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**Project acronym: EDIT**

**Project title: Toward the European Distributed Institute of Taxonomy**

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

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

Revision: final

<b>Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)</b>		
<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>X</b>
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	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](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/>

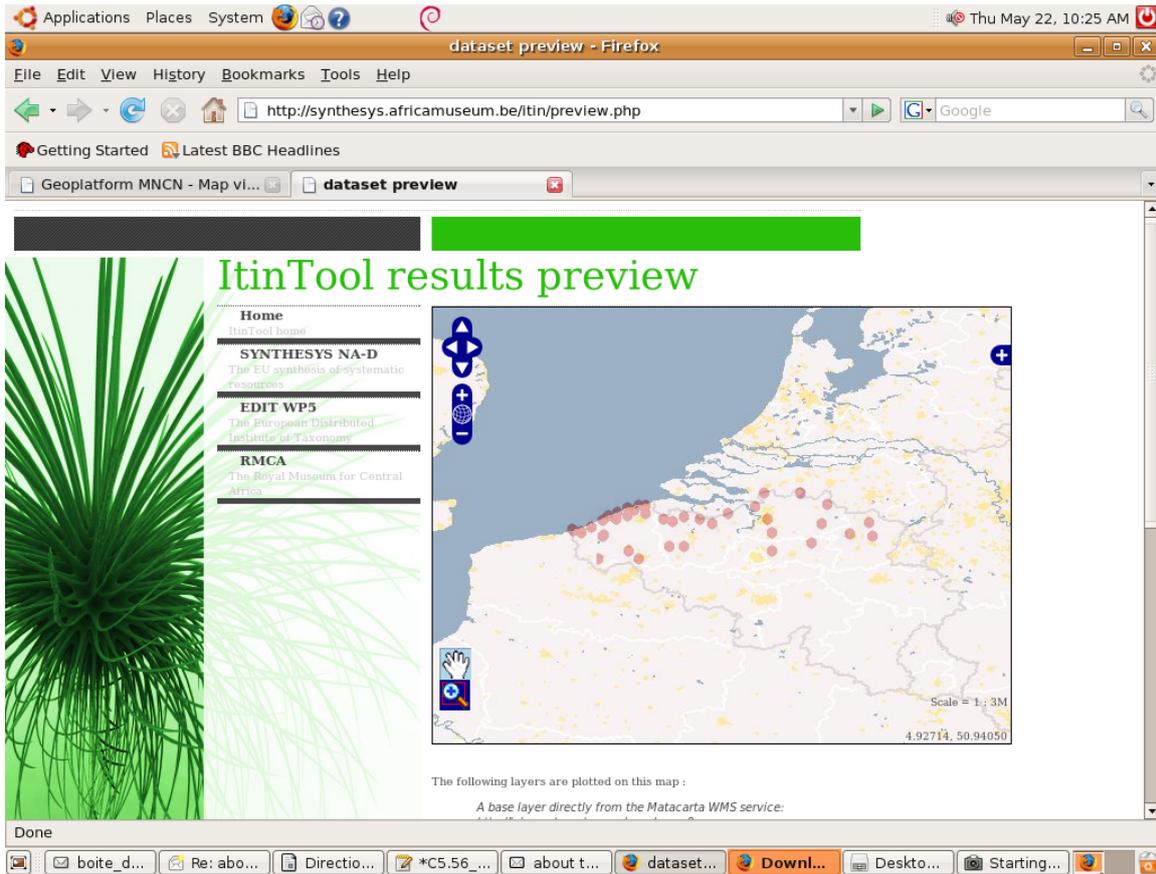


Illustration 2: Data points from a GML input file as displayed through a WMS in the ItinTool.

