IbaAnalyzer 5.11.0 new functionality description

Trendqueries in Overview

General

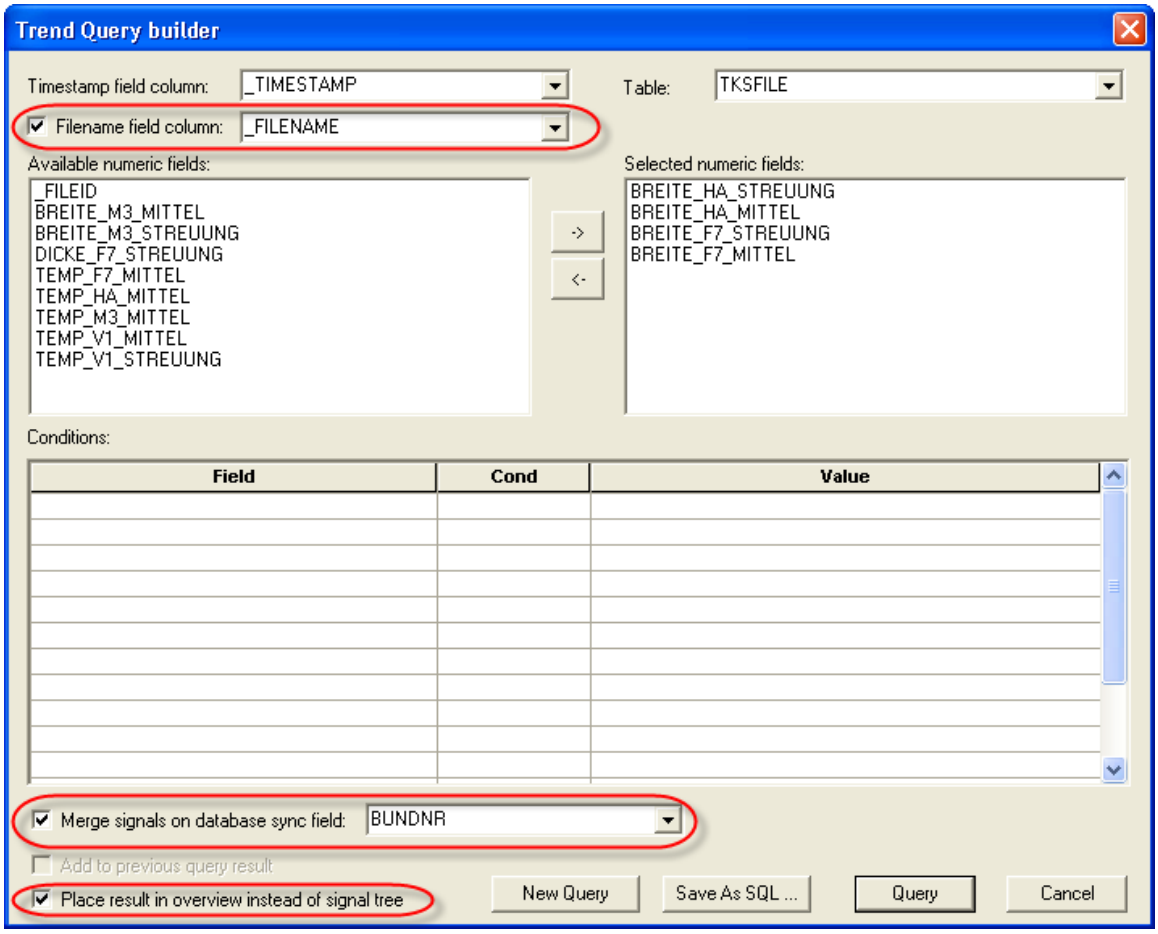
An additional tab called the *overview* is present in the tab window where the signal grid, marker grids and navigator are also located. The trend queries introduced in the previous ibaAnalyzer version can now be shown in this tab. You cannot perform calculations on trend queries placed in this tab, while other functionality is present in the overview that is not available in trend queries placed in the main ibaAnalyzer window. Specifically, you can use the overview to query the database for the extracted files that correspond with the data points of the trendquery result in the overview and open the original .dat files correspondent with these extracted files.

