

# Procus Pack Engineering Edition - standalone version

Procus Pack Engineering edition and Enterprise edition provide the same core functionality.

The Engineering Edition is more suitable in scenarios where the mobility of the user is required. For example a control system engineer visiting various sites can benefit from the Procus Pack Engineering Edition.

The ProcusPack Engineering Edition has its own embedded database system and therefore is not bound to the central database.

## General functionality

- [Querying](#)
- [Generating reports](#)
- [Exporting](#)

## FOXBORO I/A Series System

- [Data Comparison](#)
- [Browsing and searching](#)
- [Logic visualisation](#)
- [Automated instruction check for blocks with logic](#)
- [Block parameter view](#)
- [Connections visualisation](#)
- [Advanced connections visualisation](#) **NEW**
- [ICC Driver Task script generator](#)
- [Human machine interface configuration extract – HMI extract](#)
- [Sequences extract](#)
- [Block comparison](#)
- [Product configuration manager](#)
- [FBM browser](#)
- [Calc simulator](#)
- [System report](#)
- [Historian configuration manager](#)

## Triconex System

- [Triconex configuration import](#)

## Honeywell Experion PKS System

- [Honeywell Experion PKS browser](#)
- [Honeywell HMI](#) **NEW**

## ABB 800xA System

- [ABB 800xA Browser](#)

## New Procus Pack version 2.0 is available

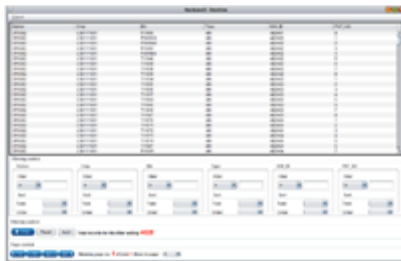
The New Procus Pack version 2.0 exceeds the previous version in implementation of multisystem platform capabilities. Now the user can easily access and work with IA Foxboro System, Honeywell Experion PKS System and ABB 800xA control system databases directly from Procus Pack.

The Procus Pack v2 provides same qualities as robust and intuitive control, quick and easy information access, dependability, new design, better user-friendly interface and new tools which make the way to desired goals easier.

Both editions are aimed at Foxboro IA, Honeywell Experion PKS and ABB 800xA engineers. The purpose of Procus Pack is to make the engineer's life easier. It allows easy data import from these systems, [querying](#), [data comparing](#) (Foxboro IA System only), [generating reports](#), [exporting](#) and [browsing and searching](#) the data in an effective and user-friendly way.

### Querying

Enterprise Edition can be connected to most of the common relational database systems. The Engineering edition comes with an integrated database engine that provides a powerful tool for querying data. It easily handles even large amounts of data. The results of the queries can be easily filtered, sorted and exported as needed.

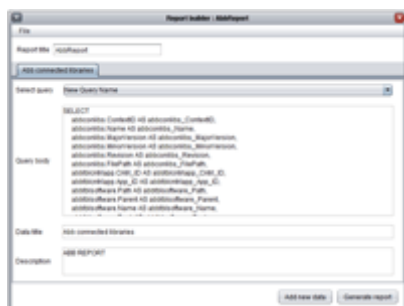


After the query is created it can be used transparently between the projects. Queries can be easily shared, imported or exported as needed. A set of the most useful queries is provided by default.

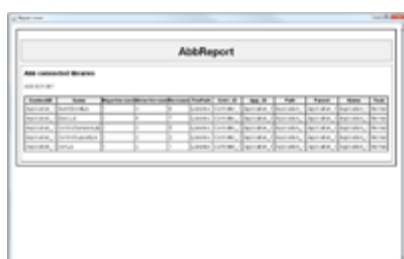
**Generating reports** (Honeywell Experion PKS System and ABB 800xA System only)

### *Report builder*

This tool allows the generation of reports from sql queries. Name the report, choose a predefined query or create a custom one, give the query a proper data title and a brief description and finally generate the report. The generated report is tabular, well-arranged and very easy to read. The user gets exactly what is required, so no data waste is generated.



The reports are in standard HTML format, but by default can be exported to a pdf file format. This simplifies all standard document operations like printing, viewing or publishing data on the intranet. Visual, content, layout and almost everything about report can be customised according to the user needs.



