



**ViBRANT**  
*Virtual Biodiversity*

**Milestone M4.40**

## **Advanced Statistics web services for the ViBRANT Index**

**Leading partner:** BGBM

**Compiled by:** Sybille Bürs and Lorna Morris

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## Introduction

For milestone M4.28 [1] we implemented a service for generating statistics for the data within a Common Data Model (CDM) database. The web service generates statistics for the objects (e.g. Taxon, References) provided via the request URL. We created a simple web-based user interface to specify which objects to count. The required parameters for this implementation and the other web services used within the ViBRANT index database are described in milestone report M4.31 [2].

## New features for the Statistics web service

In this milestone we extended the statistics service with an additional parameter - classification. This enables statistics to be calculated for a single classification. The service was also adapted to work with the recent changes that were made in the Common Data Model (version 3.3).

Furthermore we wrote a new test class to check whether the statistical counts generated where as expected using a small dummy database. Due the changes in the CDM and some changes in the DAO Code we could improve the performance of the service.

## Extended Parameters

We added two new parameters to the Statistics Controller: “classificationName” and “classificationUuid”. Either of them makes it possible to choose one or more specific classifications to generate statistics for.

The following is an example query URL:

**<host>/statistics?part=ALL&classificationUuid=ce1d035a-79a9-4a3a-95bf-26641ecb4fbe&type=NOMENCLATURAL\_REFERENCES**

In this case the result gives the count of nomenclatural references for the whole database (part=ALL) and also the specific classification (classificationUuid=ce1d035a-79a9-4a3a-95bf-26641ecb4fbe).

The extended statistics service has been tested in the Scratchpads ViBRANT index database. In this database there are currently 67 classifications (a single classification for each imported Scratchpad).

The extended statistics service will be available to use on the CDM ViBRANT index database [3] after the next CDM release in November 2013, from this URL:

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

## **CDM Changes**

The changes to the CDM simplified the model itself and also made it possible to redesign several database queries, which improved the performance.

## **Testing**

We wrote a new test class that can create a test database and store it as an XML file, and reload to a temporary database for testing any time.

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>

## **References**

1. [http://vbrant.eu/sites/vbrant.eu/files/ViBRANT\\_M4\\_28.pdf](http://vbrant.eu/sites/vbrant.eu/files/ViBRANT_M4_28.pdf)
2. [http://vbrant.eu/sites/vbrant.eu/files/Milestone\\_M4\\_31.pdf](http://vbrant.eu/sites/vbrant.eu/files/Milestone_M4_31.pdf)
3. [http://vbrant.eu/sites/vbrant.eu/files/ViBRANT\\_M2\\_18.pdf](http://vbrant.eu/sites/vbrant.eu/files/ViBRANT_M2_18.pdf)