

imc FAMOS Update Info 7.2.0

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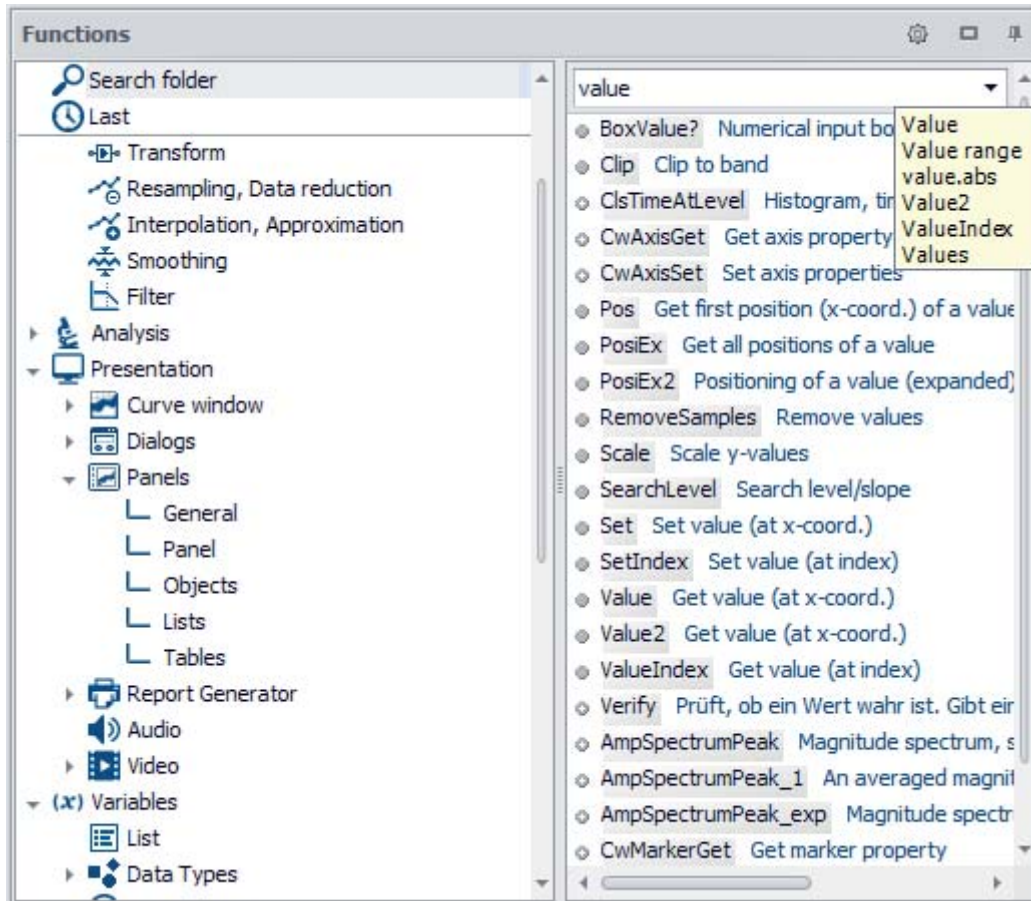
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imc FAMOS Update Info

1.1 imc FAMOS Update-Info (Version 7.2)

1.1.1 Functions list

The Functions list has been completely revised. Targeted searching for functions is now possible, and they are arranged in a more clear pattern.



Toward this end, the groupings: *Favorites*, *Standard*, *Kits*, *DLL-Functions*, and *Boilerplates* have been merged into a unified tree diagram.

For the purpose of searching, a Such Folder with intelligent keyword searching has been implemented. In the search box it is possible to enter multiple terms separated by spaces. The search is then conducted as for an AND logical operation.