## Exporting

Data from the queries / comparisons can be easily exported into various formats. Export to MS Excel comes by default.

## Data Comparison (Foxboro IA System only)

Comparing the data becomes very easy. With only a few clicks two versions of the data can be compared. Results are presented in a tabular way which allows easy filtering for only relevant differences.



## Browsing and searching

An effective way of browsing stations, compounds, blocks and their parameters is provided. Navigation between blocks is achieved by clicking the connections. To find required items in a few seconds a search function is also provided.



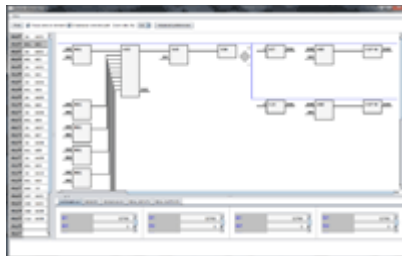
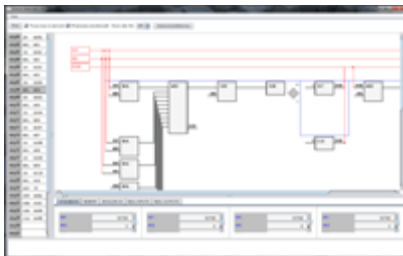
The Procus Pack v2 can be easily enhanced by various plug-ins which provide additional functions. These plug-ins are highly customisable according to the user needs. Plug-ins that are delivered by default with Procus Pack v2 are mentioned below.

### **Logic visualization** (Foxboro IA System only)

The purpose of logic visualisation is to simplify the working with logic of the CALC, CALCA, LOGIC and MATH blocks.

Main benefits:

Two way visualisation. When the user selects a step in the logic, visual representation of this step is highlighted. The other way around is also possible – by clicking on the block that visually represents the particular part of the logic, the step related to this block is highlighted.



The logic visualisation includes errors and warning detection systems. If an instruction contains a syntax error – for example a wrong name of the instruction or a missing operand, an error is detected and the row containing this error is highlighted.



The error detection also evaluates expressions. For example, if an instruction that is working with operands on the stack expects two operands but there is only one on the stack, an error is detected.

The warning system informs the user about situations which are not errors, but are likely to be undesired situations. For example, if the user calculates and stores some value on the stack, but this value is never used, the user will be informed about this in the form of a warning.

Additional benefits:

Integrated tool tips in the form of a short description for instructions of the CALC, CALCA, LOGIC and MATH blocks are shown when the cursor is hovered over for a short time over.

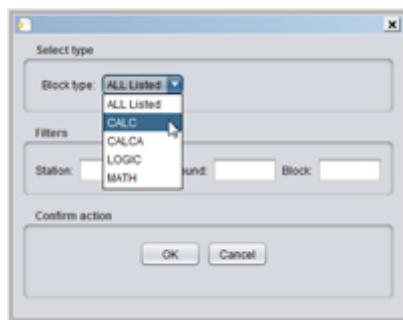
### **Automated instruction check for blocks with logic (Foxboro IA System only)**

The main purpose of the Instruction checker tool is to perform a bulk automated instructions check for Foxboro IA System blocks that contain programmable logic (CALC, CLACA, MATH and LOGIC).

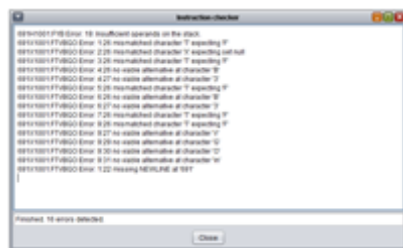
Main benefits:

The instruction checker tool allows a bulk check for errors in logic for the whole system or for the selected part of the system. This can be very useful as a final check in situations when there are many modifications realised on the system using ICC driver task script.

The procedure is very simple. The user picks the desired block type, with optional filtering on station, compound or block name.



All blocks matching specified criteria are checked and the results are presented to the user.



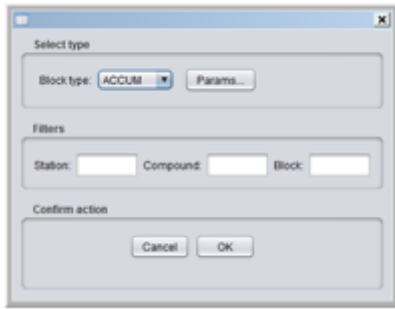
### **Block parameter view (IA Foxboro System only)**

The main purpose of the Block parameter view is to enable the user quick access to the parameters of the selected block type from the system.

