

Hyperview Browser

Trace signals, search, troubleshoot, view live data, examine configuration errors, and much more.

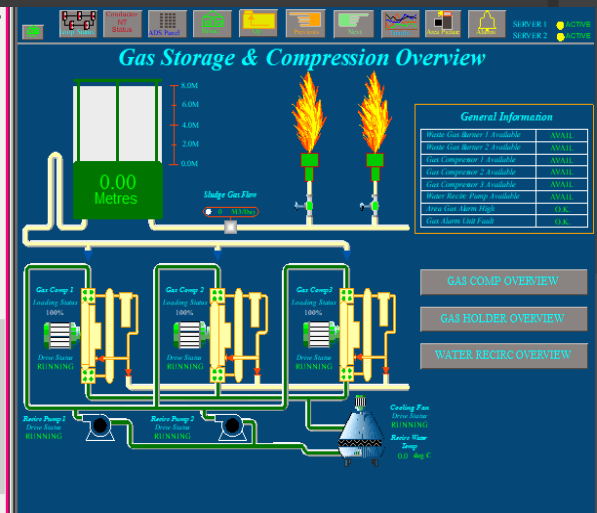
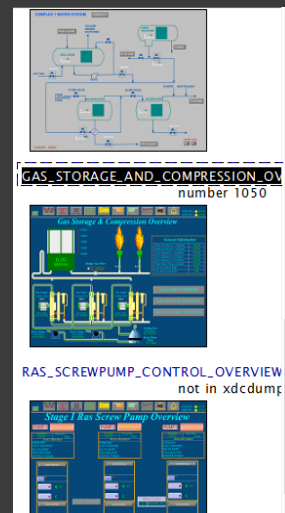
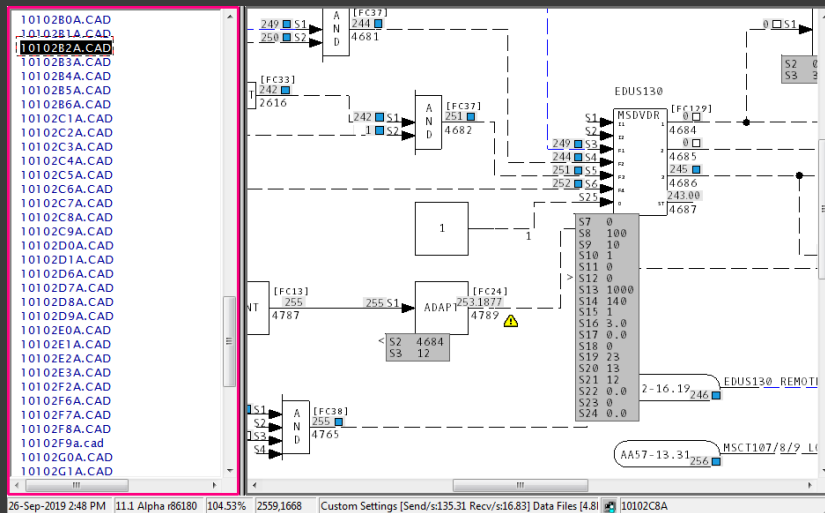
The screenshot displays the Hyperview Browser interface with three main windows:

- Top Window:** A CAD diagram of a process control system. A yellow callout box highlights a component labeled "1.01.02 B 6824" with a checkmark, and another callout points to "23.21875 HTAS075 VAPOR TRIM".
- Left Window:** An "Error Browser" window showing a list of 1132 errors. The list includes items like "[1111] No source: Used in display (34 shown)", "[123] Tag index not found in database (1 shown)", and "[141] Tag used in graphic not exception-reported (2 shown)".
- Bottom Window:** A "Live Data Watch Window" showing multiple time-series plots. The plots display signal values over time, with a red vertical line indicating the current time. A table on the right side of the window shows data for various tags, including "MAJ1001 1.20.02 B 7299" with a value of 138 and "40FT152-SR 1.20.02 B 1234" with a value of 140.25.

G. Michaels Consulting Ltd

About DBDOC and Hyperview

- DBDOC compiles all your INFI 90 resources into a single snapshot file representing your system.
- You can browse the snapshot using Hyperview, the DBDOC browser.



2.1.1 How to run Hyperview

From inside BuildPlus

- Open a project and click View project File button

From a shortcut

- Most users have a shortcut to a shared Hyperview in a central location.
- From the Start menu, select **Programs | GMCL DBDOC | Run Hyperview** or **Programs | GMCL DBDOC Hyperview | Run Hyperview**

Multiple Hyperview browser windows

- From inside Hyperview, start more browser windows with **File | New Window**.

2.1.1.1 Running Hyperview from the command line (advanced)

Hyperview can be launched from the command line. This allows fine-grained control of Hyperview options, and is necessary in order to define a shortcut.

From the command line you can

- Specify the project file to be opened
- Specify the initial document to be displayed
- Disable continuous live data collection (See section 2.5)
- Specify the default live data update interval

See the documentation for more details.

2.1.2 How to load a project file

- Use the **File** menu to open a project file
- Use **File | Recent Project Files** to see recently viewed files
- Use * on the command line (in a shortcut) to automatically open the most recently built project file.
- Associate project files with Hyperview so they get opened automatically

2.1.2.1 Associating project files with Hyperview in Windows

To make Hyperview open when you double-click on an project file, do the following:

1. Go to the **Start** menu, click on **Control Panel**, locate the **Folder Options** icon and double-click on it.
2. In the **Folder Options**, click on the **File Types** tab.
3. Click the **New** button below the Registered File Types. In the **File Extension** box enter project as the File Type.
4. Once it is added click the **Change** button below the **File Types** box.
5. Select the program to open the file from a list selection.
6. Browse to **C:\Program Files\GMCL\DBDOC\Programs** and select **hyperview.exe** as the program to open the file.

2.1.3 Help and documentation

- Use the **Help** menu to automatically bring up application help
- Go to the GMCL website (gmcl.com) to access online help
- **Help | Project File Build Revision** tells which version of Hyperlink built the current project
- **Help | About** shows the the Hyperview version

2.2 Basic navigation in Hyperview

The browser display has two panes.

Index Pane

Content Pane

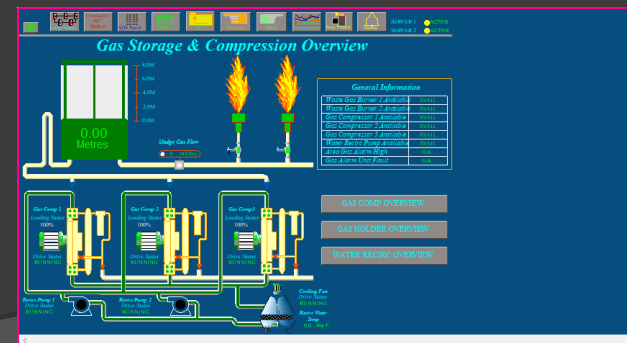
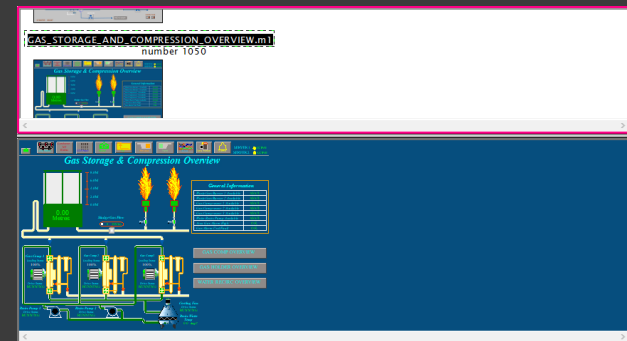
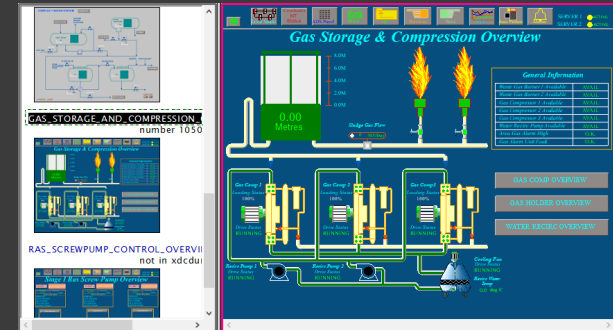
The screenshot displays the Hyperview interface for 'Stage 1 Aeration Overview'. The browser window title is '[i90 demo daily release build_0191008b_r2019-10-04-86258.dbdoc] i90 demo daily release build'. The browser menu includes File, Edit, Bookmark, Go, Search, View, Highlight, Options..., and Help. The interface is divided into two main panes:

- Index Pane (Left):** Contains a 'Table of Contents' with sections for Databases, System Information, and Graphics. The 'Databases' section lists 'Tag Index (All Databases)' with sub-items: 190demod (Tag Data), 190DEMOT (Trend Data), and Console1 (XDC Control). The 'System Information' section lists various system-related items like Function Codes, Undefined Tags, and Missing Graphics. The 'Graphics' section lists 'Sample', 'Faceplates', 'Operators', and 'conductor support'.
- Content Pane (Right):** Displays the 'Stage 1 Aeration Overview' process. It features a central 'RAS 1 BUILDING' and four 'Tank' units (Tank 1 to Tank 4). Each tank has a 'DO CONTROL' and 'AIR CONTROL' panel. The interface includes various control buttons like 'STAGE 1 BLOWER CONTROL', 'RAS 1 PUMP CONTROL', 'AERATION CONTROL', and 'CHANNEL CONTROL'. At the bottom, there are 'AERATION CONTROLLING PROCES' and 'STATUS FEEDBACK' sections with data tables and bar charts.