1.1.2 New and extended functions

1.1.2.1 Power

A new functions group for power calculations (similar to imc Online FAMOS)

Examples:

; with $N \cdot \text{PeriodDuration}$ = multiple of sampling interval:

```
; with N*PeriodDuration = Multiple of sampling interval:
PowerSelect(1,1,1,1,1,1)
PowerParameter(50,10,0,0,0, 0)
g1 = Power1(U1, I1)
g2 = Power2(U12, I1, U32, I3)
g3 = Power3(U1, I1, U2, I2, U3, I3)
```

```
; with variable frequency:
iv1 = IntervalFromLevel(U1,0,0,0,1,0,0,0, "")
PowerSelect(1,1,1,1,1,1)
PowerParameter(50,10,0,0,0, 0)
g1 = Power1(U1,I1,iv1)
g2 = Power2(U12,I1,U32, I3, iv1)
g3 = Power3(U1,I1,U2, I2, U3, I3, iv1)
```

These functions are included as of the edition imc FAMOS Professional.

1.1.2.2 Intervals

For purposes of statistical evaluation of intervals, the following functions have been added:

IntervalFromLevel: Immediately adjacent intervals are generated from a signal, where the interval boundaries are determined by the signal's crossings through a threshold. Only if the intervals do not meet conditions regarding amplitude and width, they are discarded and leave gaps.

IntervalFrom2Levels(): Intervals are formed from a signal, where the boundaries are determined by the signal's crossings through specified thresholds.

IntervalGetStatistic(): For each of a data set's intervals, statistics such as Min, Max etc. are calculated.

These functions are included in the edition imc FAMOS Professional and higher.

1.1.2.3 Matrix

New functions for calculations with matrices.

These functions are included in the edition imc FAMOS Professional and higher.

MatrixMult: Multiplication of two matrices

MatrixInverse: Determine inverse matrix

SolveLinEq: Get solution of a linear equation

1.1.2.4 ApproNonLin()

Approximation by a function which can be non-linear in its coefficients. A function described by a formula is minimized in the sense of the least squares procedure. In the process, the formula's coefficients are determined.

This function is included in the edition imc FAMOS Professional and higher.

1.1.2.5 Verify()

Checks whether a value is true, i.e. non-zero. Returns an error message otherwise. In that case, the sequence run aborts.

This function is included in the edition imc FAMOS Professional and higher.

1.1.2.6 Equal()

Compares two data sets for equality. The comparison is performed on each of a data set's readings in reference to the corresponding reading of the other data set. The data sets are only equal if exactly all the readings are equal.

This function is included in the edition imc FAMOS Professional and higher.

1.1.2.7 VarGetInit()

By calling VarGetInit(4) it is possible to determine the *number of parameters passed* in the subsequence called.

1.1.2.8 Text functions

New functions for texts and text arrays, including for regular expressions for Search and Replace.

- ◊ TxArrayDelete Deletes an element of a text array.
- ◊ TxArrayInsert Inserts a text or text array into a text array.
- ◊ TxSplit Function for splitting a text
- ◊ TxFind The system searches for a text in the text array or text.
- ◊ TxReplace The function searches for a text excerpt in a text or text array, and replaces it with different text.
- ◊ TxRegexMatch Finds texts in a text array or in a text by means of a regular expression.
- ◊ TxRegexReplace Replaces texts in a text array or in a text by means of a regular expression.
- ◊ TxFormatEx Function for formatting texts
- ◊ TxGetValidVarName The function forms a valid variable name from a text

1.1.2.9 Filesystem

New function to access the file system:

FsGetFileNames: Read-in of files and folders. (fast alternative for FsFileListNew +FsFileListGetName)

FsFileExists: Verifies whether the file or the folder exists.

FsPathCombine: Combines two strings to a file path.

1.1.2.10 Internet

Functions for downloading internet-resources (HTTP GET-protocol)

HttpGetText: Downloads the requested resource as a text.

HttpGetFile: Downloads the requested resource and saves it to a local file.

HttpOption: This function sets options for subsequent calls of *HttpGetText()* or *HttpGetFile()*.

1.1.2.11 PnGetSelectedItem

The function *PnGetSelectedItem* now also supports the Panel-widget "CCV-Selector".

1.1.2.12 FOREACH VALUE

Matches the construct FOREACH SAMPLE, but is read-only and consequently faster.