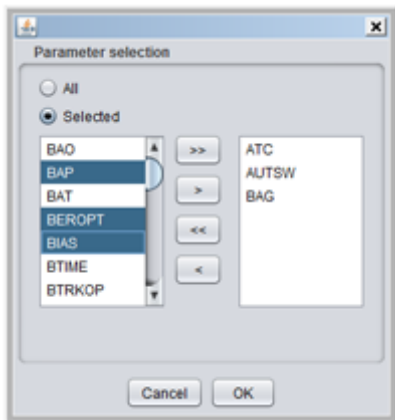
Main benefits:

The block type view allows the user easy parameters viewing of selected block type without creating any special queries.

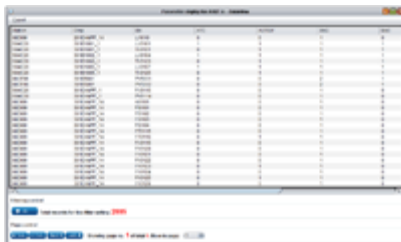
The procedure is very simple. The user picks a desired block type.



Optional parameters of that block type can be selected if not all of them are required.



The results are presented in a standard way which allows additional features, such as filtering, sorting and exporting.



### Connections visualisation (Foxboro IA System only)

The purpose of connections / loop visualisation is to get a quick understanding of the selected loop on the system. The loop visualisation shows a graphical representation of the connections between the blocks of the control system.



Main benefits:

Colour highlighting –the blocks that run with the same period and phase in the system are displayed in the same colour.

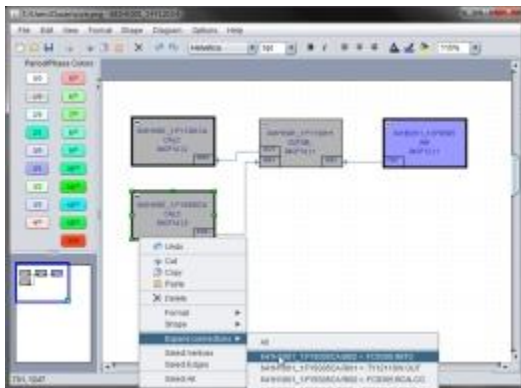
Block processing order –the order in which the visualised blocks are processed in their station is also displayed. If additional connections are expanded and new blocks are displayed, the processing order is recalculated.

Saving visualisation in a png file format – the user can save currently viewed loop visualisation in the graphics png file format for additional processing (printing, using in documentation etc.)

Dynamically expanding / collapsing visualisation – the user can expand connections of selected block or can remove selected block from visualisation according to his needs.

### **Advanced Connections visualisation (Foxboro IA System only)**

Advanced Connections visualisation provides additional functionality to connection visualisation.



Main benefits:

Customisable colour highlighting - it is possible to specify a colour which is used for all blocks that run with the same period and phase in the system.

Full support of undo and redo. Undo and redo can be applied to all operations in the loop visualisation - changing visual styles of the blocks / connection, expanding connections, deleting block or connection from visualisation etc.

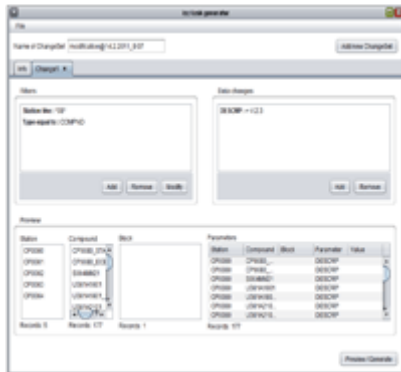
Saving and loading visualisation to and from a file. It is possible to save current loop visualisation to the file and continue working on it later by loading it from the file.

Validation of saved visualisation. When loading saved visualisation all elements are validated against the current control database. If a block or link from the visualisation was deleted in the control database it is drawn in a dashed pattern. This can be useful for documentation purposes of changes performed on the system.

Dynamically expanding / collapsing visualisation – the user can expand all connections of the selected block or just the desired ones by using a popup menu.

