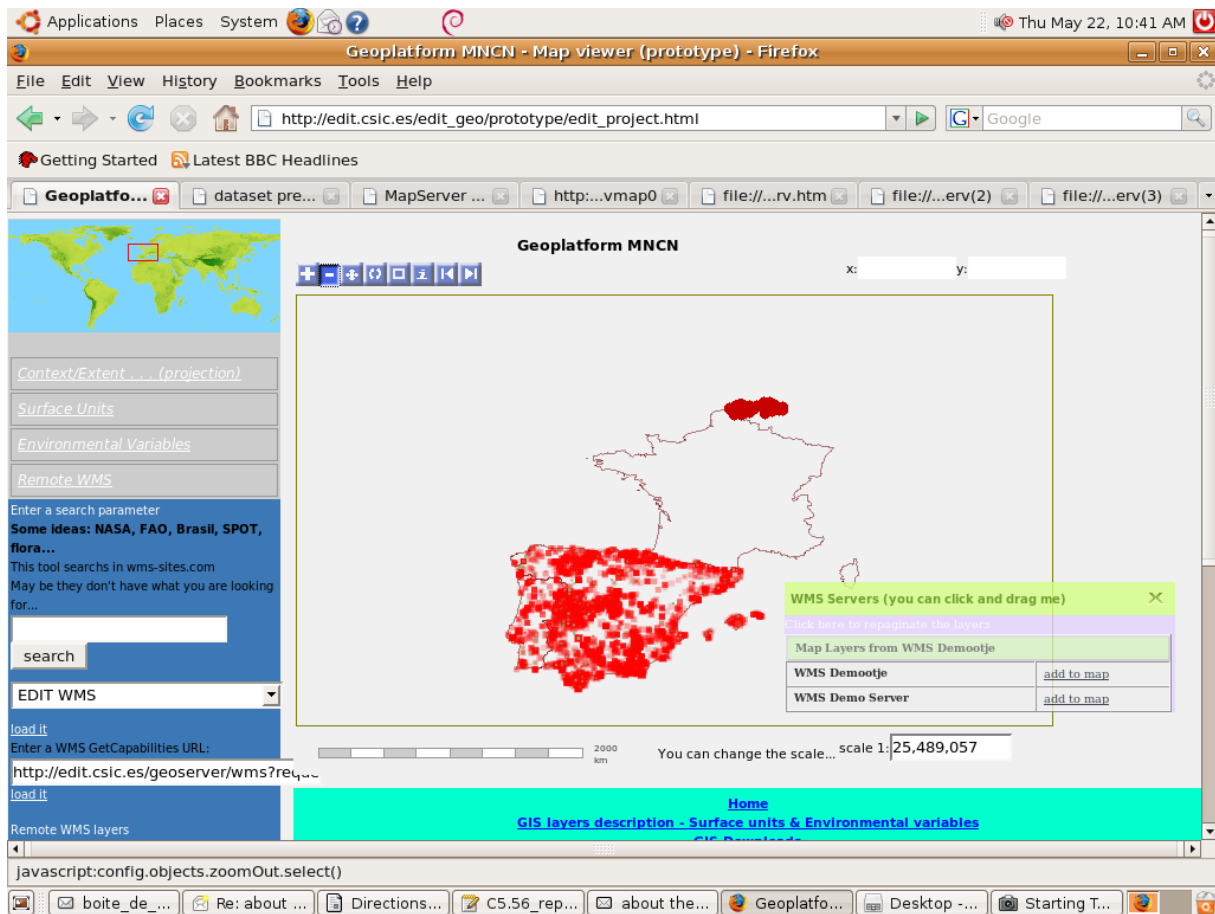


Illustration 3: The same data set in MapViewer, showing the ItinTool WMS data layer over Belgium and the CSIC data layer over Spain.