Trendquery builder dialog

Three new options or available in the Trendquery builder dialog

- **"Place result in overview instead of signal tree"**: Selecting this option puts the trendquery result in the overview instead of the signal tree. Note that the option *"Add to previous query result"* is grayed out when selecting this option. This is because there can be only one query result (possibly comprised out of several signals) present at a time in the overview, any previously queried trendquery result in the overview will be replaced when continuing with the query.
- **"Filename field column"**: Selecting this option will enable opening the original files corresponding with the extracted files in the database from the overview, provided that in the combo box next to it you select the correct name of the column in the table that contains the filenames of the original files corresponding to the extracted files. If the table you want to perform the trendquery has the layout of iba database file tables, the correct column will be preselected. You can disable this option if you are not interested in the original files or if they are no longer present to speedup the query. This option is not available when not querying to the overview and will be grayed out in that case.
- **"Merge singals on database sync field"**: This is also relevant to trendqueries that are not placed in the overview. When selecting this option and selecting in the combo box next to it the name of the appropriate *sync field* column in the table, all rows with the same value in the *sync field* column will be merged and presented as a single data point in the trendquery. The timestamp of the data point will be the earliest in the merged rows and the values of the data point will be the first non null values in the selected numeric columns when the merged rows are

sorted on the timestamp (or the values will be null if no non null values are present in the merged rows for the selected numeric columns).

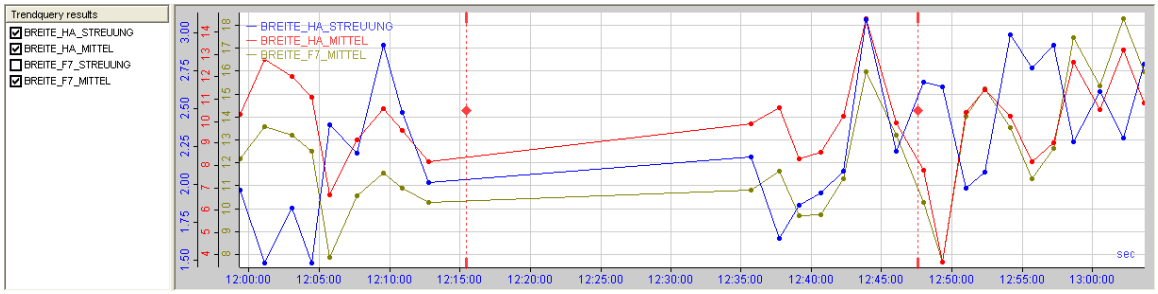


SQL Trendquery dialog

In this dialog the *"Place result in overview instead of signal tree"* and *"Merge singals on database sync field"* are also present and have the same meaning as in the builder dialog. The *"Filename field column"* is not present but as a convention the first text column in the query result set will be used as the filename column, if any text columns are present in the query result set.

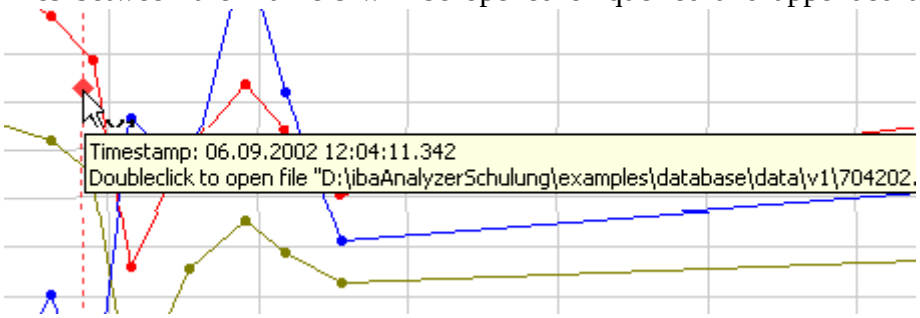
Trendquery result list and graph

The overview itself consists of two parts; on the right a graph to depict the trendquery results and on the left a list of the names of the signals in the trendquery result. This list contains all the names of numeric columns out of the trendquery result. If the sync field was numeric, it will be available here also. Unchecking or checking the checkboxes beside the names will hide or show the signals in the graph on the right. If you select a name from the list and click the list header, the checkbox state will copy to all names after that name to the end of the list. This way you can show or hide multiple signals at once.
The graph that depicts the trendquery result signals behaves mostly like an ordinary ibaAnalyzer graph, you can drag and drop signals on the same Y-axis (but not out of the graph), you can zoom and unzoom, pan, etc. The zoom buttons in the ibaAnalyzer toolbar will also work for the overview graph, provided the overview is the active window (i.e. the last window you clicked in).

