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imc FAMOS Update Info

1.1 imc FAMOS Update-Info (Version 7.3)

1.1.1 System prerequisites

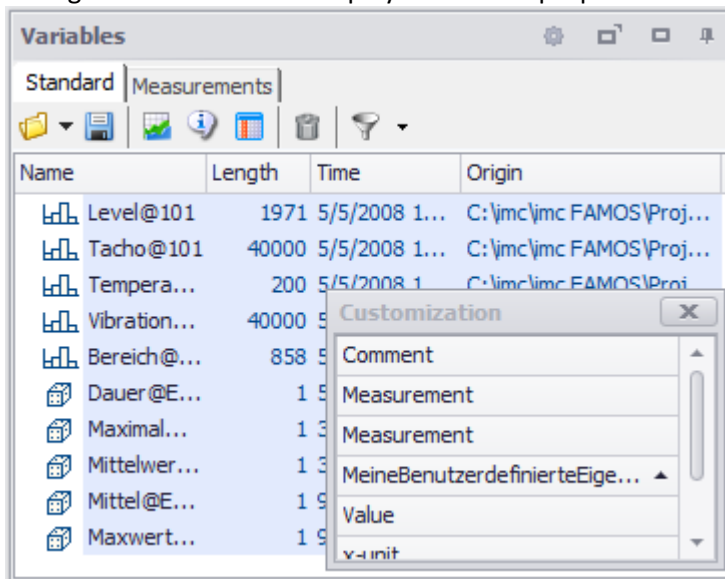
WINDOWS XP and Vista are officially no longer supported.

1.1.2 Variables list

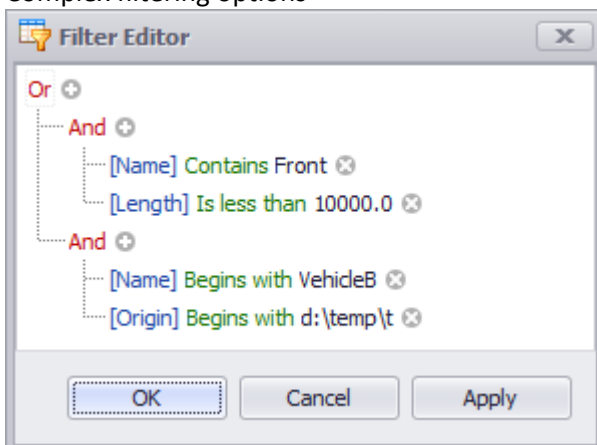
1.1.2.1 Standard

The Standard Variables list has been completely revised.

- Configurable columns for display of data set properties



- The variables can be sorted depending on the displayed columns
- Complex filtering options



Filter conditions

- Hierarchical display

Name	Len...	Ori
Test A		
VehicleA		
Front		
xxx.brake_pressure	67767	D:!
xxx.Temp_oil_BV	6778	D:!
Test B		
VehicleB		
Front		
xxx.Temp_oil_mot	6778	D:!
Rear		
xxx.Temp_output_turbo	6778	D:!

Variables list

1.1.2.2 Measurements

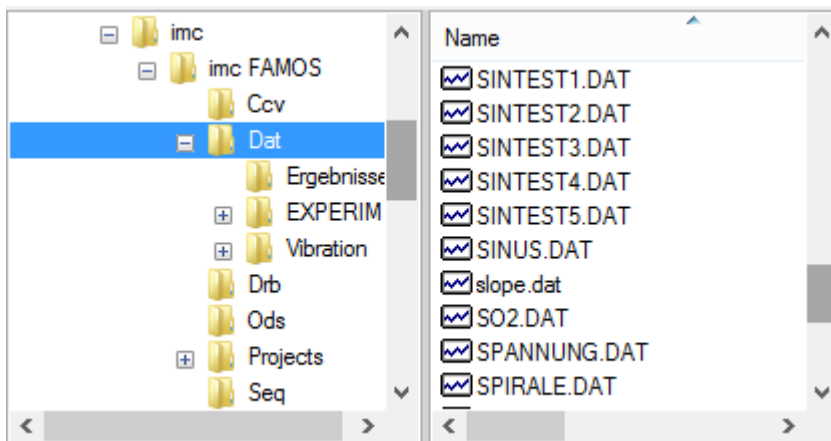
Double-clicking copies names into the active script window (analogous to the behavior of the Standard Variables list).