The status bar at the bottom shows: 08-Oct-2019 4:16 PM | 11.1 Alpha r86258 | 80.17% | 0.00,56.70 | Custom Settings [Send/s:0.00 Recv/s:0.00] Data Files [5.1M] | Numeric Index of Function Cod

2.2.1 Pane orientations

- Push button to control the pane layout.
- Adjust the dividing bar between panes.
- Pane preferences are saved for next time.



2.2.2 The index pane (left, top)

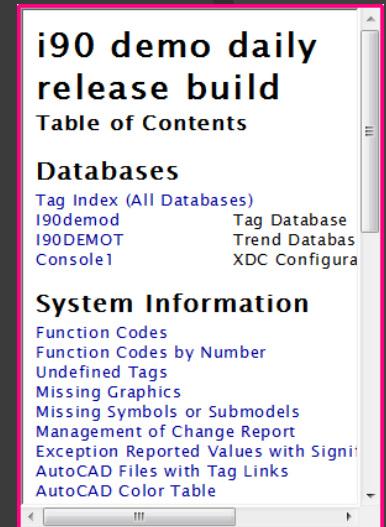
- On startup the main table of contents is in the index pane.
- Click on **hotspots** (links) in the index pane to display documents in the other pane.
- Buttons for quick index navigation:



Step through topics



Step through links



i90 demo daily
release build
Table of Contents

Databases

Tag Index (All Databases)
I90demod Tag Database
I90DEMOT Trend Databas
Console1 XDC Configura

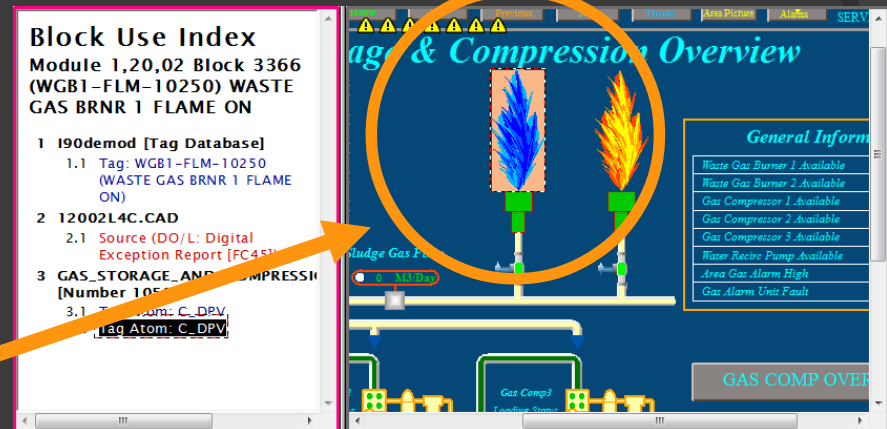
System Information

Function Codes
Function Codes by Number
Undefined Tags
Missing Graphics
Missing Symbols or Submodels
Management of Change Report
Exception Reported Values with Signi
AutoCAD Files with Tag Links
AutoCAD Color Table

2.2.3 The content pane (right, bottom)

Displays graphics, CAD/CLDs, other documents.

- **Highlight | Hotspots** makes links visible
- Pointing finger cursor over hotspots
- Click on a hotspot to see all the uses of a value in the index pane.



2.2.4 Focus for the active window

Focus is shown by the colored border around the index or content pane.

The screenshot shows a software interface for 'Stage 1 Aeration Overview'. The left-hand pane is highlighted with a pink border, indicating it is the active window. An orange arrow points to this pane. The main area displays a process flow diagram with four tanks (Tank 1 to Tank 4) and a central 'RAS 1 BUILDING'. Each tank has a 'DO CONTROL' and 'AIR CONTROL' panel. The interface includes a menu bar (File, Edit, Bookmark, Go, Search, View, Highlight, Options..., Help), a toolbar, and a status bar at the bottom showing system information like '08-Oct-2019 4:16 PM' and '11.1 Alpha r86258'.

Table of Contents

Databases

- Tag Index (All Databases)
- 190demod Tag Data
- 190DEMOT Trend Data
- Console1 XDC Con

System Information

- Function Codes
- Function Codes by Number
- Undefined Tags
- Missing Graphics
- Missing Symbols or Submodels
- Management of Change Report
- Exception Reported Values with AutoCAD Files with Tag Links
- AutoCAD Color Table
- PCU Interactions (Block Imports)

Graphics

- Sample Conductor
- Faceplates Graphics
- Operators Graphics
- conductor support Conductor

Stage 1 Aeration Overview

RAS 1 BUILDING

TANK 1 DO CONTROL, TANK 2 DO CONTROL, TANK 3 DO CONTROL, TANK 4 DO CONTROL

TANK 1 AIR CONTROL, TANK 2 AIR CONTROL, TANK 3 AIR CONTROL, TANK 4 AIR CONTROL

STAGE 1 BLOWER CONTROL, RAS 1 PUMP CONTROL, AERATION CONTROL, CHANNEL CONTROL

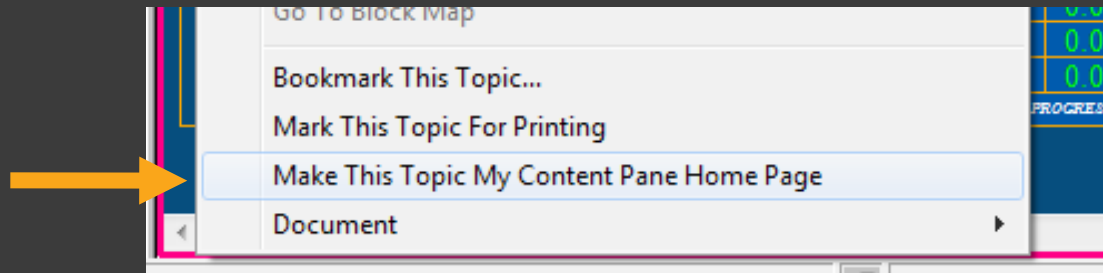
STATUS FEEDBACK

| BLOWER | STATUS | FEEDBACK |
|----------|---------|----------|
| BLOWER 1 | RUNNING | 0.0 %ICV |
| BLOWER 2 | RUNNING | 0.0 %ICV |
| BLOWER 3 | RUNNING | 0.0 %ICV |

BLOWER AUTO STARTUP IN PROGRESS 100%

2.2.5 Setting a “Home Page”

Use right-click **Make This Topic My <Content/Index> Pane Home Page** on any document.



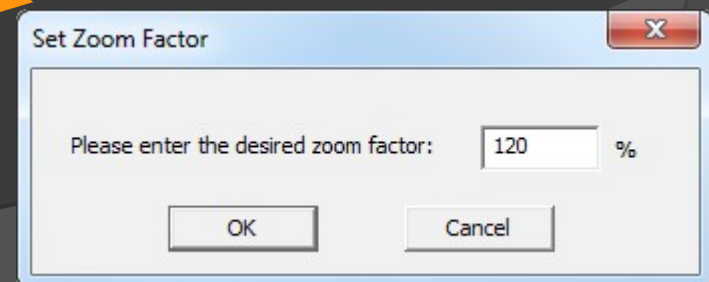
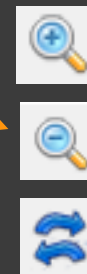
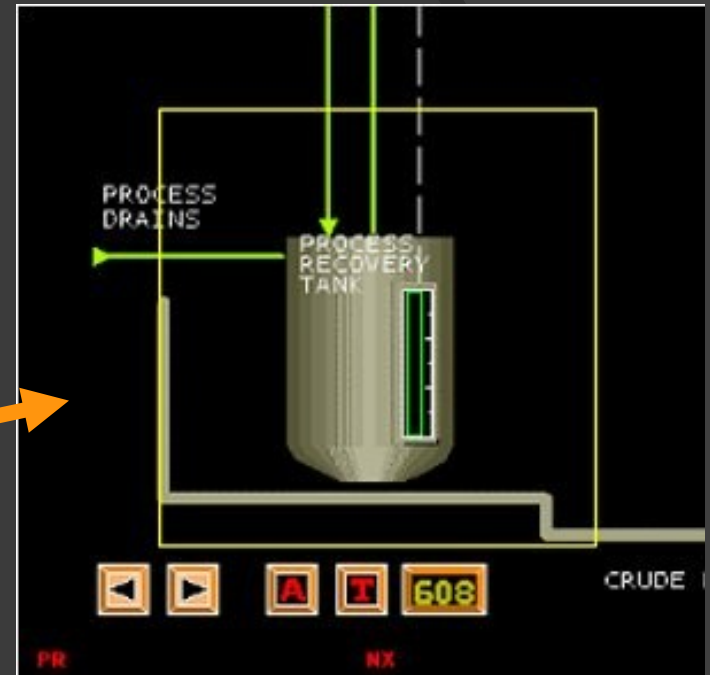
2.2.6 Scrolling

- Use the mouse scroll wheel to scroll up and down on text documents in both panes.
- Ctrl+scroll to scroll on graphical documents in the content pane.



