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Support for new/existing BioCAsE installations

In the third twelve month period of the SYNTHESYS II project the following institutions were supported in setting up new ABCD data sources or in upgrading/configuring/debugging an existing installation. Where not stated otherwise, this was done via email, phone talks, and remote desktop or remote configuration of the BioCAsE Provider Software (BPS), for

- Finnish Museum of Natural History,
- Natural History Museum London,
- ETI BioInformatics Leiden, Netherlands,
- Natural History Museum of Denmark,
- Naturalis Biodiversity Center Leiden, Netherlands,
- Bundesamt für Naturschutz, Germany,
- Botanic Museum Berlin, Germany,
- Israel Nature and Parks Authority (hosted data at the BGBM),
- DNA Bank Network,
- University of Ulm, Germany,
- Natural History Museum Prague, Czech Republic,
- GBIF Switzerland,
- Royal Botanic Gardens Edinburgh,
- AIT - Austrian Institute of Technology GmbH,
- AIT - Angewandte Informationstechnik Forschungsgesellschaft mbH, Austria,
- Royal Belgian Institute of Natural Sciences, Belgium,
- Kew Botanical Gardens, UK,

- Leibniz-Institut DSMZ-Deutsche Sammlung von Mikro-organismen und Zellkulturen, Germany,
- Alfred Wegener Institute for Polar and Marine Research, Germany,
- University of Salento, Italy,
- Verein Haus der Natur, Austria,
- Zoologische Staatssammlung München, Germany,
- Oberösterreichische Landesmuseen, Austria,
- University of Helsinki, Finland,
- Natural History Museum Vienna, Austria,
- Centre for Genetic Resources, Netherlands,
- University of Heidelberg, Germany,
- University of Tartu, Natural History Museum, Estonia,
- Naturhistorisches Museum Mainz, Germany (hosted data at BGBM)
- EDIT ATBI project (European Institute for Taxonomy, All Taxa Biodiversity Inventory). Hosted data at BGBM
- Musée national d'histoire naturelle, Luxembourg,
- TTÜ Geologia Instituut, Tallin, Estonia,
- Centre for Organismal Studies (COS Heidelberg), Germany,
- National Botanic Garden of Belgium,
- Bodensee-Naturmuseum Konstanz, Germany,
- Institute of Botany, Slovak Academy of Sciences, Bratislava,
- Museum für Naturkunde Berlin (GeoCASE project, see extra paragraph),
- Archive of Animal Sounds at the Natural History Museum Berlin, Germany,
- GBIF project at the Natural History Museum Berlin,
- The providers of the Australian Virtual Herbarium (see paragraph below).

Support for extending EFG coverage (Extension for Geosciences)

The Extension for Geosciences supplements ABCD with a schema for paleontological and mineralogical extension. The EFG task of SYNTHESYS II aims at increasing the number of EFG data providers and at improving the EFG network.

For this, assistance of the SYNTHESYS Helpdesk at the BGBM was given by

- Consulting the EFG team at Museum für Naturkunde Berlin (MfN) in respects to ABCD/EFG internals, the BioCAsE Provider Software and the whole BioCAsE architecture;
- Maintaining, extending and bug fixing an interim data portal for the EFG network on BGBM servers;
- Supporting the EFG team in the setup of new BioCAsE installations at the MfN;
- Supporting ETH Zürich with configuring their BioCAsE installation;
- Assisting new EFG providers with the setup of EFG data sources.

In the last year, the following providers joined GeoCAsE:

- Natural History Museum Vienna,
- Estonian Museum of Natural History,
- Museum of Geology of the University of Tartu,
- Natural History Museum Mainz,
- State Museum for Natural History Stuttgart.

These providers contribute additional 110320 records, resulting in 445506 records available in the GeoCAsE network. An overview of all available providers and their contribution to the GeoCAsE network can be obtained at http://gbif.naturkundemuseum-berlin.de/biocaseMonitor/?provider_ini=config/geocase_provider.ini.

