**Variant Filters**

Variants are normally produced by removing certain objects from a mother structure in a child structure. Also objects can be added to a ‘variant’, or child structure, independently.

This is a relatively time consuming operation which can now be performed quicker. This is achieved by the possibility to create a variant using a filter. The command for this action can be found under the edit menu and is a ‘Create a variant based on actual filter’. The newly generated variant acquires the name of the filter employed. This functionality is available within the Structure, Functions Net, Failure Net and Form Editors.

**Make Global Actions**

The creation of global actions is not just limited to the actions section of the Data Manager (Administration ⇒ Catalogue), but is also located in other editor’s menus and context menus i.e. the menu entry ‘global action’. Select the menu entry (displays a tick) and then the selected action will become a global action. Consequentially, this action can:

- All instances of the actions types are now instances of a global action
- The properties of the action (Deadline, Responsible.) selected will be assigned to the other actions (including variants)

The reverse operation results in a ‘de-globalisation’ of all instances of a global action and the un-ticking a global action in the menu. With the global action status removed, then each instances properties can be modified individually.
Global Actions in Variants

Global actions can now have variant specific attributes. Each variant can be awarded different ‘concrete’ deadlines and responsible persons.

Exporting Structures

The structure export in the Project Management can for be used will various purposes. Here are two common applications:

- Temporary work on a structure with the intent of later incorporating changes into the original document. In this case, within the export dialogue, the field ‘checkout status’ must always be ticked.
- Distributing the structure whilst excluding certain object types Forms (Actions), Functions / Failure Nets, Failures and Functions

Creating Function Nets in retrospect

It is not uncommon to find in a FMEA file that the Function Nets have been ignored.

Here a helpful Software functionality that constructs the Function Nets in parallel to the construction of the Failure Nets would be helpful.
This Functionality is now available as ‘Create Function Nets [Failure Net]’ and ‘Function Nets creation [Database]’ in ‘Tools’ menu of the Failure Net editor.

The difference between the two commands: Whilst the ‘Create Function Nets [Failure Nets]’ only generates the Function Net that is only relative to the actual Failure Net viewed, the ‘Create Function Nets [Database]’ will generate Function Nets according to all Failure Nets within the entire FMEA database.

Of course there is still the possibility to generate the Function Nets automatically by selecting the following menu commands: (Menu: ‘Tools’ ⇒ ‘Workstation Settings’ ⇒ ‘Settings’ ⇒ ‘General’ ⇒ ‘Create Function Nets automatically when connecting Failures in the Failure Nets’).

Generating Failure Nets from the Function Nets
Whereby function nets are in existence it is possible to generate the failure nets to reflect the function nets. To select the failures that are suggested to create your Failure Nets simply select the toolbar icons, which are found in the Failure Net Editor, ‘Connect causes from Function Net’ and ‘Connect effects from Function Net’:

A selection dialogue appears and displays the corresponding failures, and these can be selected by ticking the box.

Open a new window
The main window (Personal Desktop) the IQ-Software can be doubled so that a further 2 workspaces, with different files, can be displayed.

This can be found under the menu command ‘Window’ ⇒ ‘New Window...’

You can move or copy data between the 2 workspaces by using the normal Drag & Drop functionality.
Window layout change
The Standard setting for Structure editor’s window layout between structure tree and the structure list is a vertical split. This split can be changed to a horizontal layout in two ways:

- Menu: ‘View’ ⇒ ‘Format’ ⇒ ‘Horizontal split’.
- Position the mouse cursor over the split. When the mouse cursor changes to a double arrow press the right mouse button.
**Variant Edit Mode**
This is an important tool to activate when working with multiple variants. This is available in many of the editor menus of the IQ-Software under ‘view’ (shortcut is ‘F7’ to activate or deactivate this feature).

When the variant edit mode is active, all the objects that have been removed from a variant are displayed in grey. Allowing you to view the grey objects enables you to select these and then choose to add the object to a variant via the ‘add to variant’ command.

This feature is not available in the Statistics Editor.

**Object Inspector and Variants**
The object inspector is a tool to support working with multiple variants as it provides an overview of the objects variant specific data. Within the object inspector this variant specific data can be modified or added without the need to switch to a specific variant via the Project Management.

The Object Inspector is always available via the ‘Editors’ menu, but can also be found within the context menu (Inspect object).
Helpful Tools for Variants

Filter system ‘variant-specific object properties’
In the IQ-Explorer you apply system filters to find variant-specific values, which are then found as a list.

Deletion of variant-specific values
When in the project management and a variant is selected a context menu command allows you to ‘Delete all variant-specific values...’ the variant is completely exempt from any variant-specific values. This variant will now inherit the values of the mother structure.

Selection of variants in the Advanced toolbar *
Some editors (e.g. structure, FFA, FMEA form) to select a variant it is no longer called project management. This can now be executed via the ‘extended toolbar’ within a drop-down list.

* Functionality is exclusive to maintenance contract customers

Risk Matrix: Filtering by Colour
It is not unusual for the statistics editor’s risk matrix results to be a little overwhelming, so a way to reduce this information contextually makes sense.

A special filter has been developed to tackle this issue and subsequently reduces the content of the results list per red area, yellow area or red / yellow area. The graphics are not altered by applying this filter. The filter is activated by selecting the context menu command ‘Filter’ when in the results list.

This filter is also available for the ‘extended risk matrix’.

![Risk Matrix](image-url)
**Risk Matrix: RPN for Failure Cause**

In the Statistic Editor, the Risk Matrix has (and the extended risk matrix) a column that displays the RPN for the failure cause.

This can, for example, be used to differentiate between information of one colour, without the need to switch to the FMEA form.

**Global Actions**

Especially, with regards to detection actions, a single action will discover multiple failures (causes); therefore the IQ software allows you to define a global action.

In the FMEA form or structure the global action status can be assigned to any of the existing actions. When analysing the number of actions (e.g. action tracking), the number of actions is easier to count.

Changing the deadline date or responsibility can be made to any instance of a global action.

You can convert any action into a global action via the Data Manager’s catalogue section, i.e. for preventive / detection actions (menu: ‘Administration’ ⇒ ‘catalogues’), via the object’s properties. Alternatively, this status can be activated / deactivated by selecting the ‘Is global action’ in the context menu (see page 1).
Copying the Header Content
In the FMEA Form Management the header data from an existing FMEA form can be copied to another.

This is done implicitly when copying a page of the FMEA form (command: "copy" context menu FMEA Form Management) or explicitly by choosing the "Adopt header data" command from the Context menu when employing the right mouse button to perform a drag and drop ("Special Drag") from one FMEA form to another i.e. from source to the destination.

New Entries in the Help Menu
There is a command available in the ‘Help’ menu to update the IQ-Software, called ‘Update Program Version’. Selecting this command will launch a dialogue. The latest service packs are then downloaded and installed via this dialogue box.

The command ‘E-mail to Support...’ allows users to contact support@apis.de with their default email program, although this may need to be configured up in advance. The attachment to this email will be the ‘errors.log’, which records the error messages generated when using the IQ-Software.