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National update - PC-Axis in Statistics Norway

PC-Axis reference group meeting, Helsinki 5-7 September 2007

Use of PC-Axis family in Statistics Norway

The PC-Axis family has been a basic part of Statistics Norway's dissemination strategy from 1999 and onwards. PC-Axis and components are installed on the local data network, thus available for all 900 staff. It is centrally supported, and most of our new production and publishing systems are based on one or more "family member".

We currently use (or intend to use) the following components:

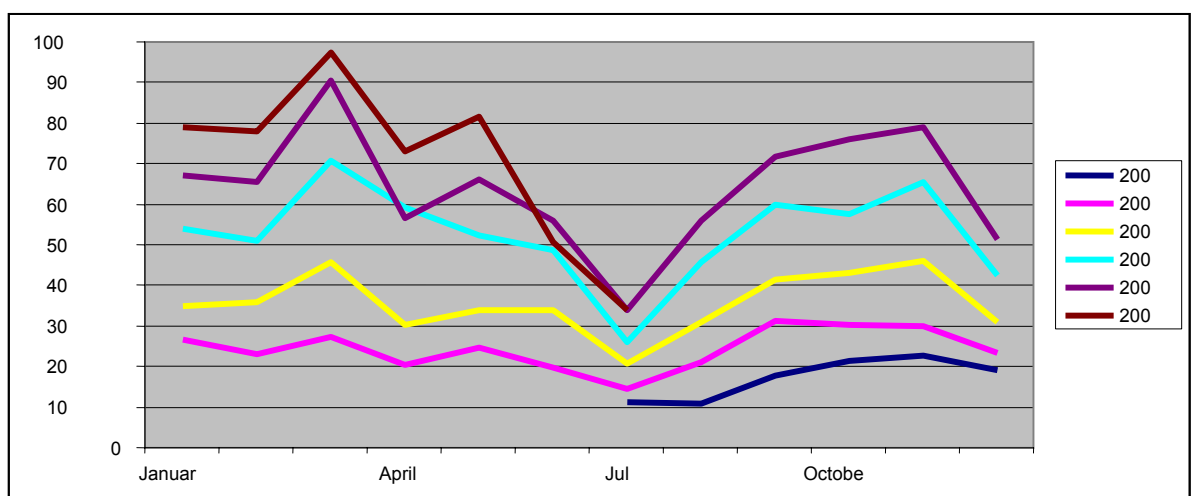
- PC-Axis SQL Macro
- PC-Axis (main module)
- PX-Map
- PX-iMap
- PX-Batch
- PX-Publ (incl. PX-Batch and "PX-Graph")
- PX-Make (and sometimes PX-Edit and PX-Check)

PC-Axis SQL Macro and StatBank Norway

StatBank Norway consists of an Oracle database for internal users and a (smaller) Oracle database for external users. PC-Axis SQL Macro is among the main internal interfaces to StatBank Norway and is also used for access to restricted data and data not yet published.

StatBank Norway was released in July 2002, and is now included in our publishing routines as a major tool for release and dissemination.

Monthly number of retrievals from StatBank Norway since July 2002:



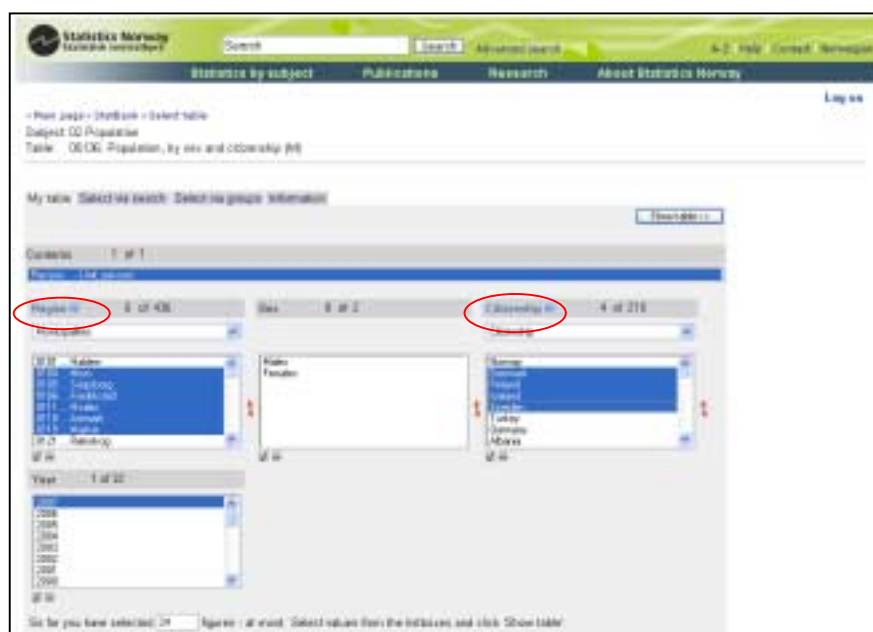
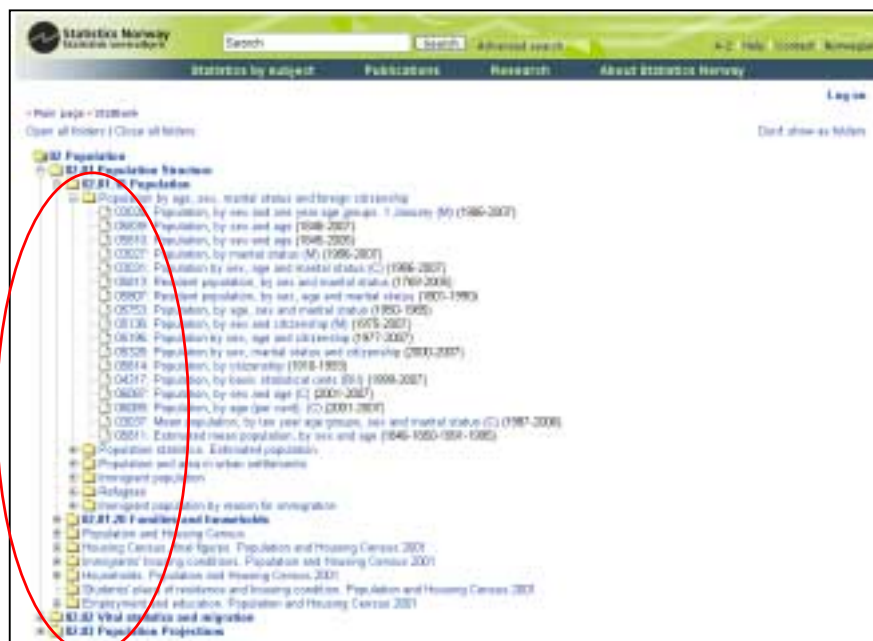
At the end of July 2006 StatBank Norway contains more than 3300 table matrices, from all statistical subject areas. Among these about 2300 matrices are public. Statistics Norway has approximately 800 statistics releases per year. Per 31.12.2006 80 per cent of the statistics were fully presented in StatBank Norway and 4 per cent were partly presented. This is an increase compared to the numbers for last year.

During the first months of 2006 the Oracle database underlying our StatBank was upgraded to be fully compatible with version 2.1 of the datamodel. In the autumn of 2006 we focused on bringing the various user interfaces (metadata programs, programs for loading of data etc) up to the same level. So far in 2007, due to changes in the working staff and other circumstances, mostly minor enhancements have been made.

PX-Internet

PX-Internet is the web-application used by Statistics Norway for accessing data in our statistical SQL database. PX-iMap, developed by Statistics Norway, and PX-iGraph, developed by Statistics Denmark, are included as integrated parts of PX-Internet.

We include a couple of screenshots from PX-Internet. The encircled areas show the menu system (the first screenshot) and hyperlinks from PX-Internet to our metadata databases (the second screenshot).



Since the meeting in Reykjavik in 2006 some enhancements have been made to PX-Internet. The most important, at least from our point of view, is the option for the users to log in and save their table queries. The solution is called “My Bank”. We plan to extend this functionality to make it possible to use the saved queries as basis for other web-based services, e.g. automated data extraction.