A completely new website was set up. By using Drupal as a content management system, maintenance efforts have been reduced and integration of modules for improved functionality and user experience is possible. A twitter account has been created and is synchronized with the news items on the GeoCAsE website, allowing quicker editing of news. Followers will immediately be noticed about recent news on GeoCAsE.

Minor fixes concerning the XSLT processing and javascript/css styles of the portal have been applied to improve portal output and usability. Openlayers was used to implement maps on the portal, where markers and unit information were added to the map. A connection to the taxonomic web services of the Paleobiology Database was established. Synonyms can automatically be added to the query. The taxonomic output can be enriched with taxonomic information from the Paleobiology Database. Translations for all country names into 10 languages have been collected and stored in an XML document, which can be parsed by the portal. Translations are then applied to queries containing request with a country name filter.

This approach has been used for the implementation of taxon translations. All functions result in a more complete response from providers.

To improve development and updating processed, the GeoCAsE portal was set up at the Natural History Museum Berlin, as it was previously hosted by the Botanical Garden and Botanical Museum Berlin.

The EFG XML standard is now the official standard of Europeana with respect to paleontological collection data.

GeoCAsE was presented at various national and international meetings and events.

Atlas of Living Australia (ALA) and the Australian Virtual Herbarium (AVH)

The Atlas of Living Australia is an Australian Government-funded initiative focused on making biodiversity information freely accessible online, comparable to GBIF, but with a strong regional emphasis. Part of its data is drawn from the Australian Virtual herbarium, a network of Australian herbaria that offers an own data portal. In 2010, the State Herbaria were supported in setting up BioCAsE for providing their data to the AVH using the HISPID standard (Herbarium Information Standards and Protocols for Interchange of Data).

Right now, there are seven data providers using BioCAsE in conjunction with ABCD; two of them deliver additional data in HISPID. The AVH plans to use the new XML archives; however, it will take some time until providers upgrade their installations to a new version. The Melbourne provider successfully created archives on a test installation.

Support was given to the following providers:

- National Herbarium of Victoria (MEL),
- Northern Territory Herbarium (DNA).

BioCAsE in Italy

Italy is planning to set up its own BioCAsE-based biodiversity network. Funded by the Ministry of Environment, in the first phase of the project several data providers will publish at least 1 million records. The BioCAsE Provider Software will be used to feed specimen information from the data providers to a central node, which will then propagate the data to the BioCAsE network and GBIF.

Extensive support was given to the colleagues in Italy on general architectural questions, for installation the BioCAsE Provider Software and the BioCAsE data portal, and for adapting the latter.

BioCAsE and OpenUp

The OpenUp project launched in March 2011 uses BioCAsE Technology to connect millions of multimedia objects stored in natural history collections to the European network Europeana, thereby making them accessible to the public in a high quality.

BioCAsE was represented during the OpenUp! Annual Meeting in Paris in March 2012. A presentation was given in the Project Assembly, and for the content providers a workshop for discussing technical issues was offered. Before and after the workshop, providers were given assistance within the frame of the regular BioCAsE helpdesk.

BioCAsE and CETAF

The Consortium of European Taxonomic Facilities (CETAF) confirmed the role of BioCAsE as its Participant Node in the Global Biodiversity Information Facility, GBIF, in the course of the 31st CETAF meeting, April 17-18, 2012 in Brussels.

BioCAsE Provider Software

Over the past twelve months, several versions of the BioCAsE Provider Software have been released. The main new feature is the option to create archives that store all information published by the BioCAsE web service. The archives contain either XML documents (for example, ABCD) or text files (DarwinCore Archives).

The full version history of the Provider Software is available at <http://wiki.bgbm.org/bps/index.php/VersionHistory>, listing all bug fixes and new features.

Versions 2.6.0/2.6.1:

- Replacing used software libraries that are no longer in the public domain with their open-source analogues,
- Improving the user interface facilitating the configuration of the mapping,
- Optimizing performance for selected, widely used database management systems.

Version 3.0:

- New XML Archiving feature for increased harvesting efficiency added,
- Several optimizations in wrapper core and for selected DBMS.

Version 3.1:

- XML Archiving reworked,
- Improved compatibility for Internet Information Server.

Version 3.2:

- DarwinCore Archives added.