- Channel list: => Channel name
- Measurement list/Measurement node: => Measurement name
- Measurement list/Channel entry: => ChannelName@MeasurementName

1.1.3 Panel

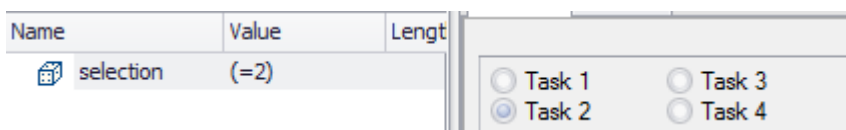
1.1.3.1 Widget: "FileExplorer"

This widget emulates the functionality of the Windows Explorers.



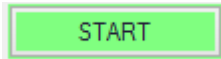
1.1.3.2 Widget: "Radio group"

A group of related functional options offered for exclusive selection via radio buttons.



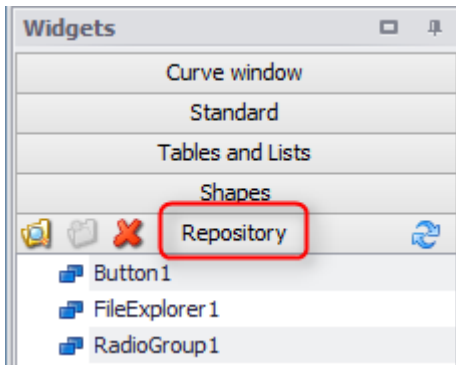
1.1.3.3 Widget: "Pushbutton"

The "Simple button" is allocated the new property "Fill color".



1.1.3.4 Widget-Repository

A new group "Repository" has been introduced. It is thus possible to use the CTRL-key to drag configured widgets into the repository. There, these copied widgets remain independent of the Panel and project, and can thus be used in other Panels.



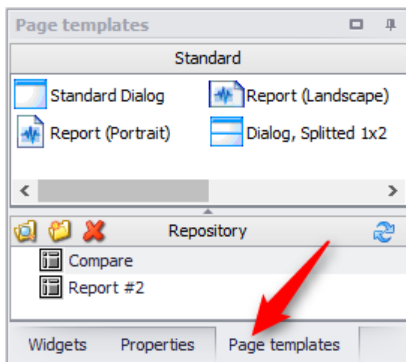
1.1.3.5 Widgets: miscellaneous

Alignment: In Design mode, the cursor buttons can now be used to move the widgets.

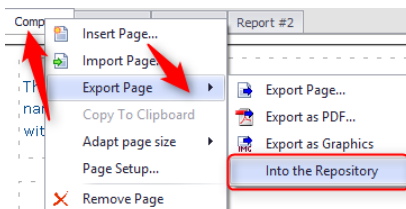
Shortcut: Using CTRL+A, it is possible to select all widgets on the page.

1.1.3.6 Page templates and repository

A new tab "Page templates" has been added. New pages can now be inserted from here with a template. In a further repository, you can store created pages for future projects.



In Design mode, there is a tab for *Page templates*. Along with standard templates for dialogs and reports, you can also re-use panel pages which you had created yourself and which had been copied to the repository.



Pages are copied to the repository via the page context menu.

1.1.4 New functions

1.1.4.1 Matrix calculation

- **MatrixEigen:** Eigenvalues, Eigenvectors
- **MatrixInit:** Create a defined new matrix
- **MatrixPart:** Partial matrix
- **MatrixMerge:** Integration of partial matrix
- **MatrixChangeDim:** Adding/deleting rows
- **MatrixAdd:** Also for transpose, +, -
- **MatrixIpol:** 2 dim interpolation
- **MatrixGet:** Read value sequence from (interpolated) matrix
- **MatrixSet:** Enter value sequence into matrix

1.1.4.2 Kit: "R-Kit"



imc FAMOS has been equipped with a bridge to the (open source) statistics package "R". Along with installation of imc FAMOS, a current version of "R" Version is now also installed.

This means that any desired "R"-functions and scripts can be called from a sequence.

This Kit is a component of imc FAMOS in the edition Professional and higher.