2.2.7 Zooming

- Use the scroll wheel to zoom in and out
- Hold Ctrl and drag the mouse to make a rectangle to zoom in on.
- Use the toolbar buttons or keyboard.
- Manually set the magnification factor



2.2.8 Using browser history

Hyperview history support is similar to that of other browsers like Internet Explorer.




Go Back

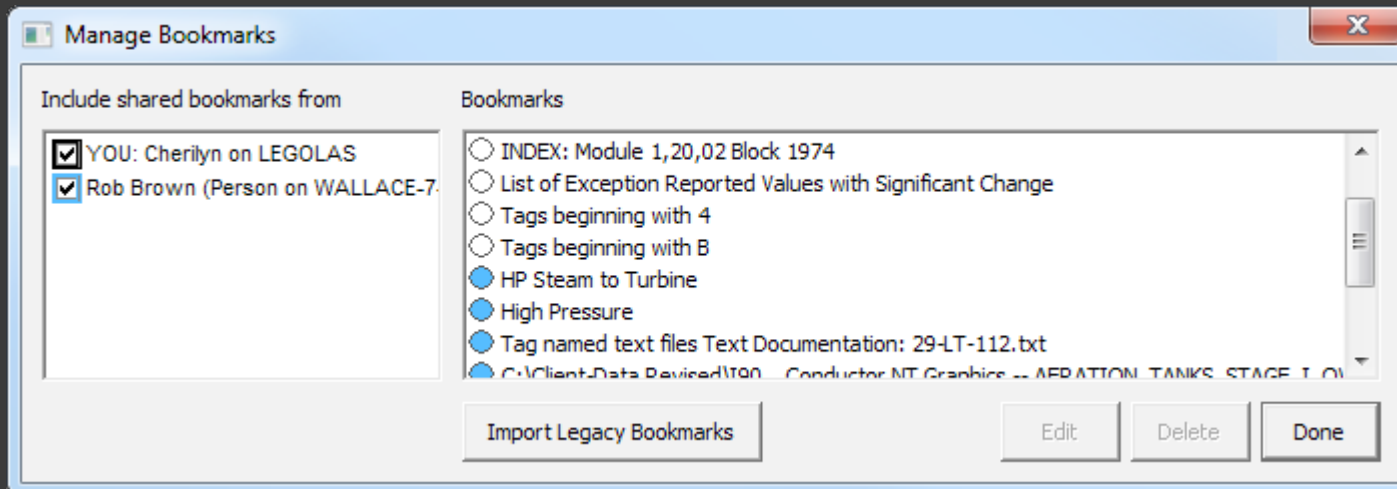


Go Forward

The black arrow shows you everything in the history.

2.2.9 Using bookmarks for quick access to pages of interest

- Add bookmarks to any document. 
- Share your bookmarks with other Hyperview users.
- Manage your bookmarks.



2.3 Techniques for signal tracing

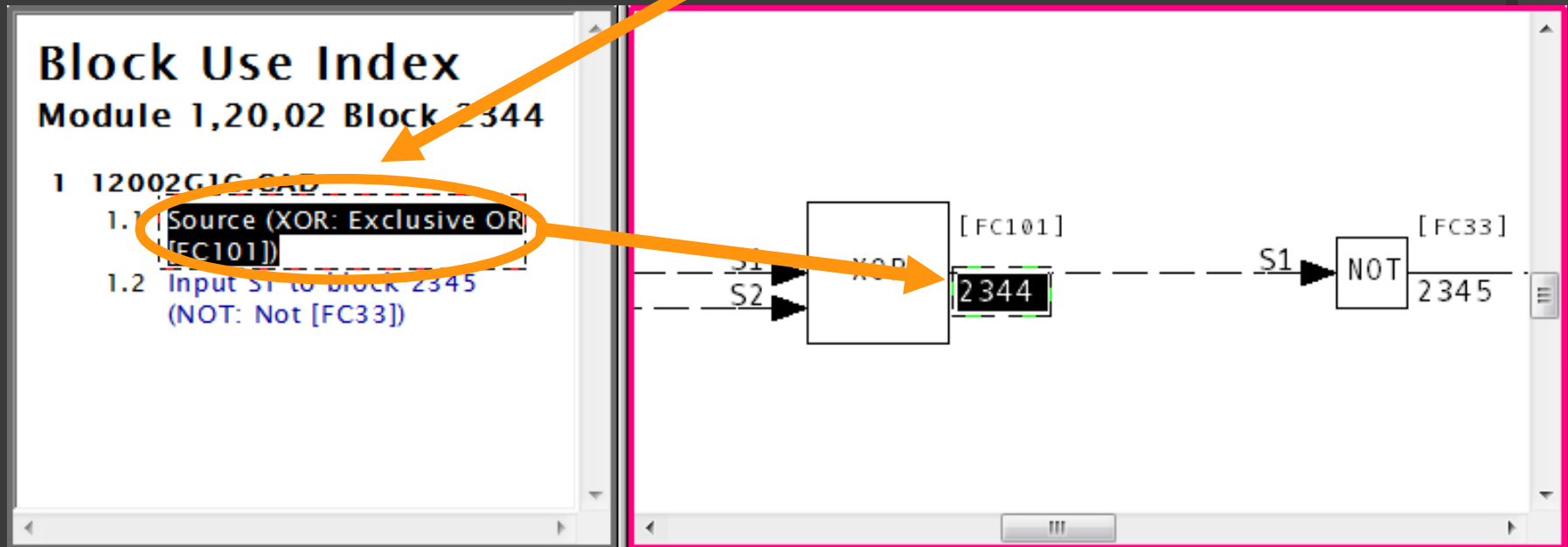
Two methods for signal tracing

1. Click on a hotspot in the content pane to see its uses in the index pane.
2. Double click on a hotspot in the content pane to jump directly to its source or one of its uses.



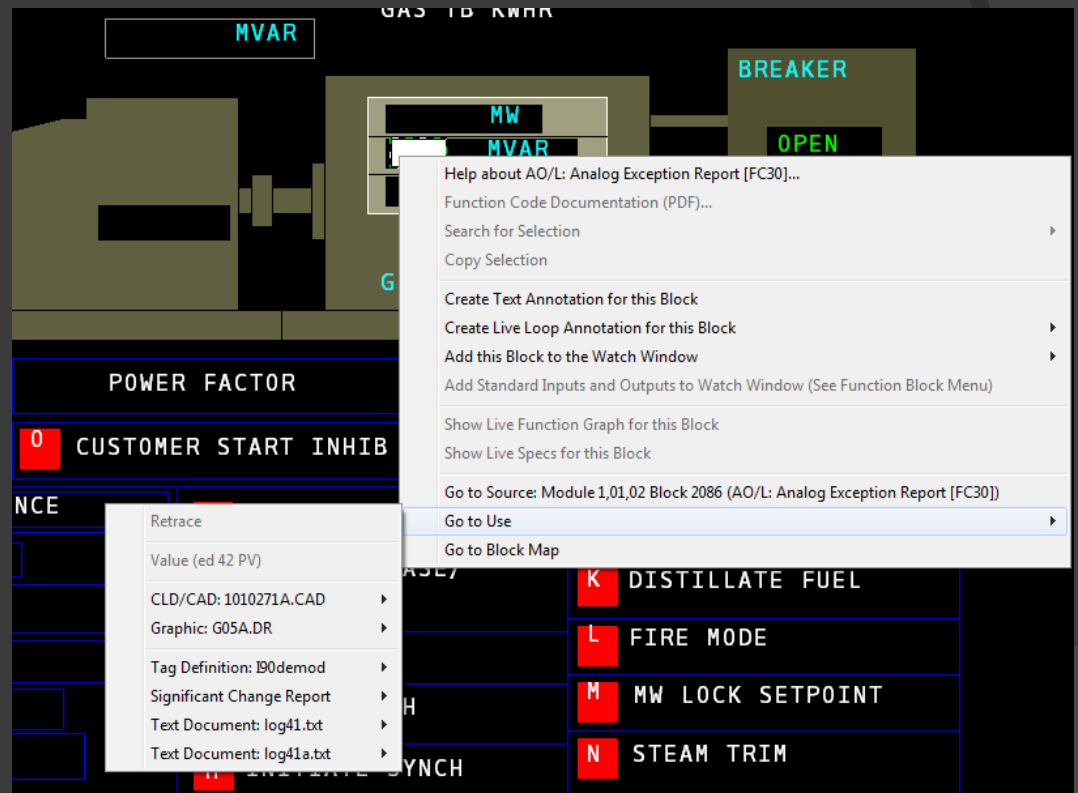
2.3.1 Trace signals using hotspots and the index pane

Click on hotspots in the index pane to display the document in the content pane.



