



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"

C5.070 (part2): Practical implementation of converter webservice that transforms point occurrence data to distribution data

Due date of component: August 2009
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Start date of project: 01/03/2006

Duration: 5 years

Organisation name of lead contractor for this component: 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)	

This report provides an overview of the practical implementation of the transformation of point occurrence data to distribution data in the EDIT mapViewer, as outlined in the requirement analysis of the first report (C5.070).

Aggregation and spatial reference

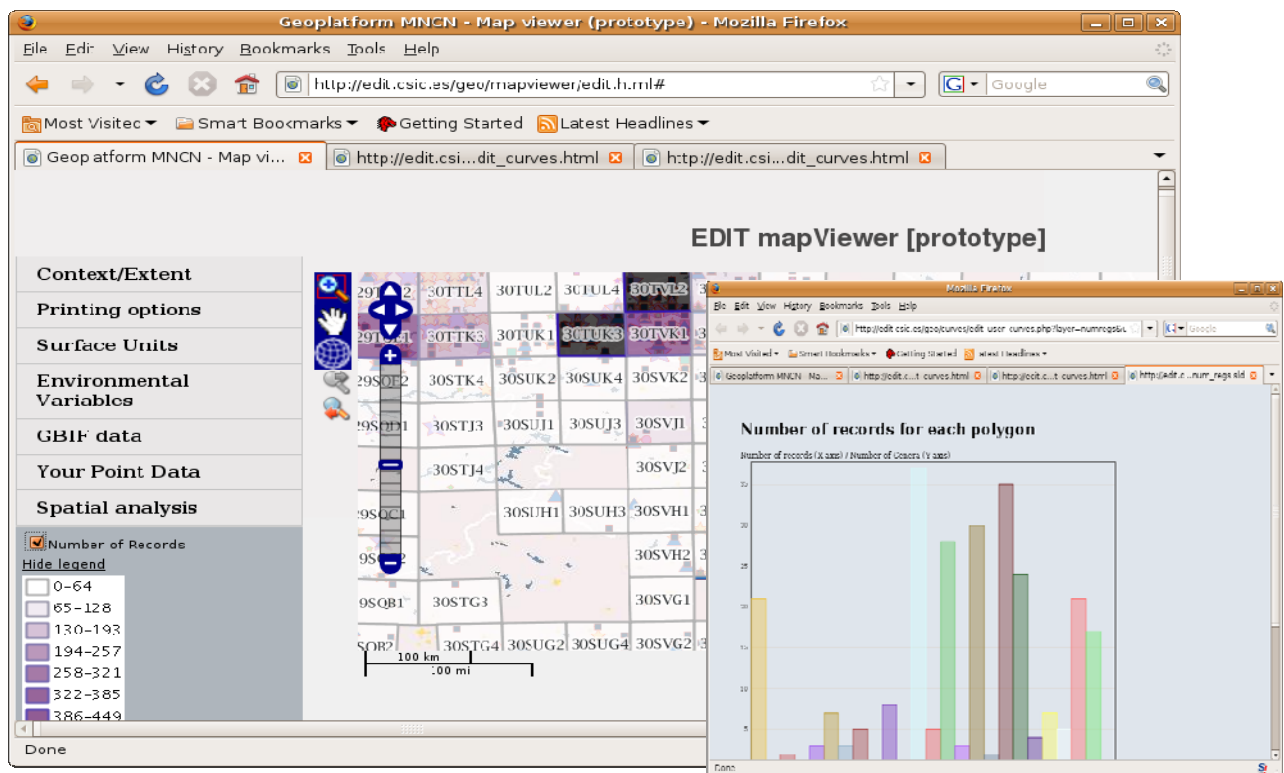
Already aggregated point data (aggregation might be at any level) should be referred to an area. In the mapViewer the points are referred to regular grids of squares based on different coordinate systems (UTM, latitudinal squares) or other polygons (such as province boundaries). Pre-defined grids for the moment include :

- * UTM 25.000 sqkm
- * UTM 10.000 sqkm
- * latitudinal squares 10.000 sqkm
- * icosaedric triangles 10.000sqkm
- * state provinces (Iberia demo)

All these results of the analysis are visualized as choropleth maps in the mapViewer. For their interpretation it is important to remember that choropleth maps use relative data values – meaning that the values of the represented data set are related to other base values. More info on: http://edit.csic.es/web/docs/Demo_explanation_spatial.htm
In addition, a separate page gives the results in a clear graph.

