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**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"

## **C5.108 MapViewer version 2: The EDIT MapViewer with enhanced functionality available.**

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Revision final

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### **Dissemination Level**

<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)	

This report describes the 2nd version of the EDIT mapViewer tool.

## Introduction

The EDIT mapViewer is an online toolbox for taxonomists, offering data visualisation and analysis for the preparation of their publications.

Its first implementation was through the Mapbuilder Ajax framework for building web mapping clients inside a browser, with limited functionality.

In the meantime, the tool has been ported to the OpenLayers framework, as Mapbuilder is no longer supported and developed. In addition, many new functions have been developed and implemented for a true “version 2” release.

The mapViewer tool can be found at : [http://edit.csic.es/geo/mapviewer/edit\\_test.html](http://edit.csic.es/geo/mapviewer/edit_test.html)

All functions are well documented, with text and demonstration videos, at : [http://edit.csic.es/edit\\_info/edit\\_videos.html](http://edit.csic.es/edit_info/edit_videos.html)

## New functionality in version 2:

### Additional layers :

administrative units : *countries, provinces*

geographic equal area units (grids) :

*icosaedric triangles 10.000sqkm*

*latitudinal squares 10.000 sqkm*

*UTM squares 25.000 sqkm*

*UTM squares 10.000 sqkm*

### Environmental variables :

*topography (elevation, distance to coast, sea/land, coastline)*

*climate (precipitation, temperature)*

### GBIF data

Through a direct link with the GBIF API interface, the GBIF data records can be browsed (on species, on country) and visualised on the map (as far as they have lat/lon coordinates). A free text search can be made on a taxon of interest, so its GBIF data points can be visualised in addition to the user's data point, for comparison and new insights (see component report 5.072 : Dynamically link GBIF data to core geoplatform webservice allowing GBIF data to be visualised in addition to custom user data).

### Uploading point data (csv)

Users can upload their own data points through a simple .csv file (comma separated value). The data are cleared from the server after the session.

### Download maps for printing and publication

When users are satisfied with the map on the screen (background map, grid or administrative units layer, data point symbols), they can download it in different image formats, adapted to the demands of the publication service for his report or article. The range of formats has vastly increased with version 2 :

*PNG, JPEG, GIF and TIF image format, colour or grayscale, resolution between 120-480 dpi, dimensions : 7.5x3.75 cm or 15x7.5cm, with or without map legend*

The pre-defined values for these parameters were chosen after careful consultation with technical staff and end users (taxonomists) in various EDIT (and other) institutions.

### **Draw polygons**

Users can define their area of interest (AOI) as a polygon on the map.

Just like the data points, this polygon can be symbolised, with different choices for stroke and fill type, width and colour. A text can be added in various fonts and text sizes. Moreover, these user-defined polygons (areas) can be used to query the records within the polygon, or for spatial analysis.

### **Spatial analysis**

Statistics about the data points (number of records, number of genera,...) can be visually related to a chosen area layout (UTM squares, province borderlines, area of interest), for a quick assessment of gathering efforts and biological importance of these areas.

3 area statistics are available for the moment :

*number of records per area*

*number of genera per area*

*genera/records per area*

An overview of these functions can be found in Component report 5.070 (partim 2) : Report on converter webservice that transforms point occurrence data to distribution data.

### **Unified development cycle**

Not visible to the end user, but nonetheless very important for the mapViewer as a tool, is the unified development cycle for the mapViewer online tool and the geoREST services.

In short, the geoREST services are a "black-box" (a sort of API) for programmers and webbuilders who want to offer the mapViewer functions in their own applications. The EDIT ATBI websites and the EDIT dataportals already use the REST services extensively. In version 1 of the mapViewer tool (Mapbuilder implementation), the mapViewer and geoREST services had separate coding and development cycles, demanding double work and difficult coordination. Since the move to the OpenLayers framework, the same code base can be used for both, so development is now simultaneous and demands less work (see Component report 5.109 : Map REST Services version 2: The EDIT Map Web Services for occurrence and distribution data with enhanced functionality available).