

Conference Abstract

The EDIT Platform for Cybertaxonomy, a Brief Overview

Andreas Kohlbecker[‡], Andreas Müller[‡], Walter Berendsohn[‡], Anton Güntsch[‡], Katja Luther[‡], Patrick Piltzner[‡]

[‡] Botanic Garden and Botanical Museum, Freie Universität, Berlin, Germany

Corresponding author: Andreas Kohlbecker (a.kohlbecker@bgbm.org), Andreas Müller (a.mueller@bgbm.org), Walter Berendsohn (w.berendsohn@bgbm.org), Anton Güntsch (a.guentsch@bgbm.org)

Received: 16 Aug 2017 | Published: 16 Aug 2017

Citation: Kohlbecker A, Müller A, Berendsohn W, Güntsch A, Luther K, Piltzner P (2017) The EDIT Platform for Cybertaxonomy, a Brief Overview. Proceedings of TDWG 1: e20368.

<https://doi.org/10.3897/tdwgproceedings.1.20368>

Abstract

The Platform for Cybertaxonomy (FUB, BGBM 2011) is an open-source software framework covering the full breadth of the taxonomic workflow, from fieldwork to data publication. It provides a set of tools for editing and management of taxonomic data (individually or collaboratively), fully customizable on-line access to that data, and other means of data publication and data exchange (Ciardelli et al. 2009).

The EDIT Platform was originally devised for the EU-funded project "European Distributed Institute of Taxonomy" (hence the EDIT name), its development started in 2006, early developments are summarised in Berendsohn (2010).

At the core of the platform is the EDIT Common Data Model (CDM), which offers a comprehensive information model covering all data domains that are relevant in the context: names and classifications, descriptive data, media, geographic information, literature, specimens, and persons (see Müller & al., this session).

Apart from its role as a software suite supporting the taxonomic workflow, the Platform can be seen as a powerful information broker for a broad range of taxonomic data providing solid and open interfaces including a Java programmer's library and a REST Service Layer.

A number of CDM-based applications have been developed, the most important of which are the Taxonomic Editor (TaxEditor), the CDM Data Portal, and the Platform Web Services.

The Eclipse-based TaxEditor allows access and editing all details of the data in the CDM in form-based windows but also provides innovative features such as parsing of nomenclatural data (names, authors, references) from free text entry or paste and automatically calculated "cache" fields that may be protected to allow preliminary, non-atomised data entry. The TaxEditor as well as the underlying CDM database instance are highly configurable, so they can be adapted to the project at hand. The taxonomic tree can be displayed and used for navigation and for restructuring by drag and drop. Apart from the core taxonomic name and classification functionality, there are editors for multimedia object metadata, for the features (descriptive data items) used, for identification keys, and for the specimen hierarchy and even an alignment tool for DNA sequences (Plitzner & al., this session). A "power user interface" presents the data in spreadsheet-like fashion and allows bulk editing and data cleaning. The CDM Data Portal is a Drupal website enhanced with full access to the Platform Web Services. It provides all the configuration options of the Drupal content management system in addition to full and highly configurable access to CDM content. Geographic distribution (both, area and point maps) use the services provided by the EDIT partner at the Royal Museum of Central Africa in Tervuren (Roca et al. 2009). The EDIT Platform Web Services are further detailed in Güntsch & al., this session).

A fair number of tools exist that allow the editing of descriptive information and identification keys, so it was decided to couple the platform with the Xper² software developed in Paris Venin et al. 2010). The respective data structures are present in the CDM, but up to now no direct editing of atomised descriptive information is possible with CDM-based tools.

The EDIT Platform for Cybertaxonomy is used by numerous biodiversity research initiatives and from regional and monographic floristic and faunistic projects to international checklists and biodiversity information portals (see FUB, BGBM 2016 for a list of publicly accessible Data Portals).

Keywords

EDIT Platform, Taxonomy

Presenting author

Andreas Kohlbecker

Funding program

A number of projects have directed resources towards development of the EDIT Platform. Most notably the EU Network of Excellence "European Distributed Institute of Taxonomy", but also the EU funded projects ViBRANT, SYNTHESYS-2, Pro-iBiosphere, PESI and i4Life, as well as the GBIF-Germany project financed by the Federal Ministry of Research (BMBF), and several other projects financed by BMBF, the German Federal Agency for Nature Conservation or the German Research Council (DFG); some of them named with the respective contributions in this session.

Hosting institution

Botanic Garden and Botanical Museum Berlin, Freie Universität Berlin, Germany

References

- Berendsohn W (2010) Devising the EDIT Platform for Cybertaxonomy. In: Nimis PL, Vignes-Lebbe R (Eds) Tools for identifying Biodiversity: Progress and problems. Edizioni Università Trieste, Trieste, 1-6 pp. URL: <https://www.openstarts.units.it/dspace/handle/10077/3737> [ISBN 978-88-8303-295-0].
- Ciardelli P, Kelbert P, Kohlbecker A, Hoffmann N, Güntsch A, Berendsohn WG (2009) The EDIT Platform for Cybertaxonomy and the Taxonomic Workflow: Selected Components. In: Fischer S, Maehle E, Reischuk R (Eds) INFORMATIK 2009, Im Focus das Leben, Beiträge der 39. Jahrestagung der Gesellschaft für Informatik e.V. (GI). INFORMATIK 2009, Lübeck, 28.9. - 2.10.2009. Springer Lecture Notes in Informatics (LNI), 154, 625-638 pp. [In English].
- FUB, BGBM (2011) EDIT Platform for Cybertaxonomy. <http://www.cybertaxonomy.org>. Accessed on: 2017-8-05.
- FUB, BGBM (2016) EDIT Platform for Cybertaxonomy – Reference Projects. <https://cybertaxonomy.eu/?q=DataPortalReference>. Accessed on: 2017-8-14.
- Roca P, Sastre P, Lobo J, Meganck B, Theeten F, Mergen P, Müller A, Kohlbecker A, Dusan S, Mikiewicz D (2009) Enhancing the visualization of biological data: Edit Geographic Tools. Proceedings of TDWG, Book of Abstracts. TDWG 2009 Annual Conference, Montpellier. URL: http://www.africamuseum.be/museum/home/contact/staff/THEETEN_Franck/publication_detail_view?pubid=599
- Venin M, Kirchhoff A, Fradin H, Güntsch A, Hoffmann N, Kohlbecker A, Kuntzelmann E, Maiocco Ô, Müller A, Vignes-Lebbe R, Berendsohn W (2010) Descriptive data in the EDIT Platform for Cybertaxonomy. In: Nimis PL, Vignes-Lebbe R (Eds) Tools for identifying Biodiversity: Progress and problems. Edizioni Università Trieste, Trieste, 7-11 pp. URL: <https://www.openstarts.units.it/dspace/handle/10077/3738> [ISBN 978-88-8303-295-0].