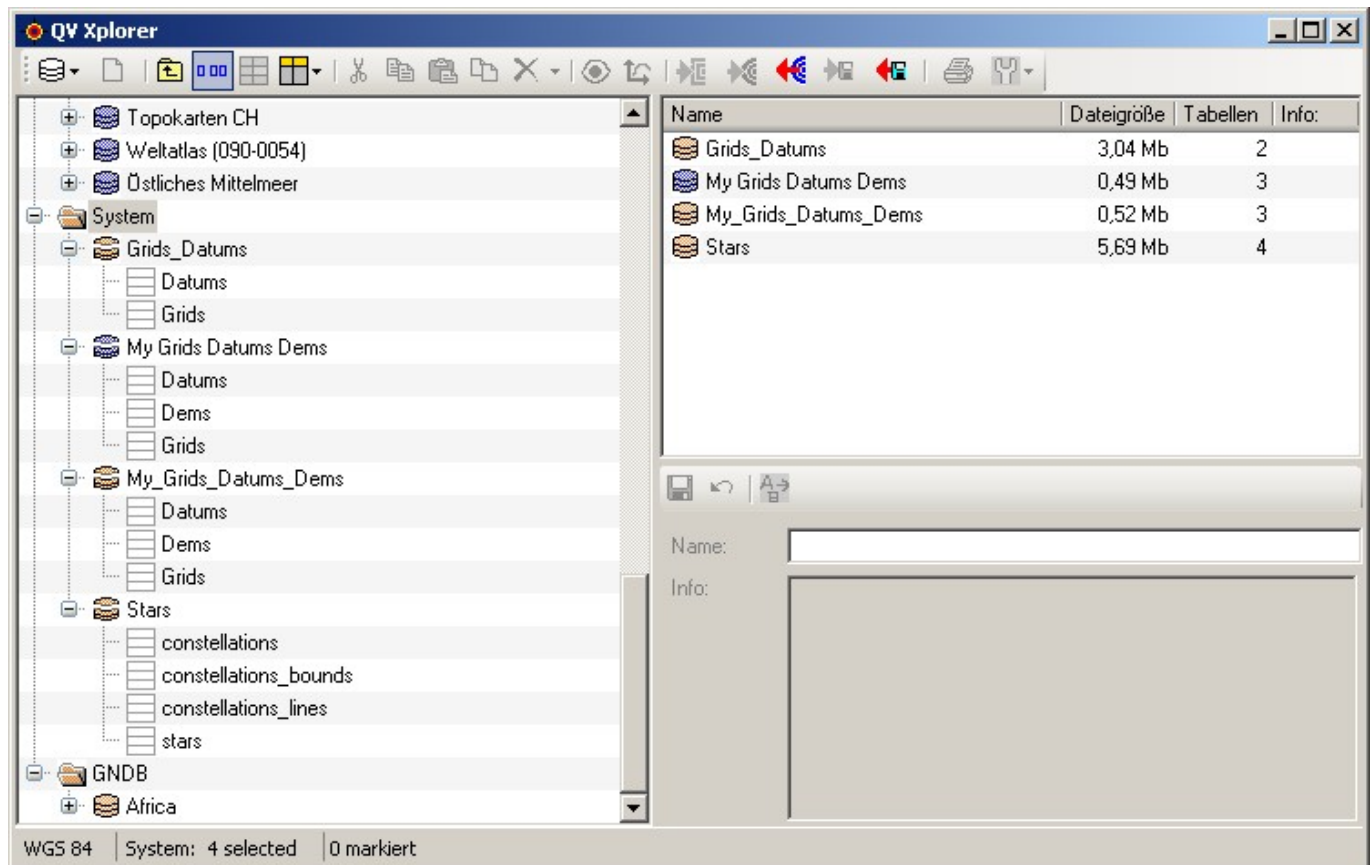


System databases

The lowest branch in the QV X-Plorer tree window you will find the System folder. Here you have access to different databases in which system parameters are managed:



These include the database Grids_Datums which is write-protected and which includes all predefined map datums and grids. Here you find all parameters which define a given map datum or a given map grid.

Following, you find two databases for map datums and grids which you might wish to define yourself. One is named My Grids Datums DEMs and has read and write access, the other one is named My_Grids_Datums_DEMs and is write-protected.

You can add, modify or delete a map datum or a grid. Furthermore, digital elevation models (DEMs) can be imported, deleted and activated (see below).

