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***Bitemporal and monthly historized data within the new business register application in Statistics
Austria***

Abstract

One of the major goals within the development of the new maintenance application in Statistics Austria was to implement a bitemporal history on the one hand and on the other hand a monthly history (in contrast to the annual history which was in place before).

The old HOST-based application allowed no other historization than a yearly one – with all the accompanying drawbacks – for example, if a unit existed from January to November in one year, the unit would be inactive for the whole year – as the status from end of December would be the one that counts.

The new maintenance application was launched at the end of 2013 and in the beginning the application had to be programmed to store all maintenance operations in both history levels. Later on the new database system “DB2 10” was implemented, in which it is not necessary anymore to program the bitemporal storage operations, but which allows to save bitemporal by itself.

A bitemporal table is defined with both an application period and a system period. So each time a dataset is changed, the person maintaining the unit sets from which month on the change becomes effective, and additionally all changes are timestamped, so that it is possible at each moment in time to find out, what did this unit or this respective attribute did look like before and after the dataset was changed.

Monthly history on the other hand allows Statistics Austria to provide a correct picture regarding the live-cycle of each unit in the Business Register. Units, which are active for a very short period might appear as inactive for the whole month, however, a query using the temporal tables shows, that the unit has in fact been active.