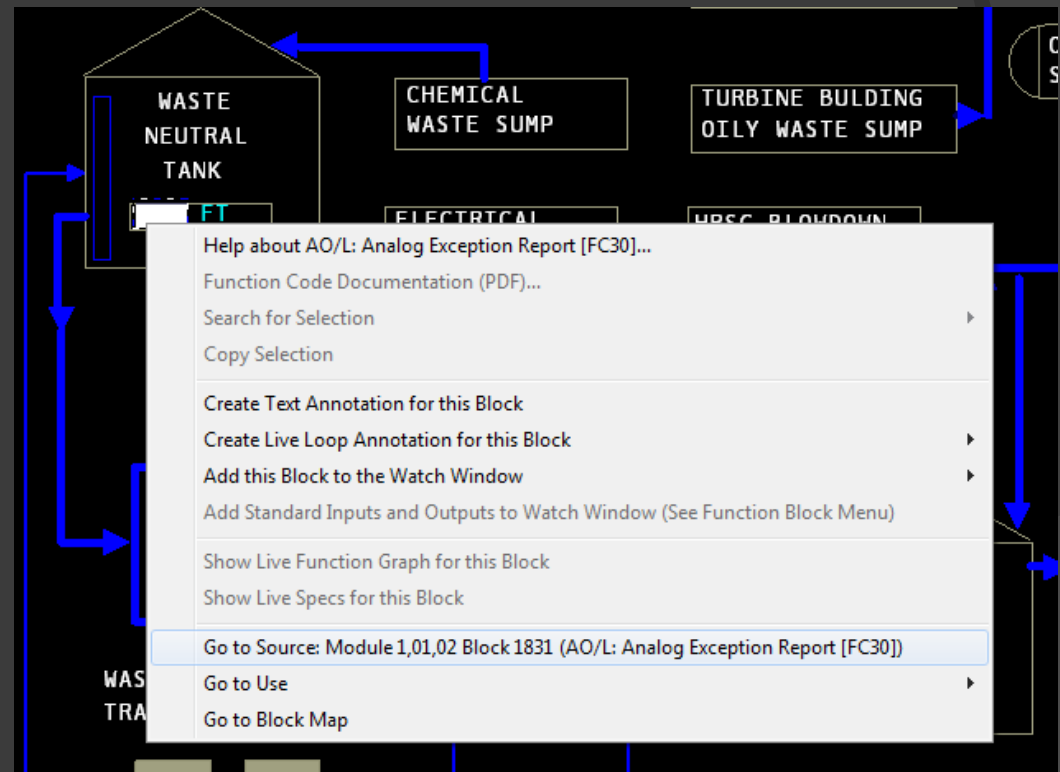
2.3.2 Trace signals using Go To Use, Go To Source, and double-click

Right-click or double-click on hotspots to trace signals without the index pane.



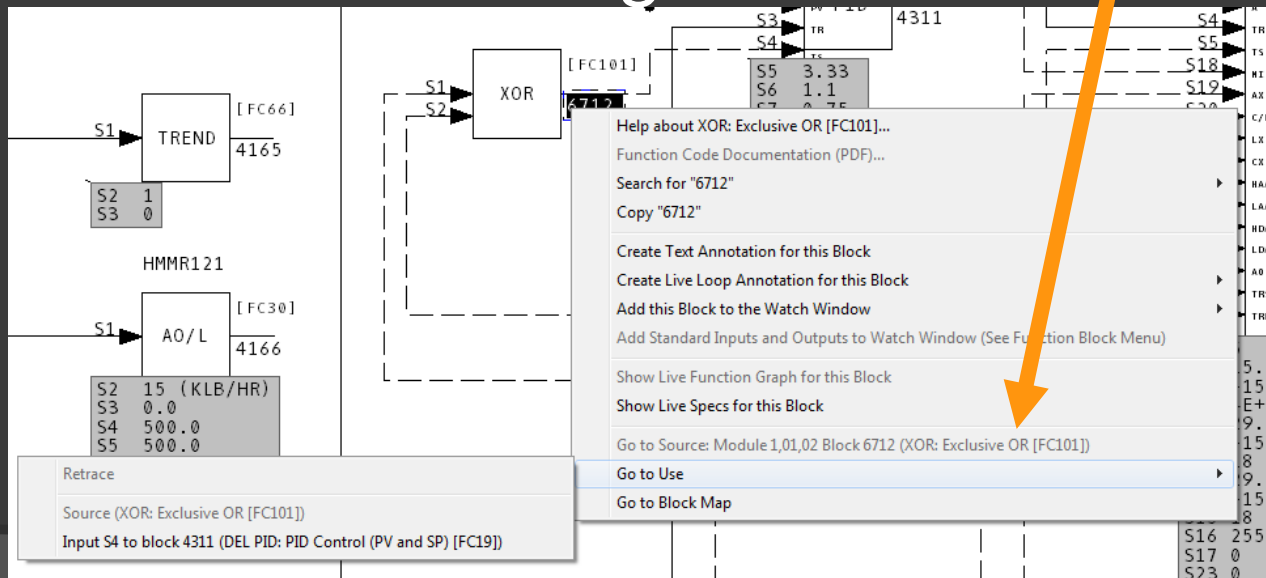
2.3.2.1 Quick ways to jump to the source of a value without using the index pane.

- **Double-click** on a value to jump right to its source.
- Right-click on a value. Select **Go to Source**



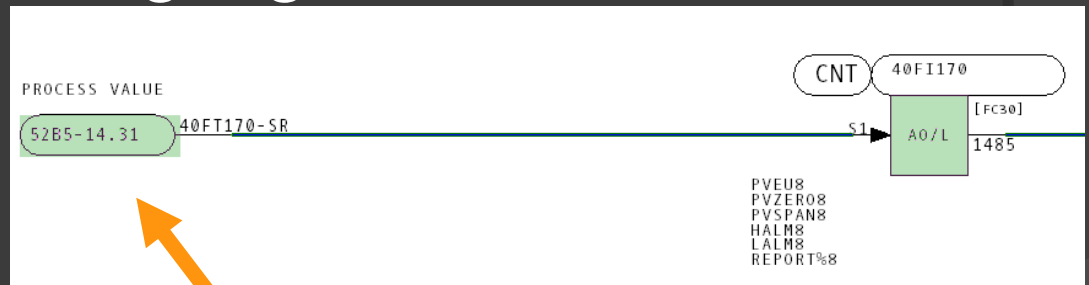
2.3.2.2 How to jump to uses of a value without using the index pane

- **Double-click** on a non-source value to show a list of uses. Choose one.
- Right-click on a value. Select **Go To Use** and choose a use to go to.

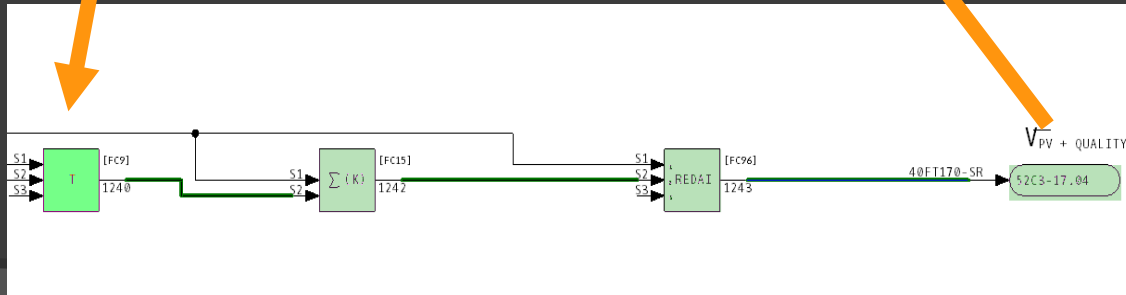


2.3.3.2 Displaying the output tree

- **Right-click** on a function block and choose **Show Output Tree For This Block**
- All of the output signals for the block, and their outputs, are highlighted