Finally you find another write-protected database where all names and ephemeris parameters of stars and planets are stored.

Creating a map datum

\ Right-click on the table Datums in the My Grids Datums DEMs database. You can then choose New for

creating a new map datum or Duplicate for copying and modifying an existing one.

In the same pull-down menu you will also find the options rename, delete, cut or copy.

For creating a new map datum proceed as follows:

- Click on an existing datum. All relevant parameters will be listed in the detail window.
- Change the parameters according to the new map datum definition.
- Confirm your settings by clicking SAVE as NEW

Creating a map grid

Right-click on the table Grids in the My Grids Datums DEMs database. You can then choose New for creating a new map datum or Duplicate for copying and modifying an existing one.

In the same pull-down menu you will also find the options rename, delete, cut or copy.

For creating a new map grid proceed as follows:

- Click on an existing grid. All relevant parameters will be listed in the detail window.
- Change the parameters according to the new grid definition.
- Confirm your settings by clicking SAVE as NEW

Transferring maps with user-defined datums and grids

User-defined grids and map datums are saved in the file user.qbd. Furthermore, the parameters for every map that uses a specific datum/grid are saved along with the calibration information.


That means that you can transfer the map with the calibration file to another PC with QV. When opening the map on another computer for the first time, the new datum/grid will automatically be added to the user.qdb file.

Even if you delete your own datum/grid by accident and later on open a map with a calibration file based on this definition, QV will automatically add the datum/grid to the user.qdb file and the map will be opened correctly.

Digital Elevation models

A digital elevation model (DEM) is a file in which the terrain elevation for a specific area is stored as a 3D matrix. Similar to a digital map, a DEM has a specific resolution and must be calibrated, i.e. there are specific rules on how to extract the corresponding altitude for a given geographic coordinate.

QV can read DEMs and thus specify altitude values for any coordinate. Thus you can calculate an altitude profile for a planned tour, add altitude information to existing GPS data and create a three-

dimensional picture of the landscape. So, for a 3D-view of a map (and the other functions mentioned), a DEM is an obligate requirement. Technically, the 3D-modelling is done through a triangular irregular network (TIN), so the earth surface is represented by a network of triangles. When displaying a map in 3D, the resolution of this TIN can be adjusted using the 3D elevation options  (see chapter Map window).

There are various Digital Elevation Models available on the market which differ in resolution and absolute accuracy of the altitude values.

Here is a list of what we offer ready-to-use for QuoVadis 6:

- **SRTM 30:** The SRTM 30 DEM comes from the CGIAR-CSI which is a consortium of 15 international research laboratories. The SRTM30 DEM has a resolution of 30 angular seconds which corresponds (in our latitudes) to approx. 900 meters and is available in an almost worldwide coverage. This DEM comes with QuoVadis 6 except Basic version.
- **SRTM 3:** The SRTM 3 DEM also comes from the CGIAR-CSI and has a resolution of 3 angular seconds which corresponds (in our latitudes) to approx. 90 meters. The coverage extends to 60° N and 60° S. In our webshop we offer these DEMs ready to use for QV. The DEMs are available for the following “hyper-continents”: America, Eurasia/Africa and Asia/Australia. So you can cover the entire populated earth with only 3 products in a resolution which is adequate for most applications.
- **SRTM 1:** Again this DEM is based on the CGIAR-CSI DEMs but the resolution has been increased to 1 angular seconds which corresponds (in our latitudes) to approx. 30 meters. This DEM is available with a coverage of the European Alps only. In our webshop you can get this DEM ready-to-use for QV. So, if you want more accurate 3D-modelling, this DEM will deliver better results than the SRTM3 DEM described above.
- **INTERMAP®-DEMs:** These are highly accurate DEMs which are licensed by INTERMAP in a linear resolution of 25 meters and have an absolute accuracy of 1 meter! They are available in our webshop as an option to some of our high quality topomaps and also with the coverage of the Complete European Alps (except Slovenia). Whenever you need a very high accuracy of altitude readings or whenever the precision of the 3D-modelling is critical, we strongly recommend to use these DEMs which have an extraordinary quality.

Important Remark: Please note that DEMs which come with third party suppliers of topographic maps usually cannot be imported into QV due to copyright restrictions!

Beware that there are several reference systems available for elevation values. Various standards have been established so the average sealevel is only one reference but not the unique standard! Other systems refer to various earth spheroids like WGS 84. If you require an absolute accuracy within a few meters, it is essential to consider the elevation reference system!

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