Records per spatial unit

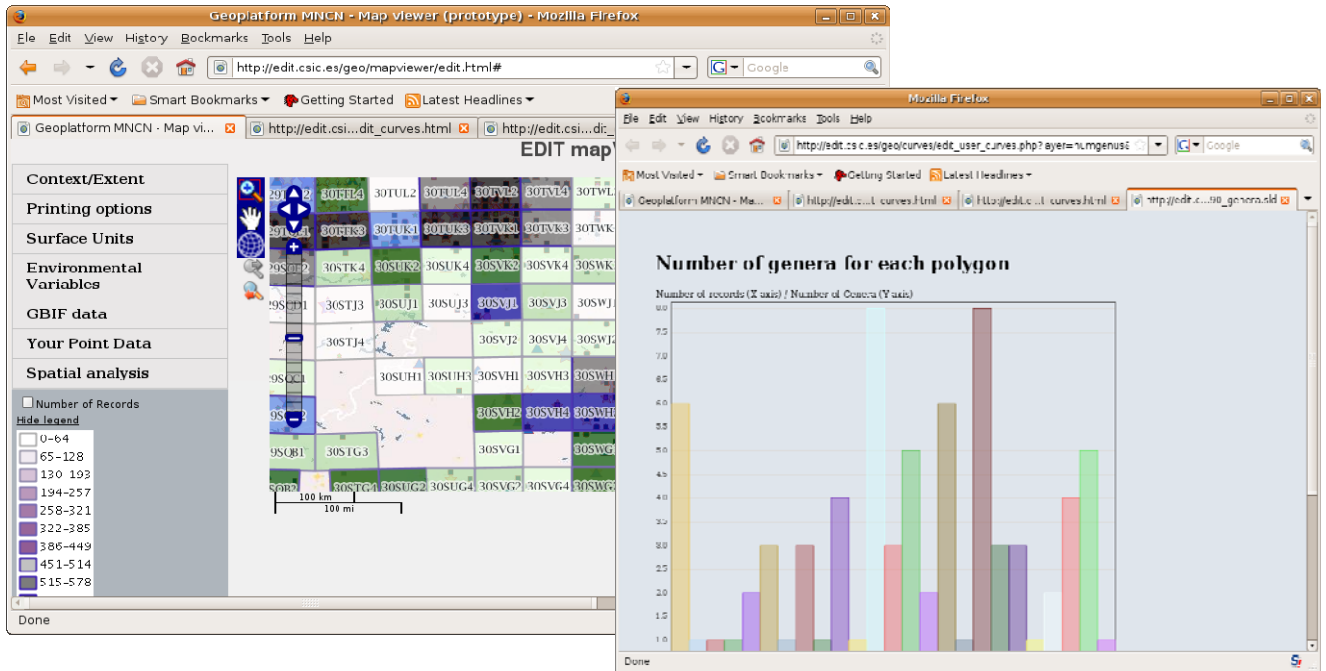
The number of records per spatial unit: gives an idea of the collecting effort, and so can help in focusing the discussion on the definition of new areas of effort.