Tree Root



Tree continues on
other CAD/CLD

2.4 Searching text, topic titles, databases, and finding coordinates

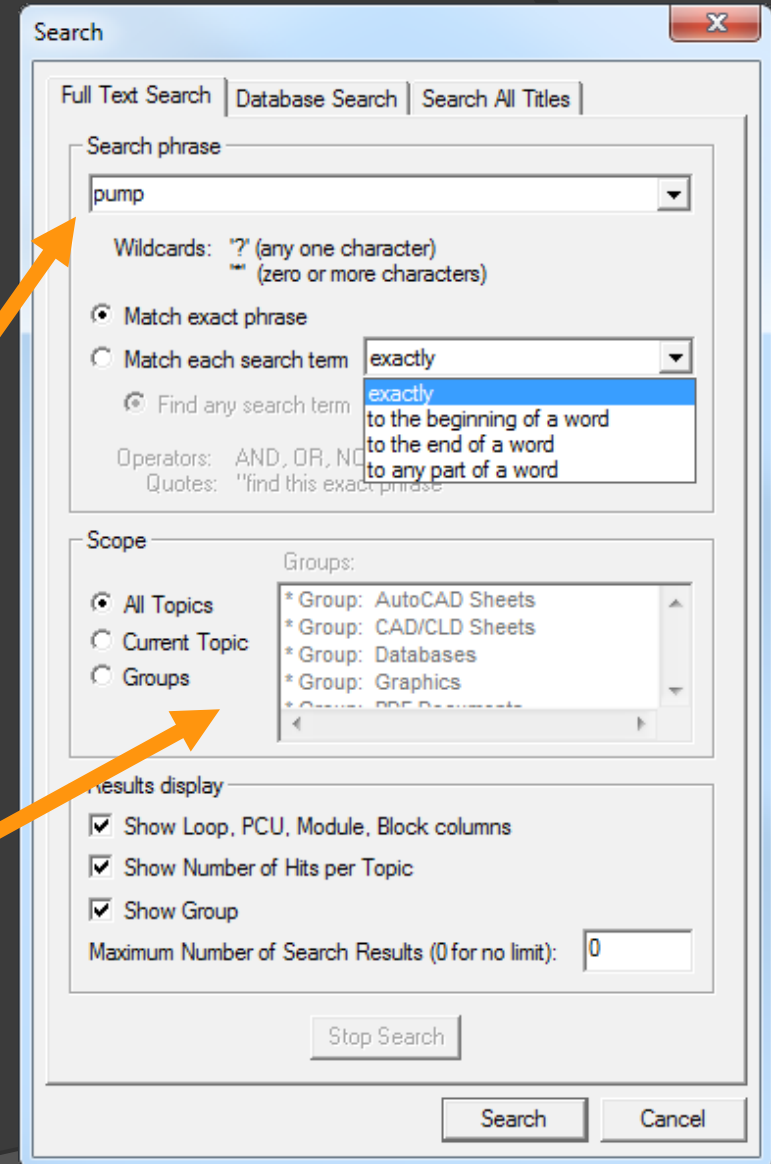
Hyperview makes it easy to search.

-  Full text search
-  Database search
-  Search all titles

The icon will show your most recent search type.

2.4.1.1 Text searches

- Searches all text, on graphics, CAD/CLD, AutoCAD drawings.
- Search for a specific word or phrase.
- Search for word combinations with **AND** and **OR**.
- Use wildcards *****.
- Limit searches to particular kinds of documents.



2.4.1.2 Database searches

Searches the databases for blocks and tags.

- Search by tag name or partial tag name
- Search by tag or trend index
- Search by any combination of Loop, PCU, Module, Block
- Search by description text

The screenshot shows a 'Search' dialog box with the following sections and fields:

- Search Mode:** Three tabs: 'Full Text Search', 'Database Search' (selected), and 'Search All Titles'.
- Instructions:** 'Enter text in any box or boxes to find tags in the database.'
- Find tags with matching tag names:** Includes an example: 'Example: 'ail' in this box will find all tags with 'ail' in the tag name.' Fields include 'Tag Name:' (text box) and 'How to match:' (dropdown menu set to 'Any part of text').
- Find tags by tag or trend index:** Fields include 'Tag Index:' and 'Trend Index:' (text boxes).
- Find tags by Loop, PCU, Module or Block:** Fields include 'Loop:', 'PCU:', 'Module:', and 'Block:' (text boxes).
- Find tags by text:** Includes an example: 'Example: 'tank' in this box will find all tags with 'tank' in the tag description or other database text.' Field includes 'Miscellaneous Text:' (text box).
- Results display:** Includes checkboxes for 'Show Loop, PCU, Module, Block columns' (checked), 'Show Number of Hits per Topic', and 'Show Group'. A field for 'Maximum Number of Search Results (0 for no limit):' is set to '0'.
- Buttons:** 'Stop Search', 'Search', and 'Cancel'.

Four orange arrows point from the text on the left to the 'Tag Name', 'Tag Index', 'Loop', and 'Miscellaneous Text' fields in the dialog box.

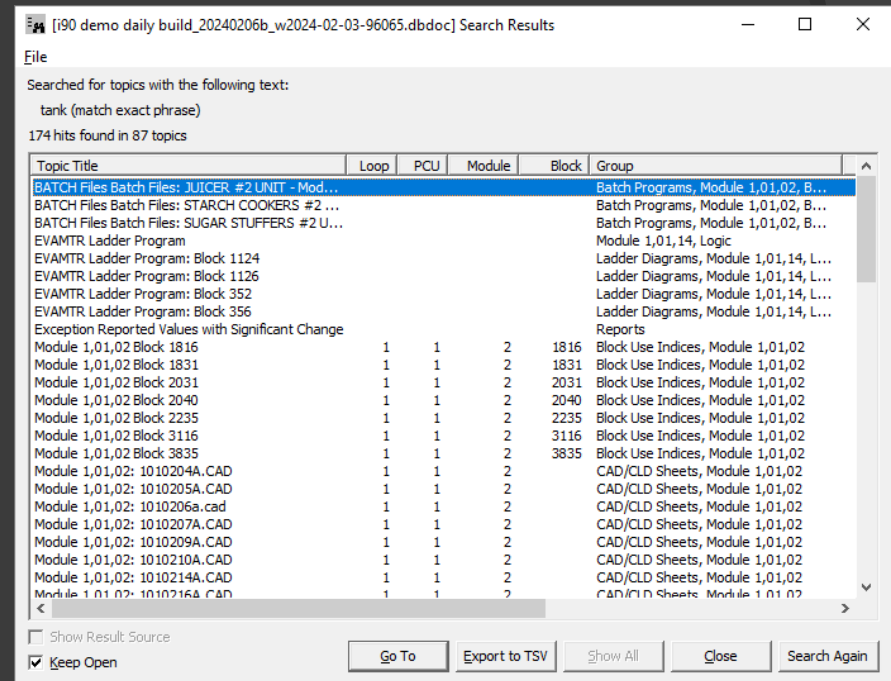
2.4.1.3 Search result options

You can specify what information is displayed with your search results.

- Show search hit frequency
- Show topic groups hits are found in
- Show Loop, PCU, Module, Block of results





2.4.1.4 After your text or database search you can...

- Display search result topics in the browser window (double-click)
- Export the results to a .tsv file
- Search again!



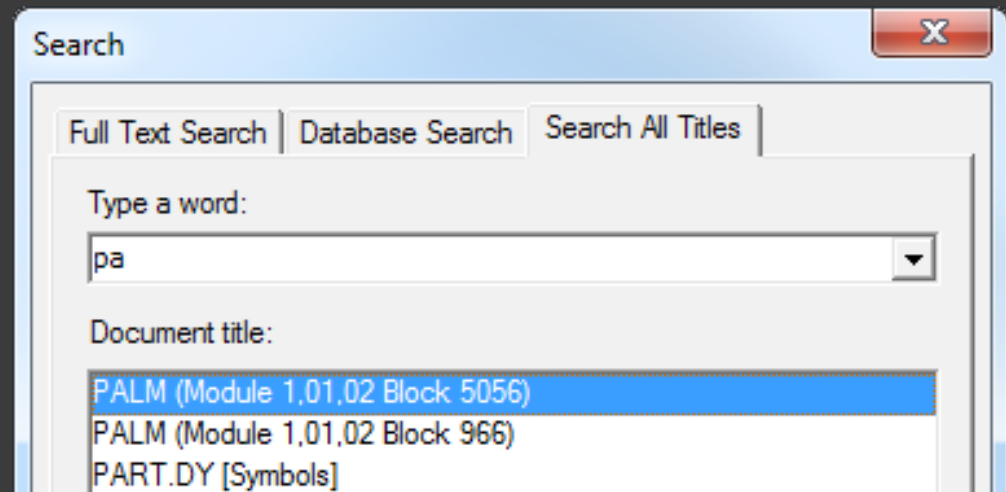
2.4.1.5 Displaying and stepping through search results

You can step through search results without the search results dialog using toolbar buttons.

-  Next search hit in topic
-  Previous search hit in topic
-  Next topic in search results
-  Previous topic in search results

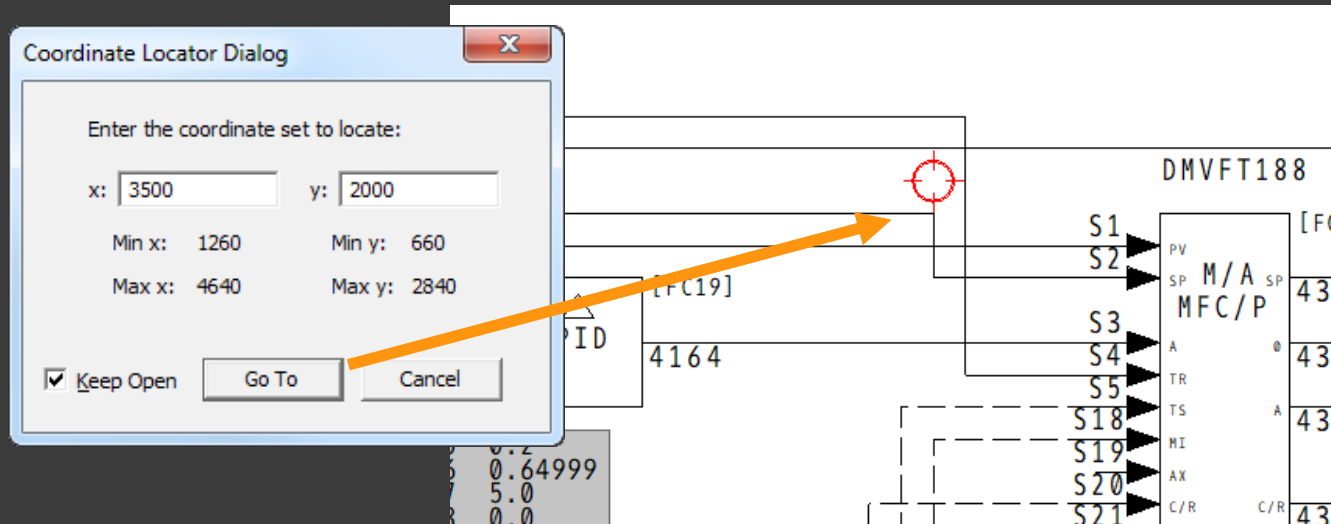
2.4.2 Using the fast topic search

- **Search All Titles** shows results interactively.
- DBDOC narrows the search based on what you type.