1.1.4.3 Kit: "PowerPoint-Kit"

The **PowerPoint-Kit** enables remote controlling of PowerPoint presentations by means of sequences, Panels and dialogs.

This Kit is a component of imc FAMOS in the edition Professional and higher.

1.1.4.4 Miscellaneous

- **AppendLoop:** Quick appending of samples in loops. The function is optimized for calling within a loop, in which small data volumes are repeatedly appended.
- **CodeRange:** A list of numerical values (codes) is assigned to and returned for a list of ranges of Y-values of the input signal.
- **corrcoeff:** Correlation coefficient, also moving
- **FlipFlop:** RS, JK
- **GetScale:** Requests the scaling
- **GetSystemInfo():** New parameter
 - Determine IP address
 - Query whether x86 or x64 version of the operating system is used
 - Query of number of monitors and their size
- **Monoflop:** Prolong pulse, to left/right
- **NorthCorrection:** Correction of angle reading within a window, in order to allow sensible averaging of compass readings or angles/phases.
- **PhaseMod:** Wind directions, angles, or phases are transformed into a customary value range, e.g. 0 .. 360 degrees
- **PolynomRoots:** Zeroes/roots of a polynomial

- **PulseDuration:** Duration/width, or even the frequency of pulses, determined in relation to time.
- **RangeSet:** Input data values which lie within a specific value range of the controlling channel are set to a different value.
- **RedEx:** Sampling with user-specified reduction factor and start
- **Rosette:** With rosettes, the principal strain and the principal stress are calculated from the strains measured.
- **SamplesGate:** Includes all values in the result which are selected by a controlling data set.
- **Signum:** The function returns 1 when $x > 0$; returns -1 when $x < 0$; returns 0 when $x = 0$.

1.1.5 Sequence Editor

- New option: **Display line number**
- New command "**Go to line**" (context menu in Editor box and "Editor"-ribbon). CTRL+G as Shortcut, thus "Selected variable" now CTRL+T
- Option "**Ident automatically**" supplemented: After entering a block opening command such as IF, WHILE etc., the next line is automatically indented by 1 tab stop more. After entering END, the current indent is reduced by 1 tab stop.
- Font larger/smaller with **mouse wheel + CTRL-key**

1.1.6 GUI: miscellaneous

1.1.6.1 Functions Assistant

The parameter boxes can now be filled either using Drag&Drop to move an entry from the Variable list or by highlighting in the Sequence Editor.

1.1.6.2 Projects

Project Properties dialog: The option "*Variables window: Display filter*" has been renamed to "*Variable window: Layout*".

Previously, only the display filters and, partially, the sorting of the Standard Variables list and the Measurement list were elements of the project.

Now, all settings of the Standard Variables list (e.g. column configuration, tree diagram, filters, sorting) also belong with the project.

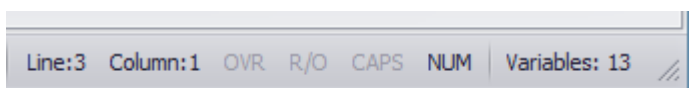
1.1.6.3 Layout

Previously, the settings for the Variables list (Standard + Measurements, such as sorting, filters, display of component etc.) belonged with "Famos.config".

Now, these are saved as parts of the *.layout file. This means that when performing "Load/Save layout" or "Save current session/Load last session", these settings are also included.