1.1.2.13 Database-Kit

This Kit provides functions for accessing databases. The data can be transferred either from the database to FAMOS, or vice-versa from FAMOS to the database. The Kit provides access to:

- Oracle 10g, 11g, 12c
- MS SQL Server 2005, 2008 or higher
- MySQL 5.5, 5.6
- Microsoft SQL Server Compact Edition 4.0
- Database systems about ODBC

The Database Kit is not included in this edition of imc FAMOS and can be purchased separately.

1.1.3 Variable list

1.1.3.1 Measurements list

The default rules for measurement assignment ("*Grandparent folder*") have been supplemented. In consequence, it is possible, for example, to edit folder structures which are generated in imc STUDIO measurements with trigger folders.

1.1.3.2 Alphabetic sorting

The alphabetic sorting in the Variables list has been revised. Instead of "strong alphanumeric", the "natural sort order" familiar from the Windows-Explorer is used.

Consecutive digits in names are treated as multi-digit numbers and evaluated accordingly.

Previously: Channel1 -> Channel10 -> Channel2

Now: Channel1 -> Channel2 -> Channel10

1.1.4 Defining favorites

It is now possible to define multi-line boilerplates.

1.1.5 Panel

1.1.5.1 Page adjustment

In Design-Mode, the context menu item "Adapt page size" can be used to adapt the page size to the space available (correspondingly to imc STUDIO).

An additional "Options/Properties"-dialog governing the system behavior at run time, including setting the initial position (e.g. always docked, Fullscreen), automatic scaling of widgets when their size is changed, has been implemented.

1.1.5.2 Widgets property anchor

New property "*Anchor*" for all widgets used with automatic rescaling.

1.1.5.3 Button-Widget

In addition to a caption, an image can now also be displayed.

For this purpose, the properties "*Image*", "*Image-Alignment*", "*Text Alignment*", "*Padding*" have been added.

1.1.6 Help window

All Help window texts on the functions have been revised and uniformly structured.

1.1.7 Variables

It is now possible to initialize variables with multiple values, e.g. Coefficients = [1, 0.2 , -1.4e-5, 2]

Along with decimal numbers, integers in hexadecimal format are now also allowed.


See also the imc FAMOS user's manual in the chapter "*Creating variables*".

1.1.8 Sequences

- Due to internal optimization, the running of sequences, particularly of such that contain loops with high iteration counts, has been significantly accelerated in some circumstances.
- The maximum number of parameters has been increased from 9 to 20.

1.1.9 Editor

- The content of single value or text variables can now be displayed in response to a "mouse-over":


CurrentValue= ii

- The variable under the mouse pointer is selected in the Variables list when you select the keyboard combination [CTRL+G]. This assists in searching for a variable in a long Variables list.

1.1.10 Datasources

The data type "*imc STUDIO Measurement data storage*" has been added, which is designed to accommodate the structure of measurement and video data recorded with imc STUDIO. For evaluation purposes, non-relevant subfolders ("Meta", "Config") are automatically hidden.

1.1.11 Curve window

1.1.11.1 Copy/Paste

With Copy & Paste, you can transfer once curve window's configuration to another. To do this, copy the configuration of the selected window using **CTRL-c** and transfer it to another one using **CTRL-v**.

With embedded curve windows, it is additionally necessary to hold down the **SHIFT**-key (child-windows/widgets in the Panel).

1.1.11.2 Connect (Link)

Color maps can also be linked in the y-direction. For this purpose, in the Options for the curve window, under *Settings*, the necessary properties have been added to the *Link*-property "*What is influenced in the Link*" accordingly:

"x-, y-axis (color map)" and "y-axis"

1.1.11.3 x-Axis

If the scaling of the x-axis is in abs./rel time, the format of the labeling can be specified:

- Auto ,Auto 1 line, Auto 2 lines
- fix 1 line or fix 2 lines.

1.1.11.4 Last Value As Number

Numerical values can also be formatted as *Floating point*, in *Hex-format*, or as *Date/Time*