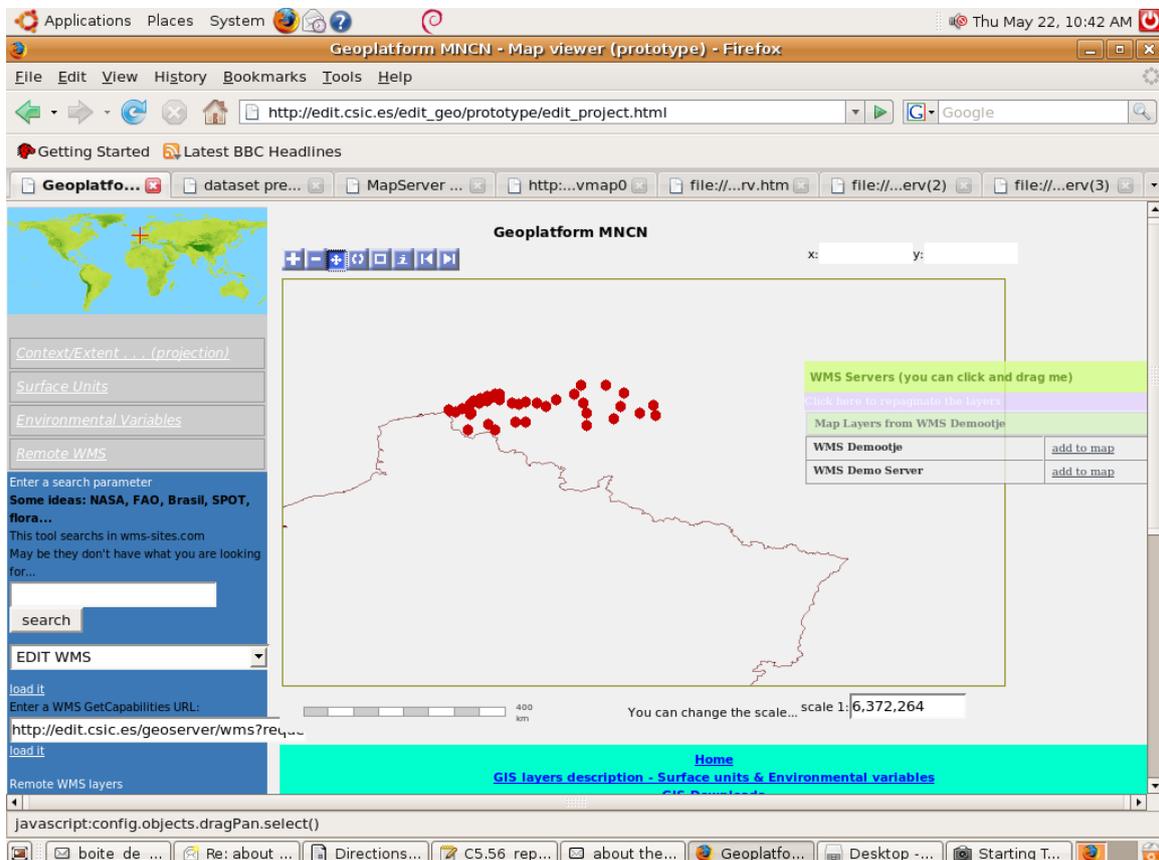


Illustration 1: The same data points in the MapViewer, directly taken from the ItinTool WMS.

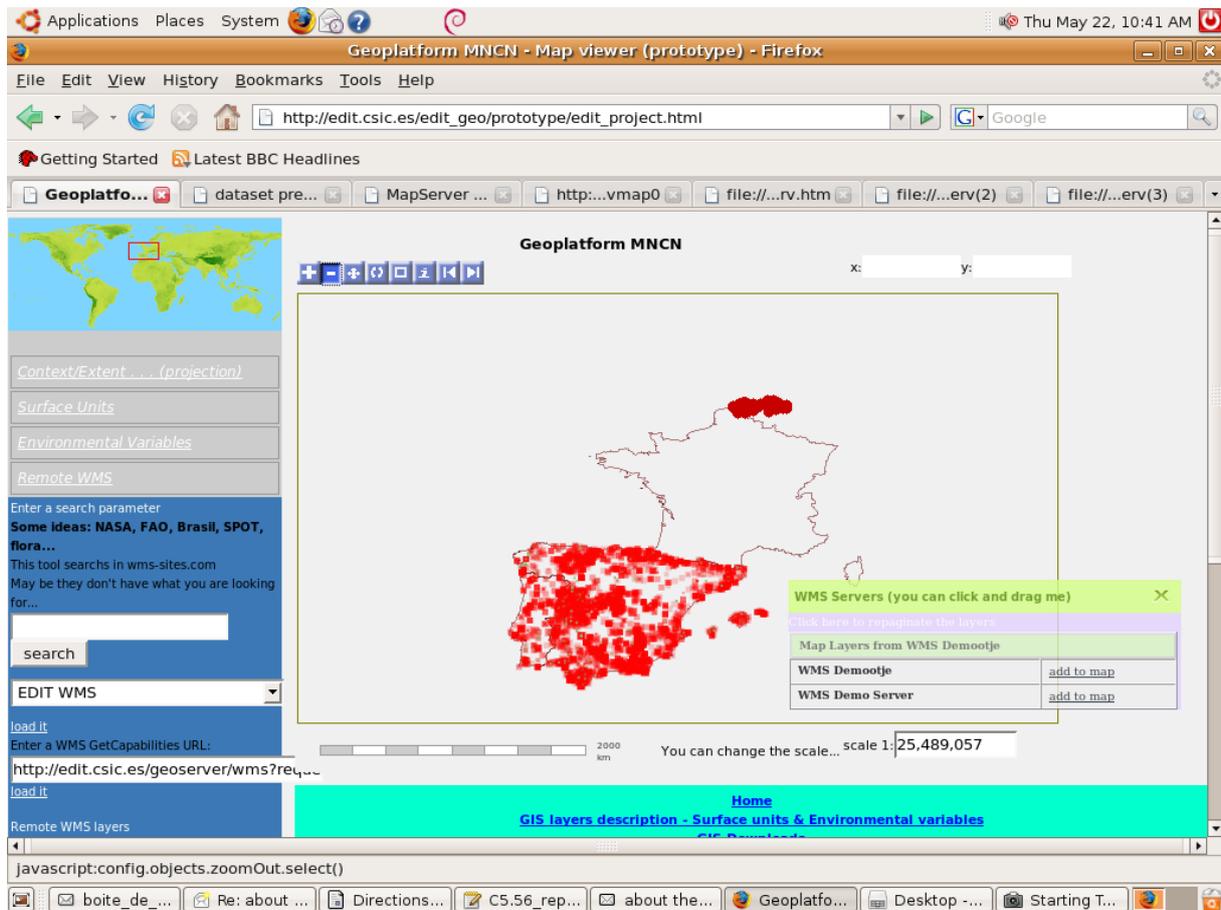


Illustration 3: The same data set in MapViewer, showing the ItinTool WMS data layer over Belgium and the CSIC data layer over Spain.