2.4.3 Finding a coordinate

- Go directly to a specific coordinate on a document
- Particularly useful when analyzing error reports



2.5 Guide to live data on documents

It's easy to display live data on documents. Use these toolbar buttons:

-  Turn on live data in Snapshot mode
-  Turn on live data in Continuous mode
-  Add a Live Loop Annotation for a specific block

2.5.1.1 Live data in Snapshot mode

Press  to turn on live data in **Snapshot** mode.

In this mode, live data is refreshed every 10s or when you:

- change documents
- move around or zoom in a document
- click on the camera button again

Snapshot mode is the most efficient way to collect live data

Values will turn gray when they are considered “stale”

2.5.1.2 Getting live data in Continuous mode

Press  to turn on live data in **Continuous** mode.

- Continuous mode updates live data at a set interval
- The update interval can be changed in the **Options | View** dialog
- Continuous mode is automatically turned off when you change documents

2.5.1.3 Managing live data load

- Double-click on the camera to turn off Snapshot mode
- Only visible values are fetched – to fetch fewer values, zoom in to an area of interest
- Monitor the data load in the status bar



[Send/s:3.00 Recv/s:3.39] Data Files [294KB] 

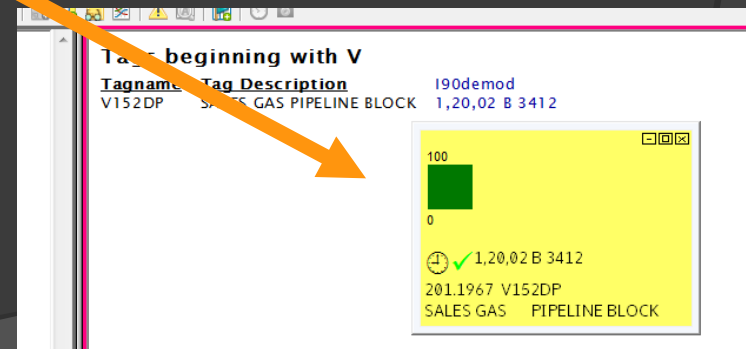
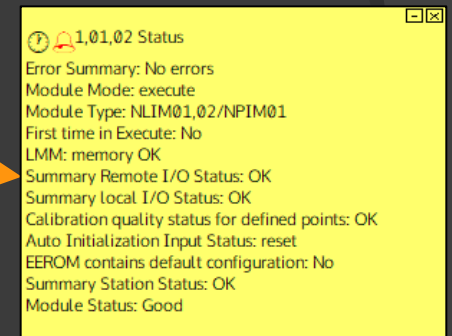
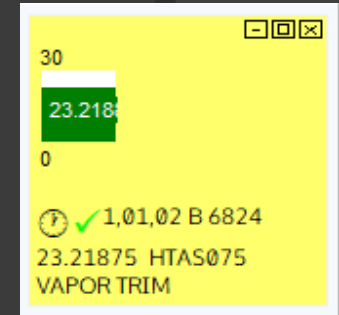
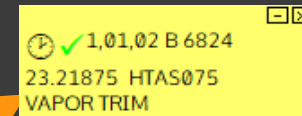
An orange arrow points from the text 'Monitor the data load in the status bar' to a status bar. The status bar contains the text '[Send/s:3.00 Recv/s:3.39] Data Files [294KB]' and a camera icon. The text '[Send/s:3.00 Recv/s:3.39]' is circled in orange.

2.5.2 Live loop annotations


“Sticky notes” that display live data. Use them to:

- View live data for a single block
- View the status of any module in the system
- Monitor data from another document

Example: track a tag's value while viewing its database entry



2.5.3 Creating a live loop annotation

- Right-click on a hotspot, choose **Create Live Loop Annotation for this Block**, then choose the type of annotation to make.
- Or, to specify an arbitrary block, press the  button, or right-click anywhere and choose **Live Loop Annotation | Create**.

Live Data Options For This Block

Specify Value to Monitor:

Value For Block Number
Loop: PCU: Module: Block:

Value For Tag Name
Tag Name: Search

| Tag Name | Loop | PCU | Module | Block | Description |
|----------|------|-----|--------|-------|-------------|
| | | | | | |

Module Status
Loop: PCU: Module:

Basic Options
Description:
Update Interval: Seconds

Annotation Options
 Show Live Data
 Dynamic Bar

Watch Window Options
Display
 Reverse Y-axis
Color:

Schedule
[PENDING] No scheduled pause

Plot or Dynamic Bar Range
 Built-in Range to
 Auto Range (calculated on the fly)
 Specify Range to

2.5.3.1 Specify the block or tag

You can specify the block to monitor.

Select Value For Block Number...

... then enter the loop, PCU, module, and block numbers here.

Value For Block Number

Loop: PCU: Module: Block:

You can quickly find tag names to monitor.

Select Value For Tag Name...

...type in all or part of the tag name you want and click Search...

...then select the tag you want from this list.

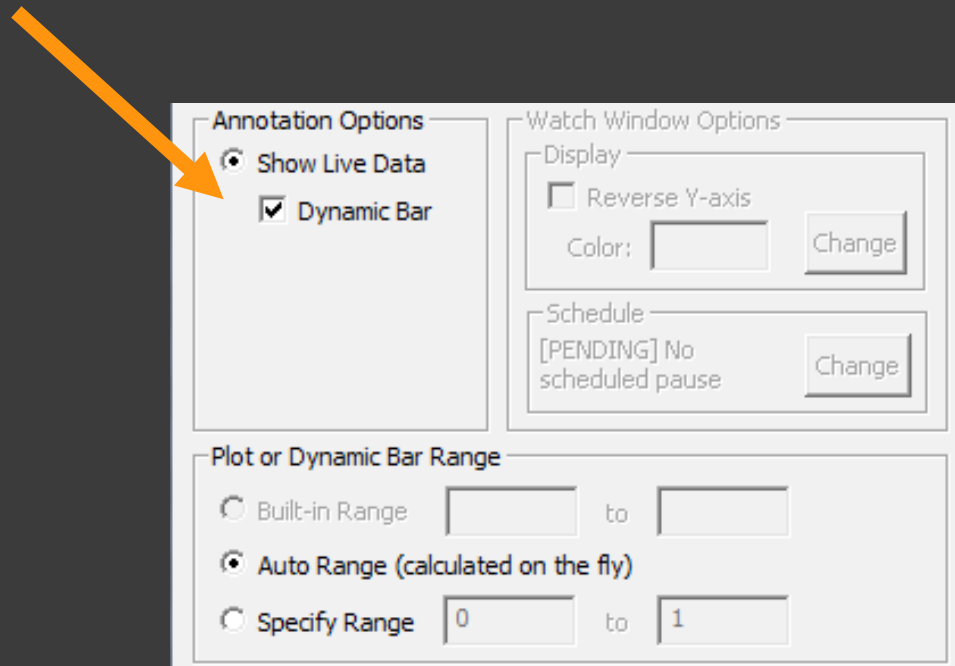
Value For Tag Name

Tag Name: Search

| Tag Name | Loop | PCU | Module | Block | Descript |
|------------|------|-----|--------|-------|-----------|
| SDDM001 | 1 | 1 | 2 | 2341 | ... |
| SDDM96GW-1 | 1 | 1 | 2 | 2119 | CH4 T... |
| SDDMC100A | 1 | 1 | 2 | 5459 | CT-10... |
| SDDMC102 | 1 | 1 | 2 | 5552 | CTC IV... |

2.5.3.2 Live loop annotation options

Choose the type of annotation to create



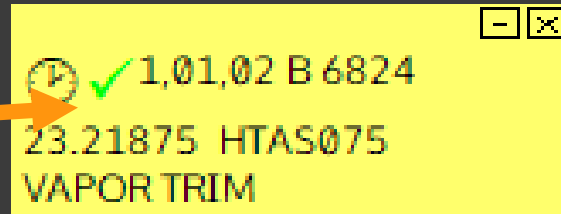
The screenshot shows a dialog box with three main sections:

- Annotation Options:** Contains two radio buttons: Show Live Data and Dynamic Bar. Below them is a checked checkbox for Dynamic Bar.
- Watch Window Options:** Contains a 'Display' section with a checkbox for Reverse Y-axis and a 'Color' field with a 'Change' button. Below that is a 'Schedule' section with the text '[PENDING] No scheduled pause' and a 'Change' button.
- Plot or Dynamic Bar Range:** Contains three radio buttons: Built-in Range (with empty input fields), Auto Range (calculated on the fly), and Specify Range (with input fields containing '0' and '1').

