



## **Milestone M4.28**

# **Statistical output provided for CDM- ViBRANT Index query Interface**

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## Introduction

We have created a simple web-based user interface for querying different statistical counts from a database that is imported into the Common Data Model (CDM).

The web user interface is available within the BGBM at:

[http://160.45.63.201/vibrant\\_index/search/vibrant\\_stats.html](http://160.45.63.201/vibrant_index/search/vibrant_stats.html)

After the next CDM release (mid December 2012) it will be available externally at:

[http://dev.e-taxonomy.eu/vibrant\\_index/search/vibrant\\_stats.html](http://dev.e-taxonomy.eu/vibrant_index/search/vibrant_stats.html)

## Implementation

A new service for generating statistical summary data from the CDM was implemented. We make use of the web-service, service and persistence layers in the CDM. A web service controller was implemented, which parses the parameters that are given by the user in the HTTP request and returns the matching statistics from the service. The service uses several DAO classes to compute the requested numbers.

Using a combination of HTML forms and XSLT a simple query interface was created where the user can select the statistics they would like to view by choosing from a list of checkboxes. (figure: 1). XML generated from the web service queries was transformed to generate a table showing the search results. (figure: 2)

The web application source code is available from EDIT's subversion repository:

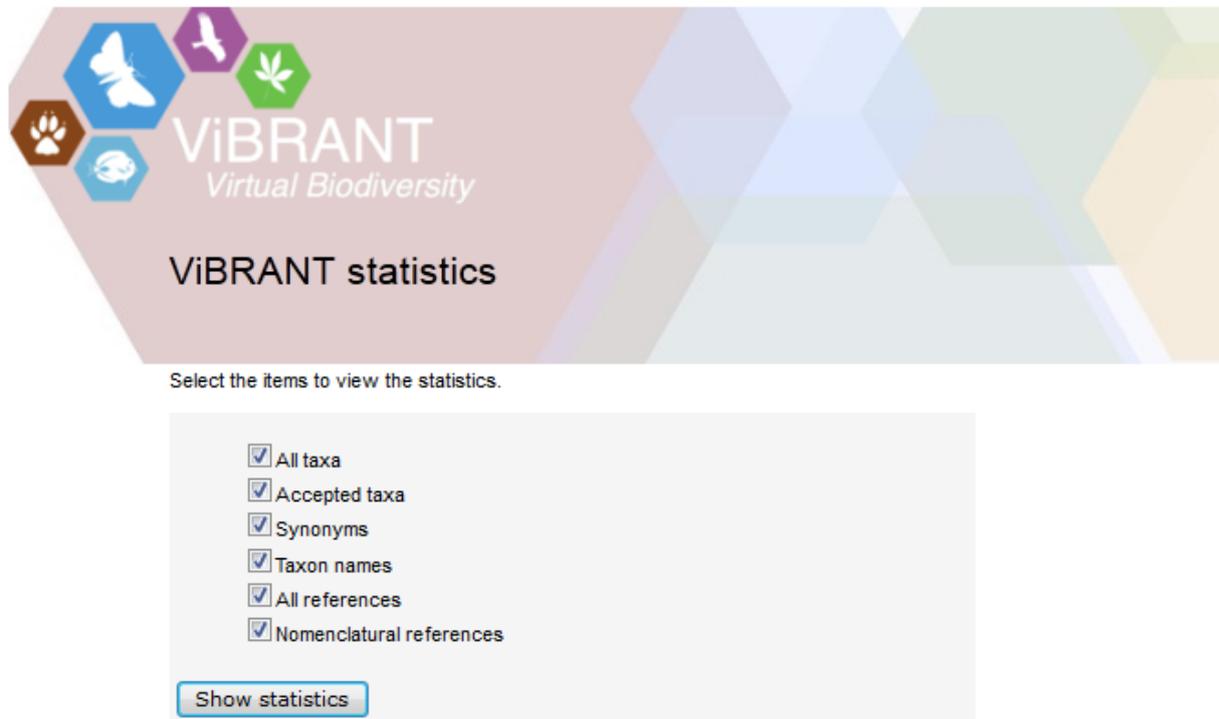
<http://dev.e-taxonomy.eu/trac/browser/trunk/cdmlib/cdmlib-remote-webapp/src/main/webapp>

The Java source code of the web service controller is available in the project:

<http://dev.e-taxonomy.eu/trac/browser/trunk/cdmlib/cdmlib-remote-webapp/src/main/cdmlib-remote>

The statistics service classes can be found in the package:

<http://dev.e-taxonomy.eu/trac/browser/trunk/cdmlib/cdmlib-remote-webapp/src/main/cdmlib-services>



ViBRANT  
*Virtual Biodiversity*

ViBRANT statistics

Select the items to view the statistics.

- All taxa
- Accepted taxa
- Synonyms
- Taxon names
- All references
- Nomenclatural references

Show statistics

**Figure 1: Screenshot of the form for querying statistical data from the ViBRANT index. Several items can be chosen.**



### Summary statistics:

Accepted_taxa:	695
All_taxa:	1760
Classifications:	1
Nomenclatural_references:	1758
References:	2910
Synonyms:	1065
Taxon_names:	1760

Figure 2: Screenshot of the search result. The selected statistics are shown in a table

### Testing

We ran the service for different parameters on a local stable test database and compared them to the counts we got from the database with manual SQL queries. The counts from the statistics web service were identical to those from the SQL queries.

### Further work

The most important improvement is to create and use a specific DAO for statistical issues to enhance efficiency/performance of the service. We plan to add the possibility to choose more specific requests like counts of description source references and to limit the computation to specific classes of the database. These could include specific branches of a classification like sub-trees of taxa.