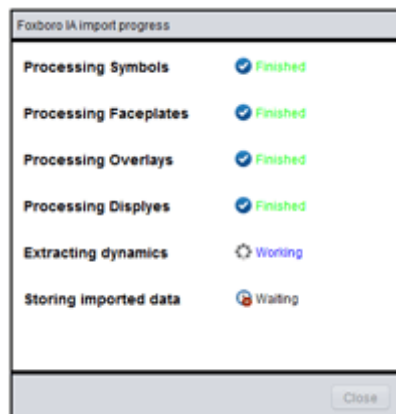
## ICC Driver Task script generator (IA Foxboro System only)

The ICC Driver Task script generator provides an easy-to-use solution for generating complex ICC driver Task scripts based on the user's selection. Complex logic is wrapped in an intuitive graphics user interface, so the user does not need to know specific details about ICC itself. The picture below shows the ICC Driver Task script generator interface.



## Human machine interface configuration extract – HMI extract (Foxboro IA System only)

HMI extract allows the import of information about the configured Compound:Block from Foxview display g-files.



It supports the following Compound:Block configurations:

- Direct configurations.
- Configurations using Symbols. Import of Symbols g-files is required.
- Configurations using Faceplates. Import of Faceplates g-files is required.
- Overlay calls are also supported. Import of Overlay g-files is required. (Calls of overlays are simulated to extract information about configured dynamics in Overlays.)

Extracted information is displayed in the Foxboro IA Browser. When the user selects specific Compound:Block, detail section will show all displays where this element is configured together with information about its configuration.

## Sequences extract (Foxboro IA System only)



This plug-in imports information about configured Compound:Block from compiled sequences code in i-file format.



At the moment only full specified references in sequences are supported.

Extracted information are displayed in Foxboro IA Browser. When the user selects specific Compound:Block, detail section will show all sequences where this element is used.

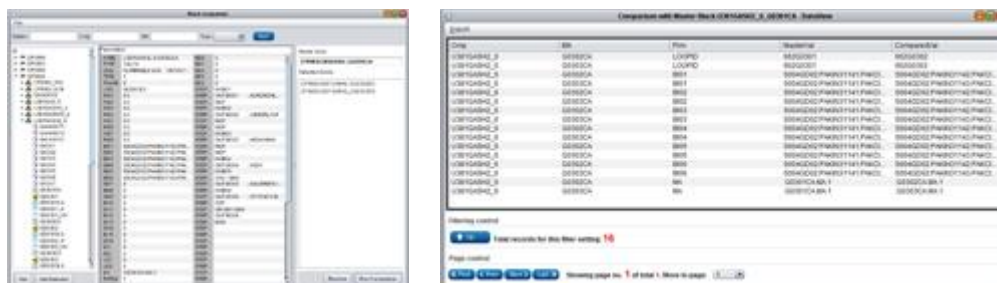
### **Block comparison** (Foxboro IA System only)

The purpose of Block comparison plug-in is to provide a quick and simple way of block comparing.

Main benefits:

An effective way of browsing stations, compounds, blocks and their parameters is provided. The comparison procedure is very simple. The user picks desired blocks with optional filtering on station, compound, block name and type of block. Firstly the master block has to be set and the other selected blocks are compared against the master block. There is also a possibility to save current selection of the blocks for future usage.

The results are presented in a standard way which allows additional features such as filtering, sorting and exporting.

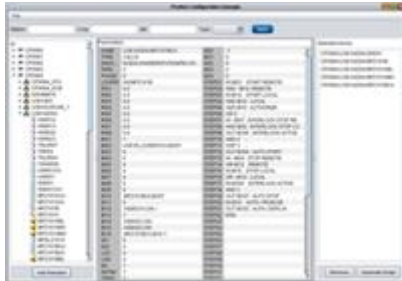


### **Product configuration manager** (Foxboro IA System only)

This plug-in allows the saving of the current blocks configuration to the ICC driver task script.

Main benefits:

Product configuration manager provides an easy-to-use solution for generating ICC driver task scripts based on the user's selection from system blocks. This feature allows the saving of the blocks configuration with current parameters and the use of this configuration for future usage.