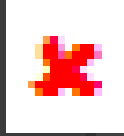
An orange arrow points from the text 'Choose the type of annotation to create' to the 'Show Live Data' radio button.

2.5.3.3 Symbols on live loop annotations

The green check means all is well.



Other symbols can indicate a problem. Check the help for more information if you see them.



Problems with the network connection are indicated in the status bar.

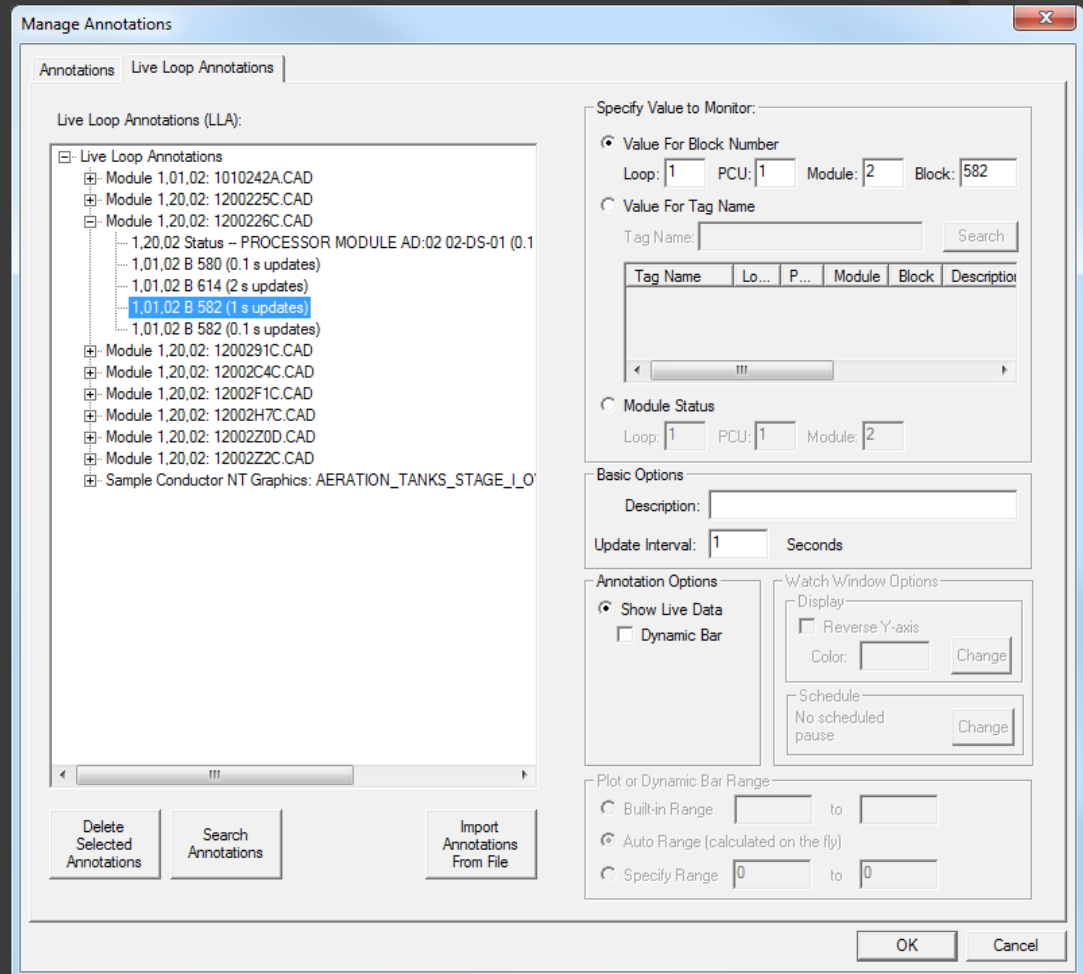
A white status bar with a thin border. It contains the text "[Send/s:3.00 Recv/s:3.39] Data Files [294KB]" and a small icon of a computer with a red X over it. An orange arrow points from the text "Problems with the network connection are indicated in the status bar." to the red X icon.

[Send/s:3.00 Recv/s:3.39] Data Files [294KB]

2.5.4 Managing live loop annotations

You can see all the annotations in your project at a glance in the Annotation Manager.

Any annotation can be edited or deleted here.



2.6 Trending live data in the Watch Window

- Plot data from any block in the system
- Plot groups of blocks together
- Plot data from non-tagged blocks
- Control data fetch rate for each block




2.6 Trending live data in the Watch Window

- Display data at different resolutions
- Mark points of interest with timestamps
- Print plots
- Export plot data to other applications



2.6.1 Opening the Watch Window

To open the Watch Window:

- Press the  button on the toolbar
- Press **W**
- Select **View | Watch Window**

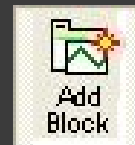


2.6.2 Adding blocks to the Watch Window

In the browser window:

- Right-click on a hotspot and choose **Add This Block to the Watch Window**
- Right-click on a Live Loop Annotation and select **Add to Watch Window**

In the Watch Window:



- Use the **Add Block** button
- Double-click on a blank area of the block list on the right side of the Watch Window.

2.6.3 Defining and editing plots in the Watch Window

➤ You can flip the plot vertically

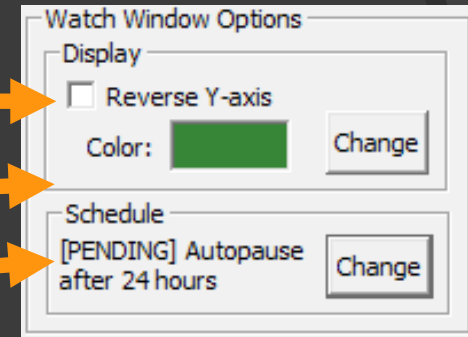
➤ Choose the plot color

➤ Pause data collection

➤ Specify the Y-Axis range

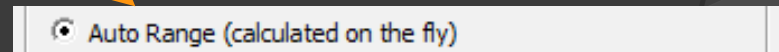
➤ Or use the built-in range

➤ Or have it done automatically



This is the *minimum* value that will be displayed on the vertical axis of the watch window or dynamic bar graph.

This is the *maximum* value that will be displayed on the vertical axis of the watch window or dynamic bar graph.



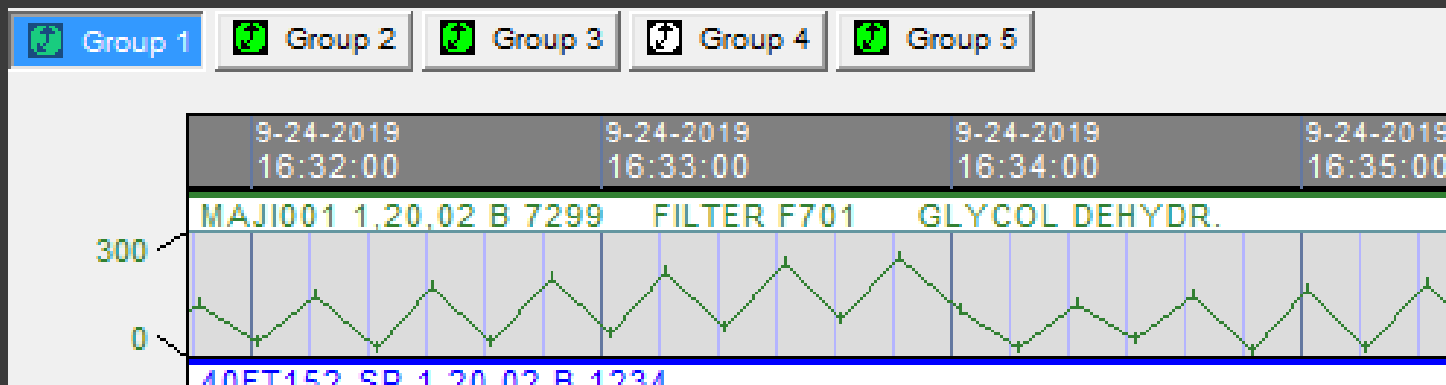
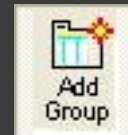
To edit a block, press



or double click on the block in the block list.

2.6.4 Creating groups of blocks in the Watch Window

- Create multiple groups to organize your blocks in the Watch Window.
- Name each group whatever you want.
- Blocks in a group are plotted together.
- To add a group press the **Add Group** button.