Genera per spatial unit

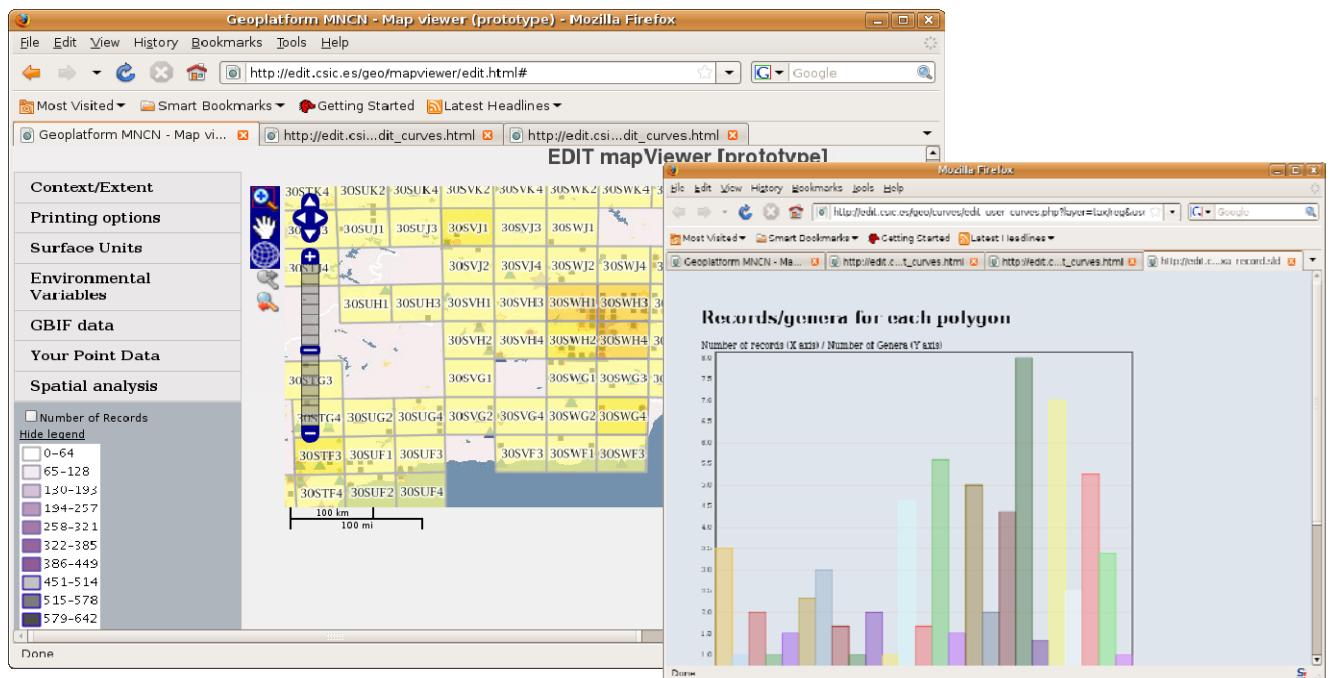
The number of genera per spatial unit: gives a first idea of the biodiversity. A first and/or false idea, as there is no relation to the number of records (and 5 genera in 5 records might be a lot whereas 5 genera in 300 records is not). Still for people who know their own dataset well (and

can interpret the figures with caution) it can be a quick guide to their past efforts/gathering localities.