### **FBM browser** (Foxboro IA System only)

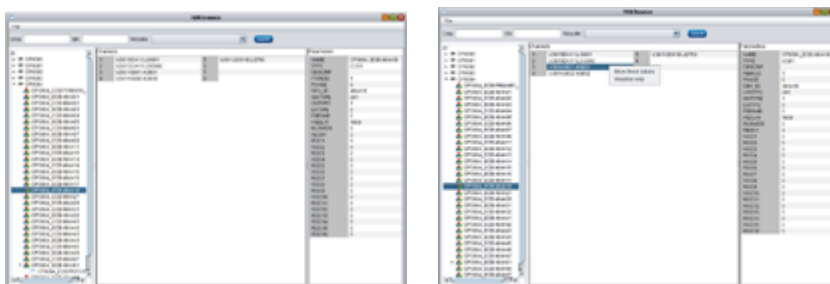
The FBM browser plug-in provides a quick and simple way of browsing fieldbus modules and displaying IO allocations of blocks to these modules.

Main benefits:

An effective way of browsing fieldbus modules, displaying IO allocations, search based on FBM name or block name is provided.

It is possible for each block allocated to FBM channel quickly display its parameters using context menu and displaying it via Foxboro IA Browser. It is also possible for each block allocated to FBM channel to quickly show all its connections to other blocks using the context menu and showing the loop via Loop visualisation.

The possibility of exporting current fieldbus module report to pdf file format is also provided.



### **Calc simulator** (Foxboro IA System only)

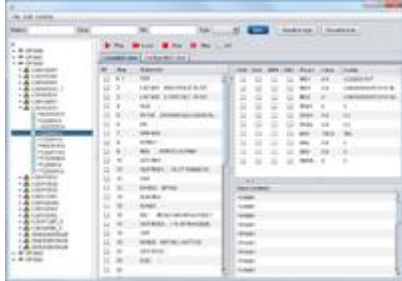
The purpose of Calc simulator plug-in is to simulate logic which is integrated in CALC, CALCA, LOGIC and MATH blocks.

Main benefits:

This plug-in allows browsing only between these blocks. When the user clicks on the required block the whole block logic is displayed stepwise. The user can simulate the block's logic

with its current or new configuration which the user can execute also in this plug-in. There is a possibility to choose a single run, continuous or stepwise simulation.

A quick and easy interaction with logic and loop visualisation for the selected block is also provided.



### **System report** (Foxboro IA System only)

IA System report plug-in provides a data integrity check of the control database.

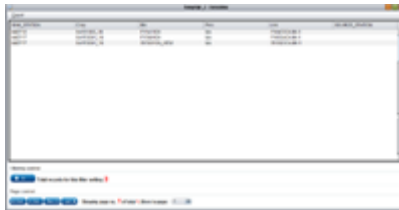
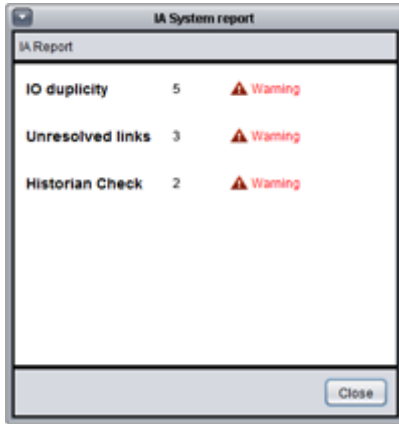
Main benefits:

The system reports are generated automatically when new data are imported to the project. These checks can be easily extended according to specific customer needs. Currently, the following checks are implemented.

IO duplicity informs the user about INPUT/OUTPUT addresses which are used by more than one block.

Unresolved links feature checks validity links for source blocks existence.

Historian Check feature checks the historical configuration against the control database.



### Historian configuration manager (Foxboro IA System only)

The purpose of this plug-in is to inform the user about which parameters of the blocks are archived by the historians and to assist the user with the historical configuration.

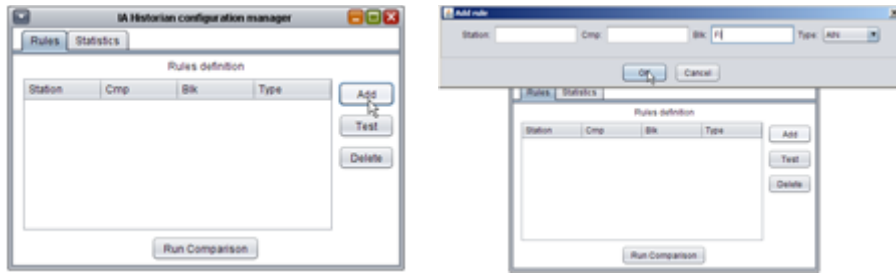
Main benefits:

To use this plugin, the user has to first of all import the historian configuration to Procus Pack v2. After a successful import the user is able to see the historian configuration for each selected block through the IA Browser. The names of historians and their parameters are displayed.