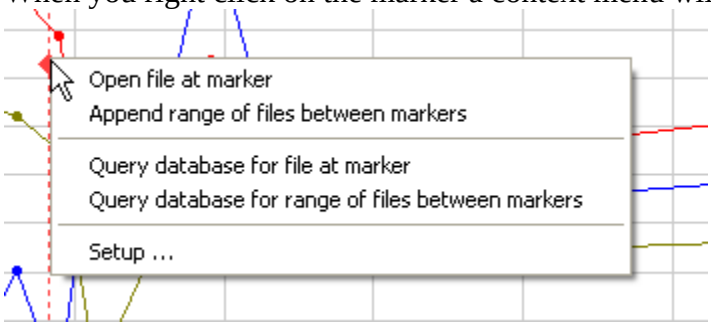


Markers

A pair of markers is present in the overview graph. They look like ordinary classic markers except they have a diamond present roughly 2/3ths of their height. You can drag the markers around by either their outer ends or their diamond. You can make the markers snap to data points by holding CTRL while dragging them.
A tooltip will appear when you hover over a marker its diamond telling the exact timestamp of the data point it is on and the action it will take if you double click on the diamond. Depending on your settings this will be either opening the original file or querying the database for the extracted file. If you hold CTRL while double clicking, the range of files between the markers will be opened or queried and appended after each other.



When you right click on the marker a context menu will appear:



You can select to either

- **"Open file at marker"**: Open the original file corresponding with the data point, this option will be grayed out if you did not select the filename field column in the query dialog.
- **"Append range of files between markers"**: This opens and appends all files (i.e. generates chain of files in the signal tree) between the markers, i.e. starting from the data point the left marker is on, up to but not including the data point the right marker is on. Again this option will be grayed out if the filename field column was not selected in the query dialog.
- **"Query database for file at marker"**: Instead of opening the original file, the extracted file in the database will be queried for.
- **"Query database for range of files between markers"**: Similar to "Append range of files between markers" but will query and append the extracted files instead.
- **"Setup …"**: Will open the preferences dialog with the tab with the options for the overview selected.