Genera/records per spatial unit

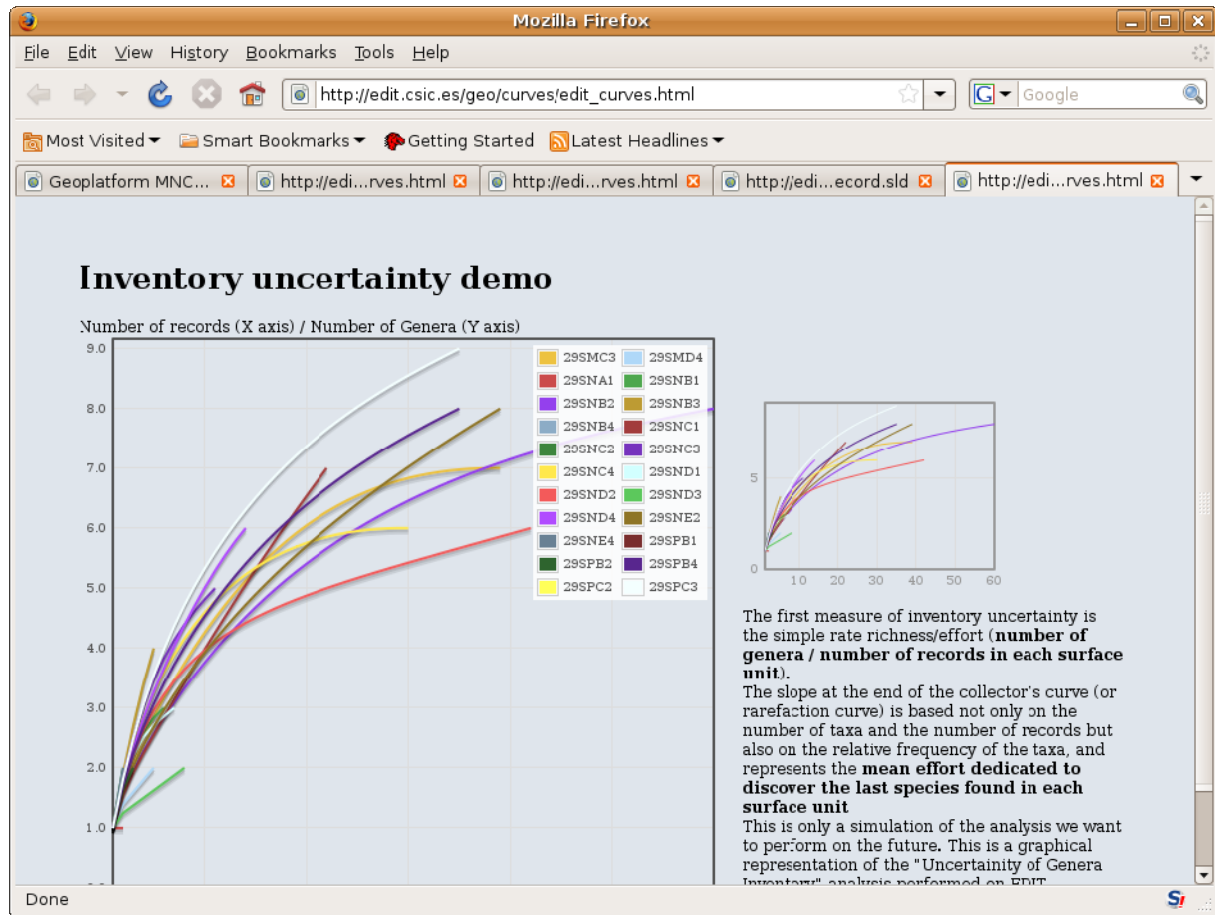
The number of genera/Number of records per spatial unit: gives a more accurate idea of biodiversity, and as such can serve for determining areas of future effort, or areas of high biological value. Even, with the necessary caution, in conservation decision making.



Inventory uncertainty

Uncertainty of genera inventory represents the mean effort dedicated to discover the last species found in each surface unit. This data are presented as a collector's curve, from which conclusions can be made on where future field work is most needed: this can concentrate the efforts where

they are most necessary and so avoid duplicating work and expenditure. (http://edit.csic.es/geo/curves/edit_curves.html).



Conclusions

Conversion of the point data to larger entities (distribution data) is the first step in drawing (biological, ecological) conclusions from a dataset, so it is vital for the taxonomists using the tools. These functions are now offered in the EDIT mapViewer as a measure of inventory facility, that is: *"do I have enough data **in my selected spatial units** in order to apply possible future modeling?"*

Some of the most useful operations are now implemented in the mapViewer to be used through the online interface, or as black-box (invisible to the user) background REST services for embedding in other tools (and websites).

The mapViewer tool is available online at :

<http://edit.csic.es/geo/mapviewer/edit.html>