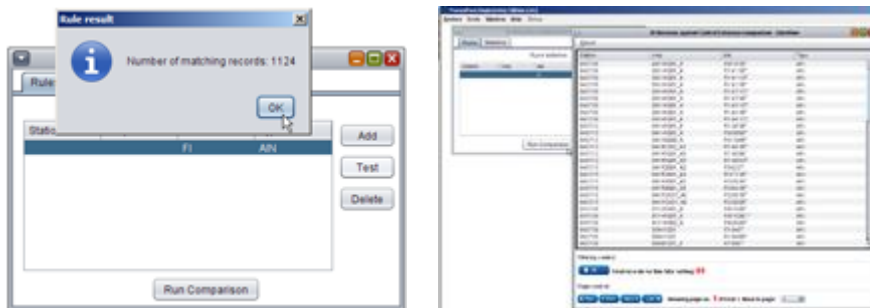
This plug-in provides the user with another useful function. The user can compare control database with the historian configuration to find out if all of the blocks from the control database which should be in the historian configuration are present.

The first user has to define the rules by which the blocks from the control database should be archived by the historian.



When the rule is defined the user can test it. By clicking on the Test button, a number of blocks which match the defined rule are displayed.

By clicking on the Run Comparison button, a comparison procedure is executed. The list of blocks which match the defined rule and also are in the historian configuration is displayed.



The statistics part informs about the number of points which are configured for the particular historians.

Historian	Number of points
mor06h	2169
mor07h	3159
mor08h	2695
mor09h	2186
mor10h	1905
mor11h	3251
mor12h	2547
mor13h	2463
mor15h	751
mor20h	1382

### Triconex configuration import

Procus Pack v2 allows the import of Triconex exported data in a dbf file format. After importing the data, the user can easily create a custom cross query with DCS data according to his specific needs and standards.

Procus Pack v2 supports the new systems - Honeywell Experion PKS and ABB 800xA. The main benefits of using Procus Pack v2 with these two systems are described below.

## Procus Pack v2 and Honeywell Experion PKS System

Procus Pack v2 includes useful tools for working with Honeywell Experion PKS export files. Honeywell Experion PKS export file is in an xml format. This file is further processed in Procus Pack v2 for querying or in Honeywell Experion PKS browser which is briefly described below.

## **Honeywell Experion PKS browser**

Honeywell Experion PKS browser (later browser) is a tool for detailed off-line browsing and reporting of the user's Honeywell projects database.

### *Browser basics*

The picture below is a typical view of a browser containing Honeywell control database. The browser provides an effective way of viewing the system database tree including all CPMs and Control Modules with correspondent embedded blocks and their parameters.



The browser consists of two main areas : tree and report.

Tr shows Honeywell system in a format of an Application Browser, so the user is able to use it intuitively – without reading numerous pages of documentation.

The report part shows information about the selected item in the tr. Information is shown in a standard table layout for better orientation and easy printability in a mirror image format. The user is able to see and browse the data in a single sheet format which is effective and it allows the finding of the desired information faster.

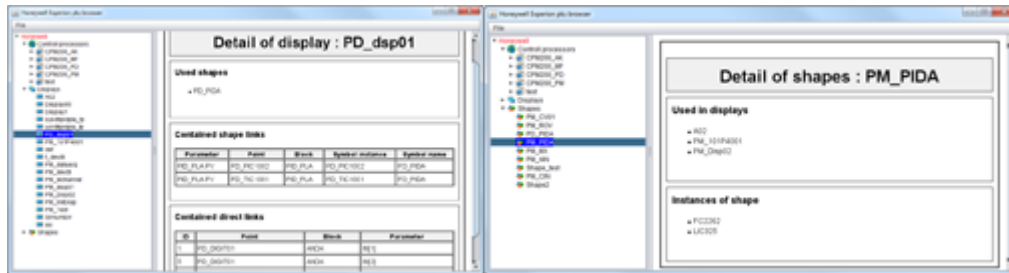
Tr and reports are highly customisable and can be easily modified according to the user's needs.