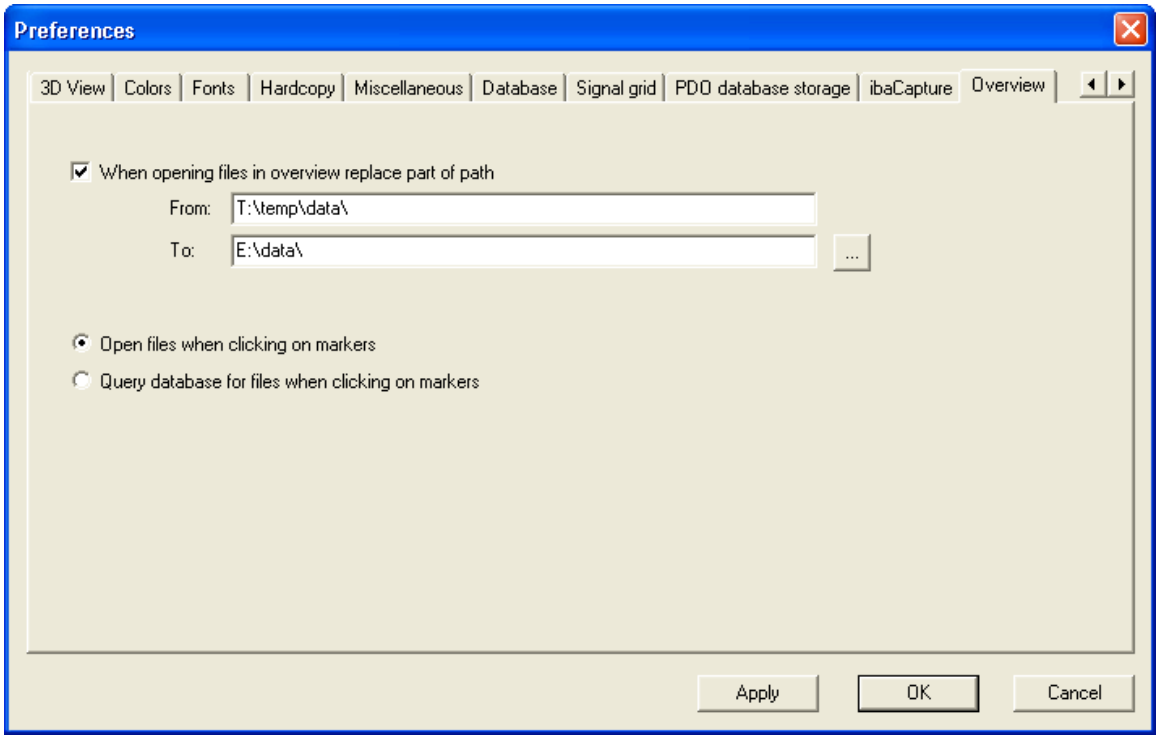
Overview time axis highlight

The part of the time axis visible in the recorder window of ibaAnalyzer is marked on the overview graph by a green filled rectangle overlaid on the graph.

Overview options

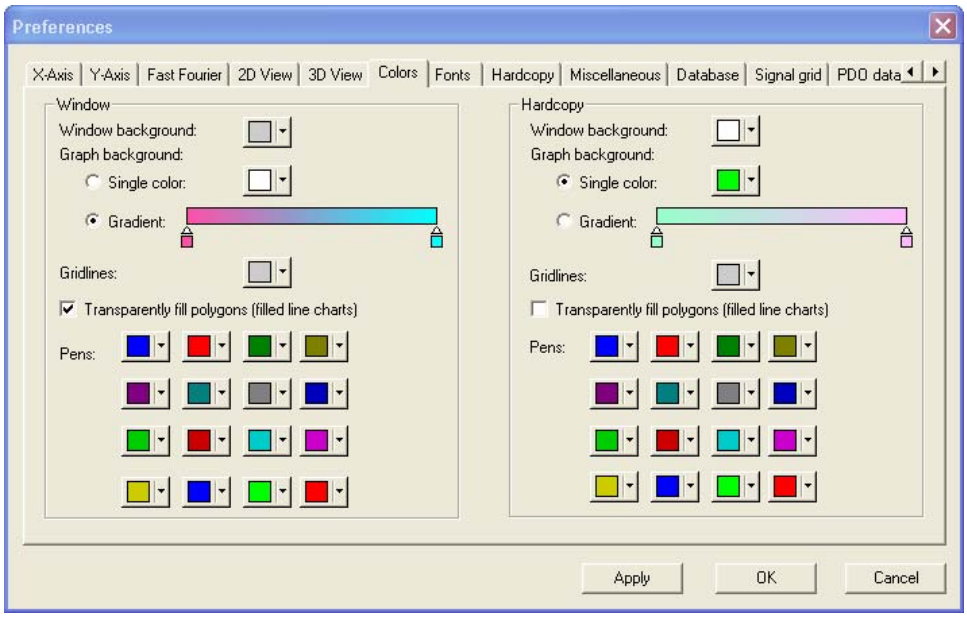
In your preferences some options for the overview can be set:

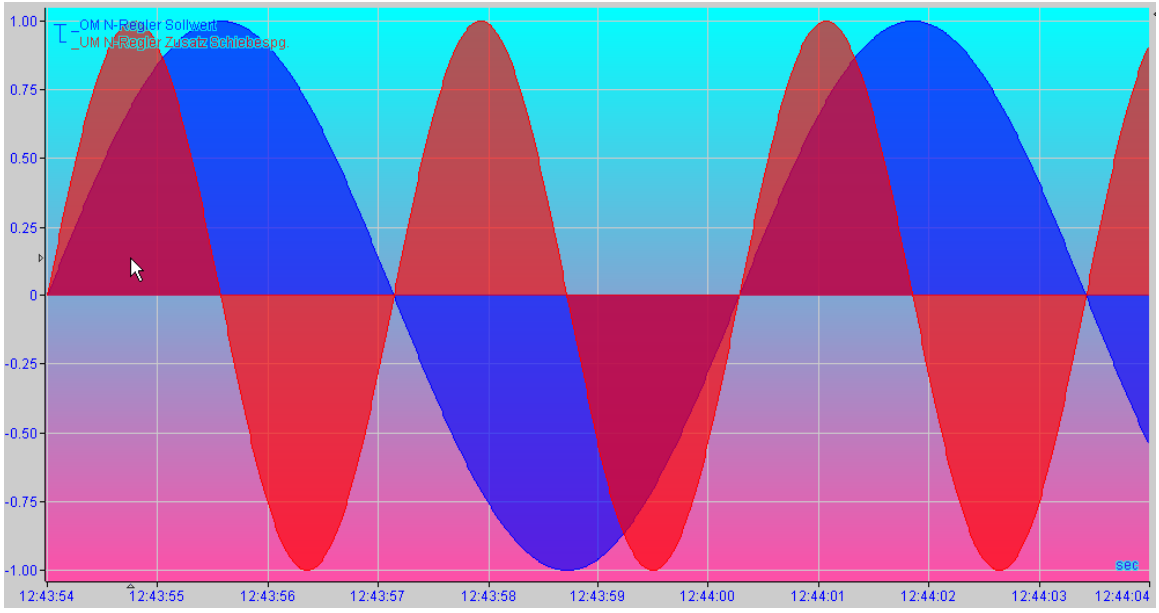
- In the case you moved or copied the original .dat files to another location, you can choose to replace the entire path or part of the path that is retrieved from the filename column. A browse button is available to select the replacement path. If you went to the overview preferences through the context menu of the overview, the path to be replaced will be filled in with the path stored in the data point you right-clicked on.
- You can select the default behavior when double clicking on the marker diamond. You can select to either open the original files or query the database for the extracted files.



Gradient backgrounds and transparent polygonal signals

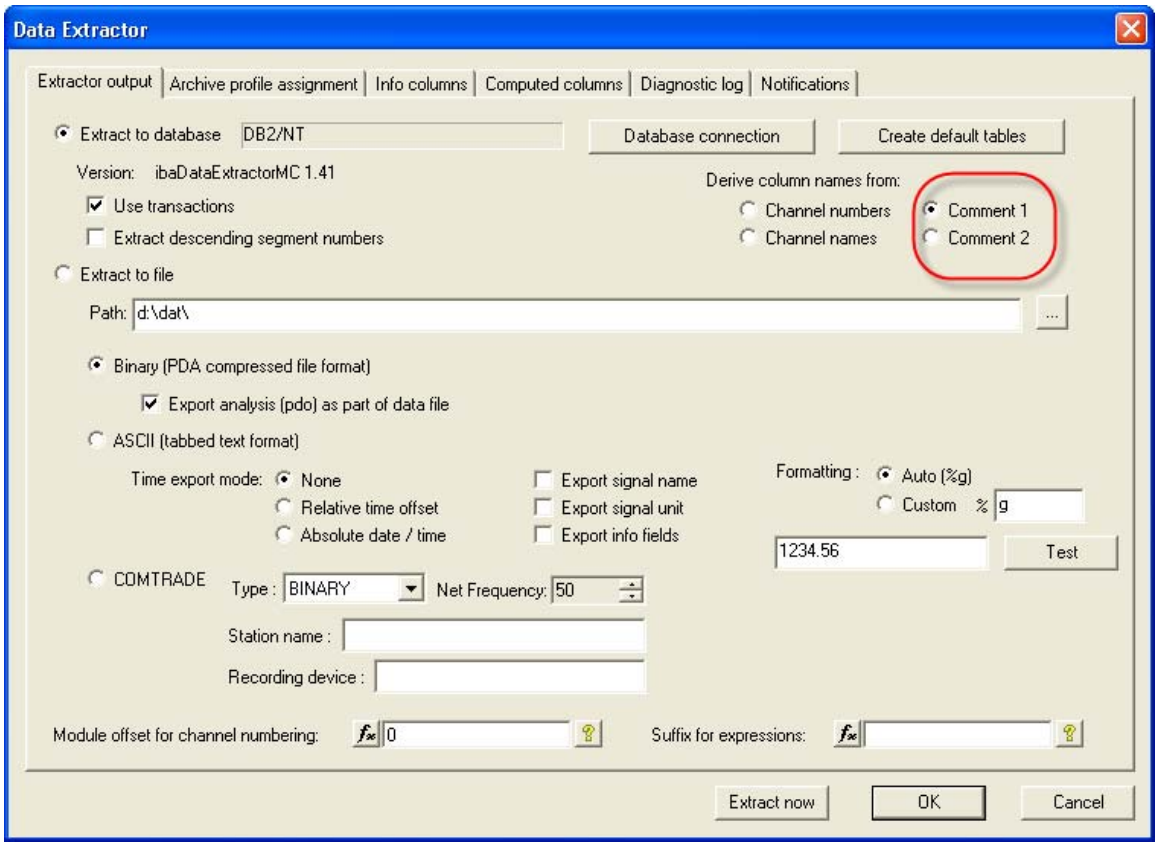
In your preferences dialog, colors tab, you can set a gradient as the background color for the graphs, similar as you can do in PDA.
You can also select to have signals to be depicted slightly transparent when drawn in filled polygon mode so they do not entirely hide signals drawn earlier.
You can select this for both the screen and your hardcopy (e.g. printer). Note that not all printer drivers (for example acrobat PDF printer) support these options effectively so by default these options are disabled for the hardcopy.