PX-Map and PX-iMap

PX-Map and PX-iMap are two “add-on” programs to PC-Axis and Internet GUIs, respectively. These programs can now be replaced by the new PX-Map2. PX-Map2 is based on SVG, javascripts and .Net. The program has been tested and found satisfactory among a varied group of users. Still, comments and feedback from the users are of vital importance for further development and improvement of PX-Map2.

PX-Map2 runs both in Web browsers and on Windows platforms and will use the same GUI in both cases. Input formats are at present PC-Axis file format (px-files) and character-separated text-files for statistical data. Map data should be in predefined SVG format. PX-Map2 is adapted for Firefox native SVG support.

Statistics Norway will only support PX-Map and PX-iMap until PX-Map2 is released.

PC-Axis 2006

Statistics Norway has written the component OdbcCells in the test version of PC-Axis 2006 for the metamodel 2.0 and 2.1 including NPM (Null, point, missing) signs. The component is written in VB6 and handles maintables which include NPM signs as well as regular maintables.

PC-Axis .NET

Statistics Norway is working on a .NET version of PC-Axis in cooperation with Statistics Sweden. The .NET solution is modular, and Statistics Norway is working on the module for extraction of data from the SQL databases. The module is written in C#, and expects the configuration file (pcasqldb21) and query file (pxs) to be in xml format. Due to changes in the office staff the development is somewhat delayed.

Other areas of development

Since the PC-Axis reference group meeting in 2006 other major areas of development have been

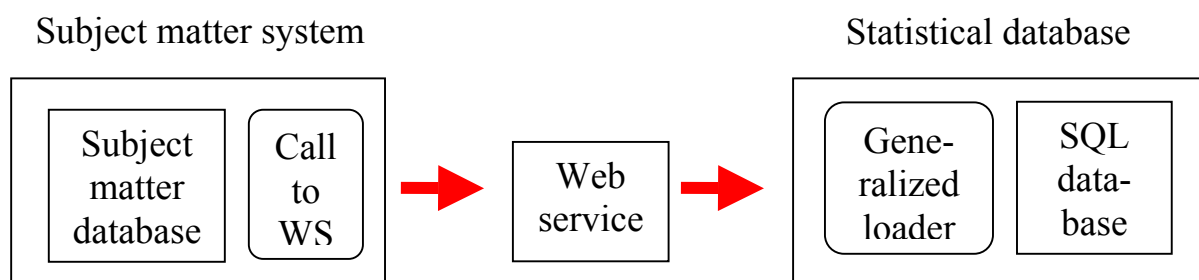
- a) rewriting of the program for loading data into the sql database, with stricter data controls and better log messages to the users. The system also handles markers for data that cannot be presented (missing or confidential data), the so called NPM signs.
- b) creating utilities for automated export of data from the statistical databank and thus make it possible to use our statistical data interactively in applications outside Statistics Norway. So far an internal version have been put to use.

Development under b) will eventually be connected with the “My Bank” option.

Automated loading of table data into the SQL database

The various departments and divisions of Statistics Norway use different subject matter systems for creating their statistical data, and there has been a certain demand for a functionality that could make it possible to integrate the subject matter systems and the loading of table data into the statistical database.

A facility for automated loading of table data into the statistical database has been developed and put to use. The facility consists of two parts, a generalized PL/SQL program for loading of data into the database, and a generalized web service for interfacing with the PL/SQL program. The idea is that a call to the web service can be included in the subject matter systems as the last step of producing table data for the statistical SQL database. The web service, in its turn, calls the PL/SQL program, and the loading is started.



Automated export of data from the statistical databank

For some years now Statbank Norway has wanted to have a functionality of the "push" type for automated export of data from the statistical databank to our users. The users should have the opportunity to save an "order" in the system, and when new data is available, the order should be executed and data sent to the orderer. It has turned out that this is not one functionality, but rather a number of related functionalities, e.g. RSS messages, other types of notification of arrival of new data (in different formats and for various receivers), dispatch of extracted data (in different formats). Some of these services are up and running now, but we still have more work to do in this area.

Statistics Norway have decided that in principle all reporting of data to international organisations (e.g. Eurostat) should go through our statistical database and use its automated export functionality. We are working on this task and a first version has been started up. The application can deliver both Gesmes and SDMX files. Statistics Norway also participates in the SODI project and an OECD project, both expecting data delivered in the SDMX format.