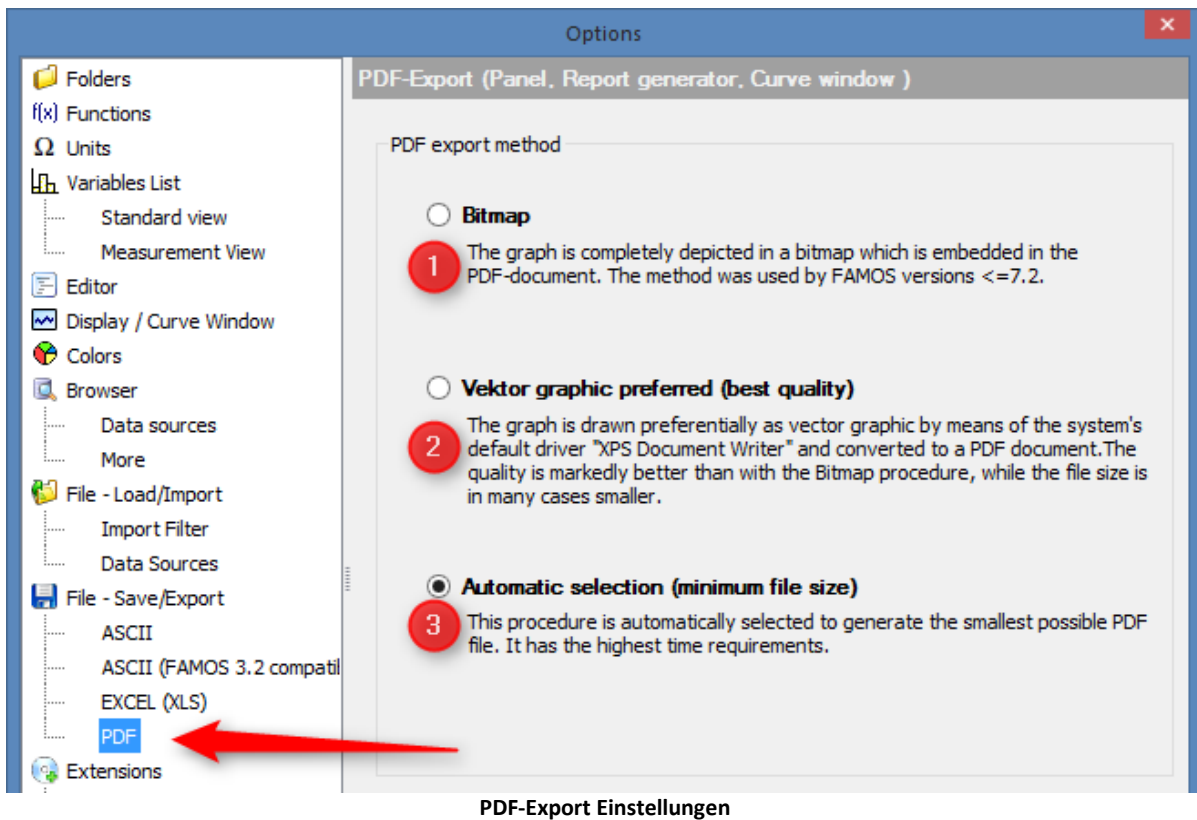
1.1.6.4 Status bar

The count of variables is now indicated in the Status bar.



1.1.7 PDF Export

PDF Export has been improved. For smaller file sizes, the quality has been significantly improved. This applies both for export of a **Panel** and **Report Generator** as well as to the export out of the **curve window**.



When creating the PDF file, graphics can be generated either as a bitmap or vector graphic. The rule of thumb is:

- Documents having a **high proportion of texts** and **simple curve graphics** produce smaller files with the **vector method**.
 - Documents having **complex curve graphics** and **large numbers of symbols** produce smaller files with the **bitmap method**.
1. **Bitmap:** Graphics and text are embedded as a bitmap. With curve windows having normal time plots, this generally produces larger files of lesser quality than with vector graphics.
 2. **Vector graphic preferred:** By means of Windows XPS Document Writer, texts and graphical sections are exported as individual objects and thus displayed in **highest and most scalable quality**. For text and "simple" graphics, this setting provides the best quality and smallest file size. However the file size advantage is reversed when the graphics are complex. Curve windows with symbols representing each measurement point, or with very many values, have much higher memory requirements for this technique.
 3. **Automatic selection:** With this setting, FAMOS produces the file according to the procedure which produces the smallest file size.

Furthermore, options in Settings and Handling of the curve window have been added to control the behaviour.

1.1.8 Curve Window

1.1.8.1 PDF Export

Graphic export:Create PDF files:

In the curve window menu *Options\Presettings\Handling global* the PDF export options have been added, which can be set in the [options dialog of imc FAMOS](#)^[7].

Graphic export:Export optimization:

In addition, *Options\Presettings\Settings* can be used to define how the **inner drawn area** of the curve window is exported.

When *Bitmap* is activated, a bitmap is created containing the **interior of the coordinate system**, with its curves and graph lines. In consequence, when the graphic is complicated, having very many measurement points, graphics elements are not generated as a vector graphic, but only as a bitmap.

Markers, axis labels and legends are not affected and continue to be processed as text elements as vector graphics