## **Honeywell HMI**

After importing HMI data by using the Honeywell HMI importer, the browser allows also the reporting of information about displays and shapes.

The display represents a visualisation screen for a certain part of the plant, and the shape represents a template of the graphic objects which are used for logic visualisation.

The user has quick and easy access to the displayed information, such as which shapes are used in the display and parameters of the shapes. The shapes part provides information about the interconnection of the shape to the display; also instances of the shapes are displayed.



### *How It works*

After successful import from the control system, the user is able to browse data anywhere without having access to the Honeywell network system. The data can also be easily moved and imported anywhere without need of connecting to the plant network.

Data from the Honeywell export file are stored in the internal database, in documented database format, so besides browsing Honeywell through browser, the user can query it using standard tools of Procus Pack v2 and get the specific data which are required.

### **Main benefits of Procus Pack v2 from Honeywell Experion PKS perspective**

- Hardware and software expectancy to run Procus Pack v2 are very low.
- Clean and intuitive managing of the whole application.
- All data related to specific item are displayed in simple, tabular, one sheet form.
- Quick and easy access to information from the system database.
- No additional installation of any libraries or application is needed.
- User is not working with online data. There is no way how user can harm control system, cause system failure or safety state alarm.

## **Procus Pack v2 and ABB 800xA System**

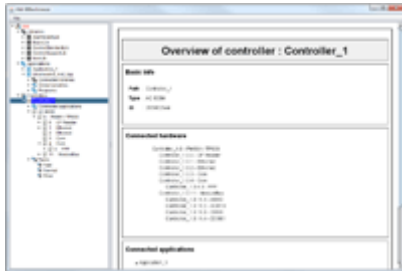
Procus Pack v2 also includes useful tools for working with ABB 800xA control system export files. These export files are in a standard pdf file format and after their import in Procus Pack v2 they are processed and stored in the internal database for further use. A useful tool for working with these files is described below.

### **ABB 800xA Browser**

ABB 800xA browser (later browser) offers a convenient way to view the control system hardware configuration, parameters, libraries, division of tasks, applications and programs contained therein and the variables used in applications and programs. The data is presented in a way which is familiar to the ABB 800xA control system and displays all information from the ControlBuilder M/C. This makes the period required for the user to get familiar with the browser considerably shorter.

### *Browser basics*

The following picture is a typical view of a browser containing the ABB 800xA control database.



It consists of two main areas :tr and report.

The Tr section shows ABB 800xA system in a format of the Application Browser of MyePlant, so the user is able to use it intuitively – without reading numerous pages of documentation.

The report section shows information about the item which is selected in the tr. Information is shown in a standard table layout for better orientation and easy printability in a mirror image format.

Tr and reports are highly customisable and can be easily modified according to the user's needs.

#### *How It works*

The browser works in the environment of Procus Pack v2 and uses all the advantages of its system for using different DCS databases at the time. After successful import the user is able to browse data anywhere, without having access to the ABB 800xA network system. Data can also be easily moved and imported anywhere without the need of connecting to the plant network.

The data from the ABB 800xA export file are stored in the internal database, in a documented database format, so besides browsing ABB 800xA through the browser, it is possible to query it using the standard tools of Procus Pack v2 and get specific data according to the user's needs.

It can be said that Procus Pack v2 brings very similar benefits for ABB 800xA control system users as for Honeywell Experion PKS.

#### **Main benefits of Procus Pack from ABB 800xA perspective**

- Hardware and software expectancy to run Procus Pack v2 are very low.
- Clean and intuitive management of the whole application.
- Quick and easy access to information from the system database.
- No additional installation of any libraries or application is needed.
- The user is not working with online data so there is no danger of the user causing harm to the control system, causing system failure or causing a safety state alarm.

## **Additional benefits using Procus Pack**

- Saving time and money.



- With Procus Pack the user does not only get software but also our support according to what his needs are.
- Our team is able to create queries or help the user with technical issues should any occur.
- Our team is also ready to customise existing program modules according to the user's needs.
- Should the user be interested, we are able to create new program modules which are compatible with various decentralised control systems (DCS) and safety systems (PLC).