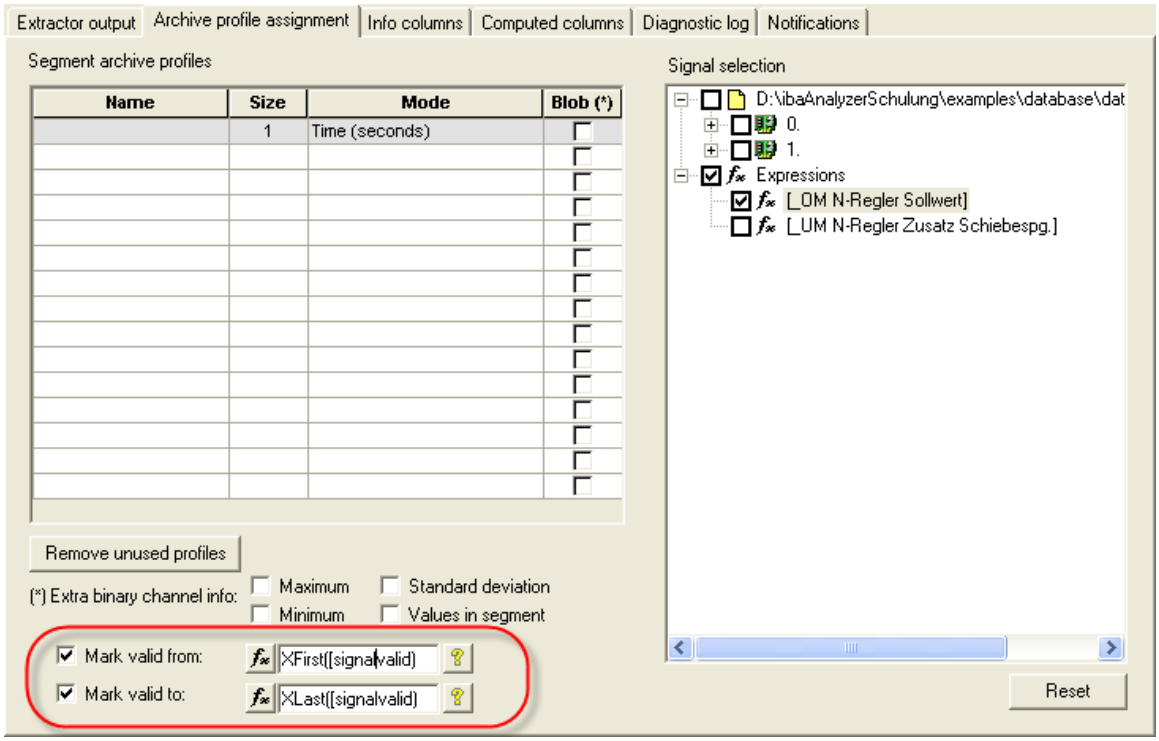
Extraction modifications

Column names derived from comments



When using the ibaDataExtractorMC (multi column) library, you can now opt to have the column names in the segment table derived from either the first or second comment of the extracted signals.
If you select ‘Comment 1’ and a signal does not have a first comment, the channel name is used instead. If you select ‘Comment 2’ and a signal does not have a second comment, the first comment is used, if that is also missing the channel name is used.
Note that for the moment comments are not stored in the database, we’ve opted to not only change the column name in the segment table, but also change the channel name to the comments in the channel table.

