



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”

C5.071 Specification of a joint geospatial training course (with WP5.4, WP7, WP8)

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[Final]

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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 has been compiled by Bart Meganck of the Royal Museum for Central Africa.

Introduction:

This report documents the joint geospatial training course, realised through cooperation between EDIT WP5.4, WP7 and WP8. The joint geospatial training course was given during the second EDIT Summer School in Slovakia (July 19th - August 2nd 2009) by staff from the three workpackages involved. There were several theoretical lessons, but mostly the topics were made clear by demos and practical work (in the field or on the computers). The staff was also available on other days to permanently support the students in these issues, so that the new knowledge could be directly applied in practical terms - and so that there was opportunity for asking questions as they arose. The students were asked to provide 10 data records each (following the ATBI+M data format guidelines) at the end of the Summer School period, as an extra exercise. We feel that both students and staff have learned lots of this experience, and that it would be good to repeat the training in the future.

Topics:

These topics were elaborated in the geospatial course. Within a limited timeframe they gave a solid introduction to some of the key concepts of the geospatial practice.

1/ basic navigation:

latitude & longitude, meridians and parallels, Prime Meridian, different Prime meridians in history, local and global gravity: geoid and ellipsoid concepts, radio and satellite navigation, GPS and other satellite navigation systems (Glonass, Galileo,...).

2/ basic map theory:

different map types, different projections (Gall-Peeters, Mercator, ...), caveats in map interpretation (impossibility of correct representation of a sphere on a 2D surface, distortions), choice of map type in relation to its purpose (correct angles, correct surfaces,...).

3/ basic georeferencing:

concept of georeferencing, georeferencing of historical specimens, when to georeference, when not to georeference, locality description: theory and practices, practical examples and exercises, demo: georeferencing and visualisation of photographs.

4/ GPS:

GPS field training, data point offload, data point storage and processing (data cleaning, cf. GBIF guidelines), data point visualisation through GIS, data and metadata registration in the field (WP7 ATBI standards).

5/ GIS (Geographical Information Systems):

GIS concept, different data types for storage (vector, raster), geodata standards (KML, GML, shapefile, CSV,...), geometry storage in database, EDIT online GIS tools (mapViewer).

6/ the Web connection:

harvesting and use of GBIF and other data portals with geospatial data, WMS and WFS concepts, the EDIT online geographical tools (mapViewer, Geoportal).

Staff:

Pere Roca Ristol (WP5.4): EDIT GeoTools, mapViewer, QGIS software for visualisation

Dominik Mickiewicz (WP5.4): general GIS, data formats, storage formats, 3D visualisation

Alexander Kroupa (WP7): data and metadata gathering in the field, the ATBI+M data guidelines and handheld field tools

Bart Meganck (WP5.4, WP8): general navigation, GPS theory and exercises

Eduard Stloukal (WP7): georeferencing and visualisation of field pictures

Course material:

The presentations of the second EDIT Summer School will be made available online, on the Summer School website: Pere Roca Ristol (mapViewer), Dominik Mickiewicz (georeferencing and GIS), Bart Meganck (basic navigation), Alexander Kroupa (data and metadata in the field).

Furthermore the GBIF manuals (on data cleaning and processing, on georeferencing) were extensively used. This material is available for download on the GBIF website.

The relevant sections of the upcoming EDIT ATBI+M Field Manual will include many of the mentioned topics, and could be used for future editions of the joint geospatial course.

All this material could be referenced through the EDIT WP8 taxonomy online resource links for future use in Summer Schools, in "expert-in-training" education, or in "e-learning" projects.