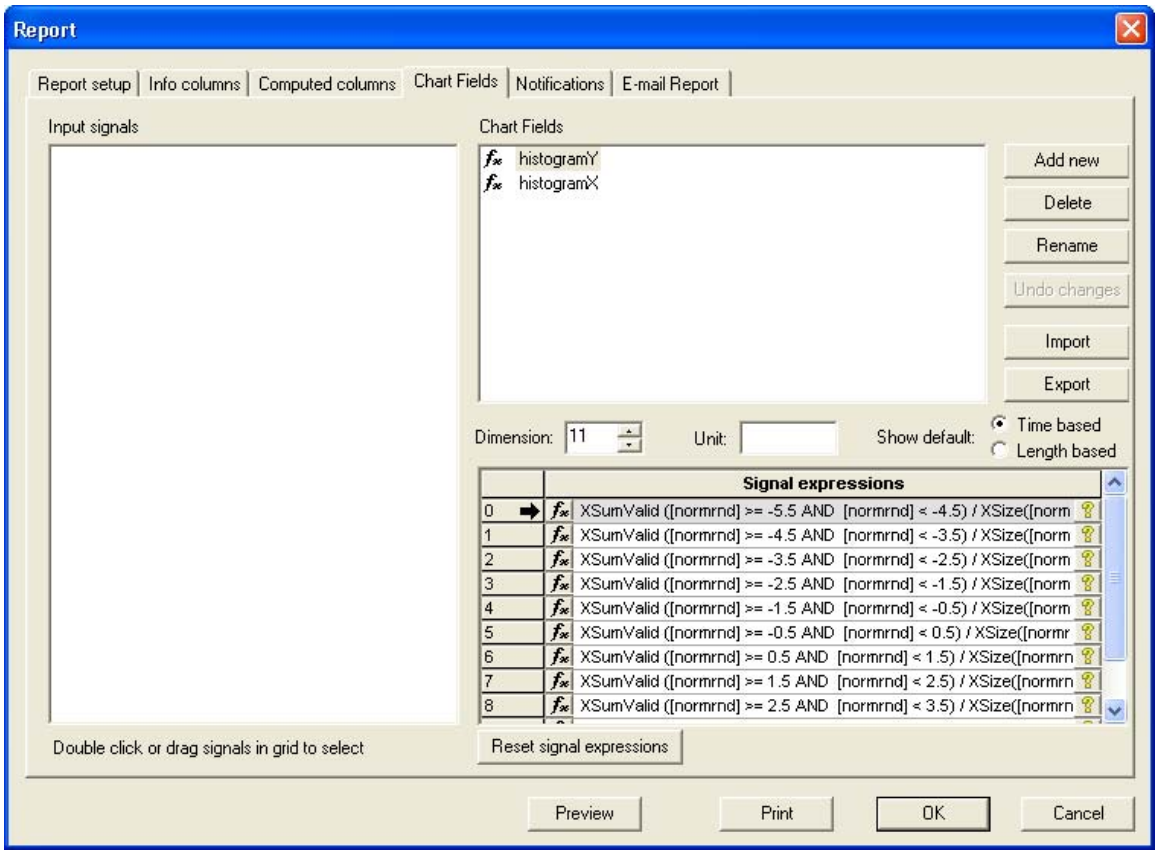
Extracting a valid range

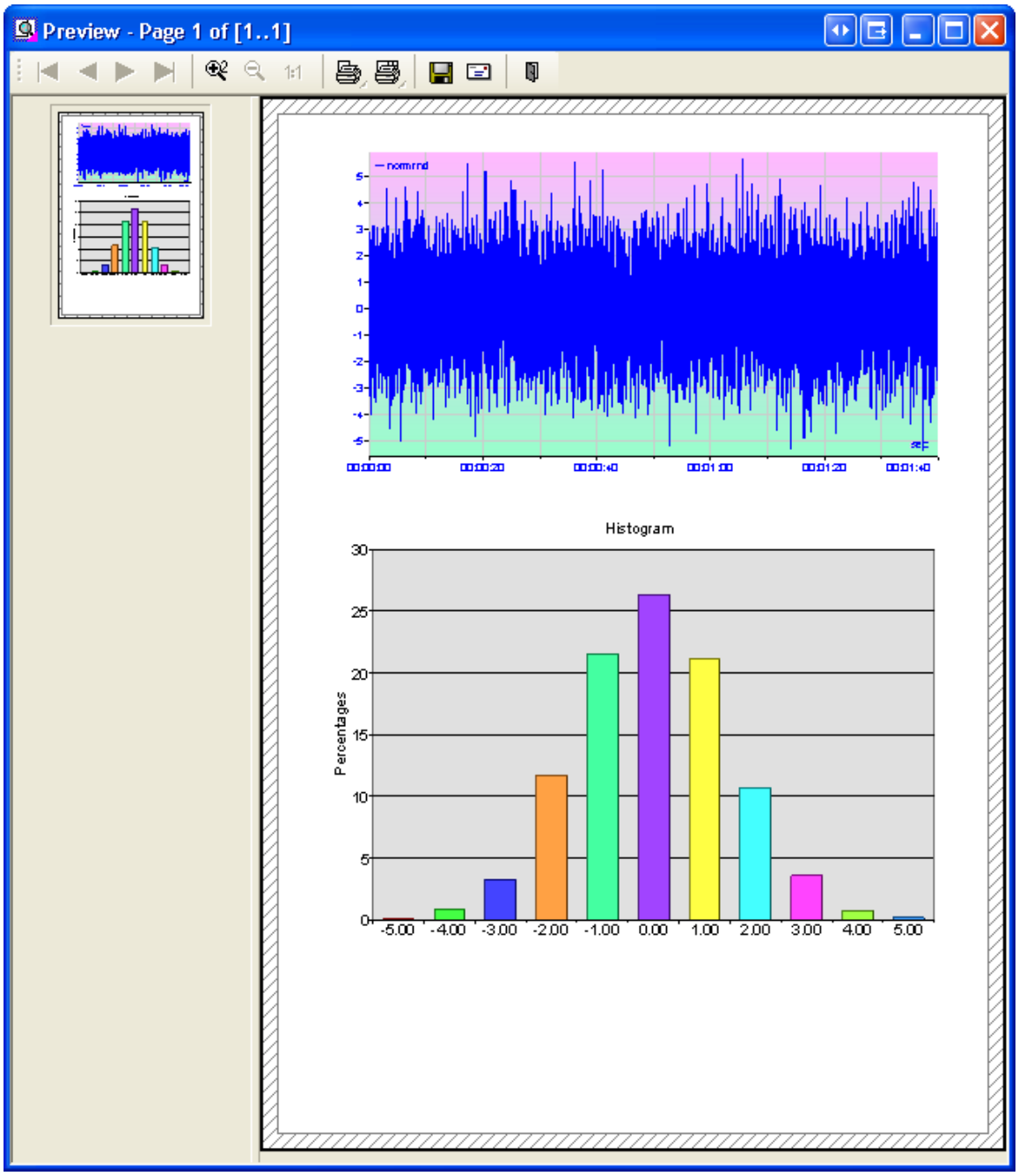


If you wanted to extract only a valid range from a signal to a database, you could do that by defining expressions using either *XMarkValid* or *XMarkRange* and extracting those expressions instead. From ibaAnalyzer 5.11.0 on, a shortcut is provided that lets you specify valid ranges in the *'Archive profile assignment'* dialog.
Note that you can use expressions to have the range calculated from your data.
If you only select the '*Mark valid from*' option, the range will be from the evaluated given expression next to the option until the end of each signal. Likewise, if you only select the '*Mark valid from*' option, the range will be from the start of the signal to the evaluated given expression.
These ranges are per profile, so each signal having the same profile will have the same valid range extracted to the database (provided you selected both *'Mark valid from'* and *'Mark valid to'*, otherwise the ranges can depend on the start or end of the signal).
If the given expressions cannot be evaluated, you'll get an error while extracting.

Chartfields

It is possible to insert various charts like bar charts, pie-charts, etc. in the report designer to represent data consisting out of a limited number of discrete data points. In previous versions of ibaAnalyzer, it was however not simple to provide these charts with data. From ibaAnalyzer 5.11.0 on, there is an extra tab where you can specify so called *'Chartfields'* to be used by the designer.
This tab is similar to the *logicals* dialog. Each *'logical'* corresponds to a chartfield (e.g. X- or Y-values of the chart) while the *'dimension'* of the *'logical'* corresponds to the number of data points. You can then specify an expression for each data point.

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