2.6.4.1 Importing a list of blocks from CIULink to the Watch Window

Window

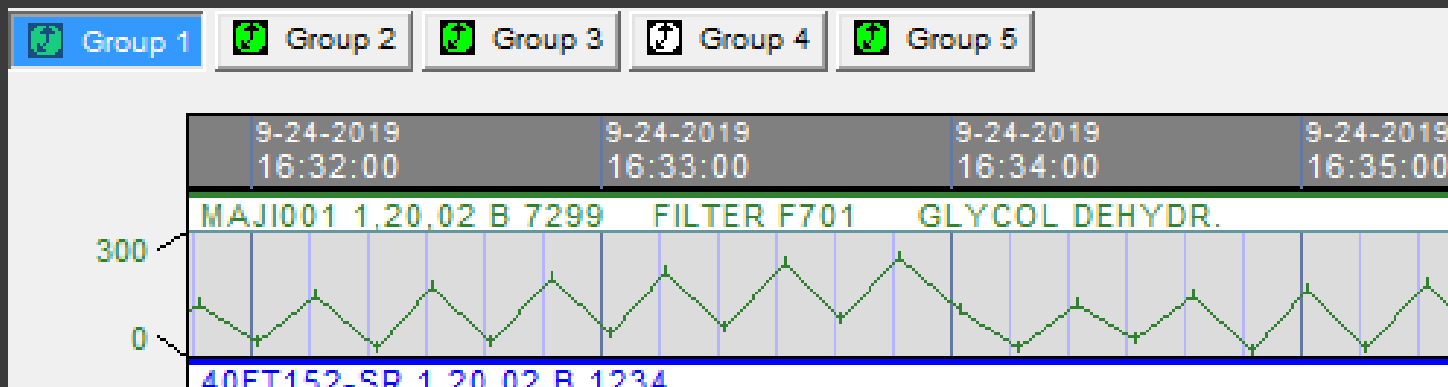
- If you use CIULink to monitor groups of blocks, you can import the group into the Watch Window
- Use **Import | Group** or **Import Group** button



2.6.4.2 Managing groups of blocks

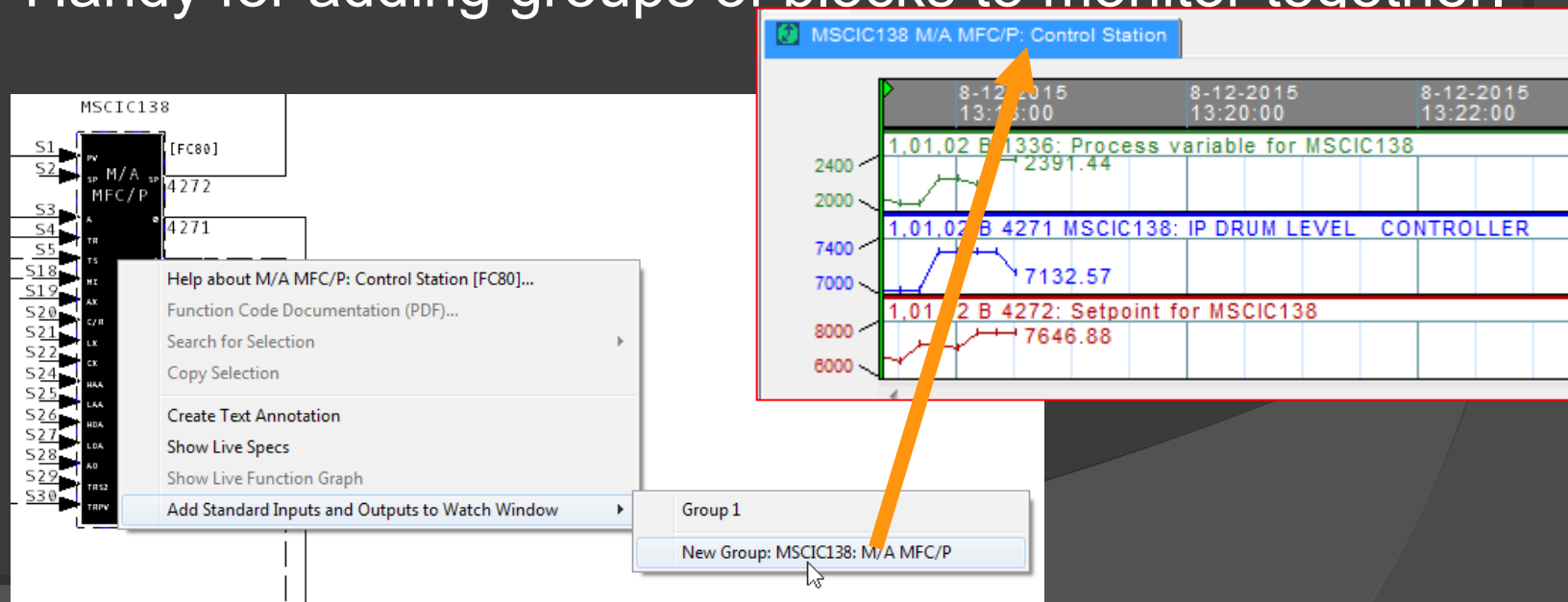
Manage groups:

- With the **Group** menu in the Watch Window
- With the Watch Window toolbar
- By right-clicking a group tab

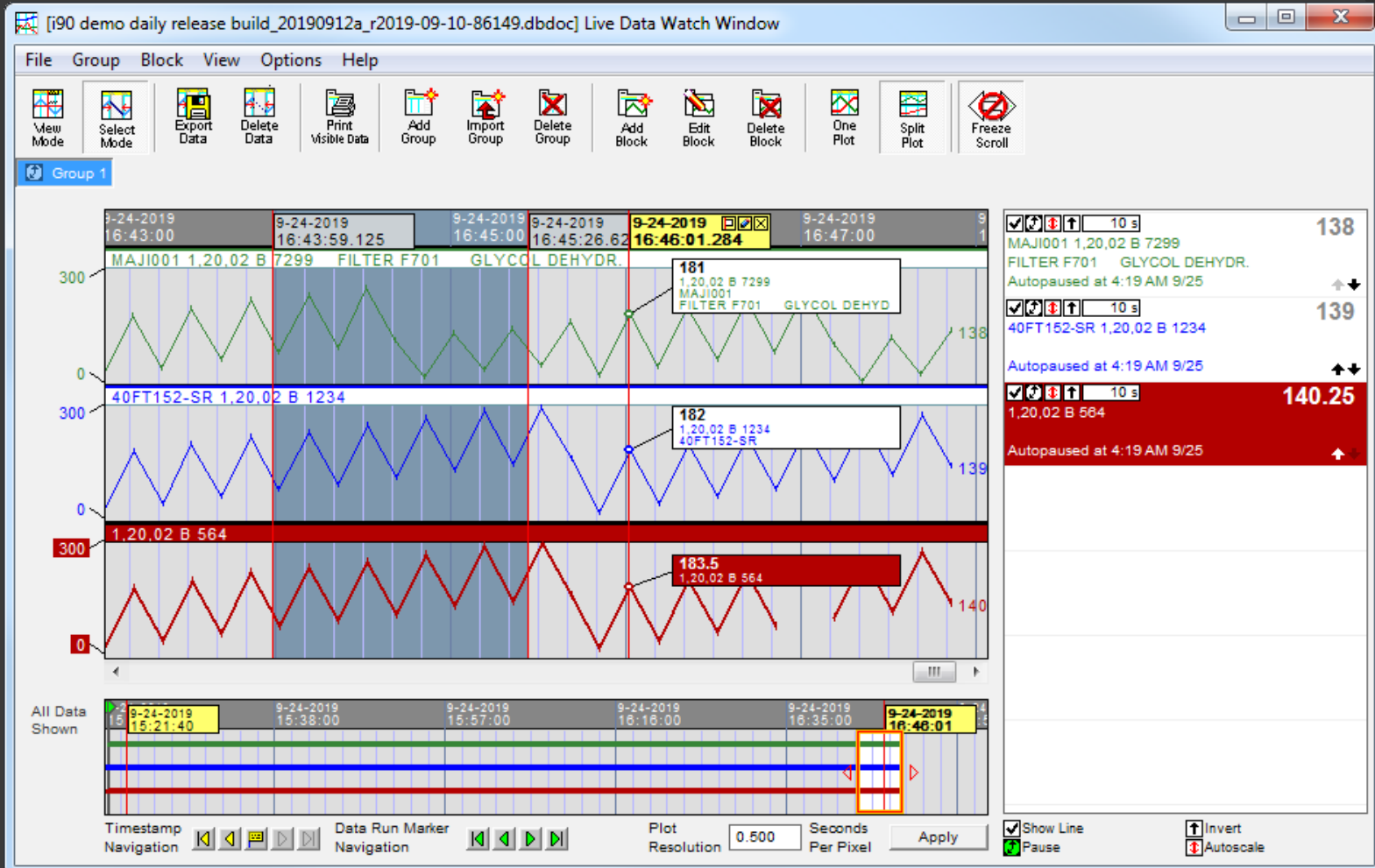


2.6.4.3 Add all block inputs and outputs to Watch Window at once

- Right-click on a function block on a CAD.
- Choose **Add Standard Inputs and Outputs to Watch Window**.
- Handy for adding groups of blocks to monitor together.



2.6.5 Watch Window highlights

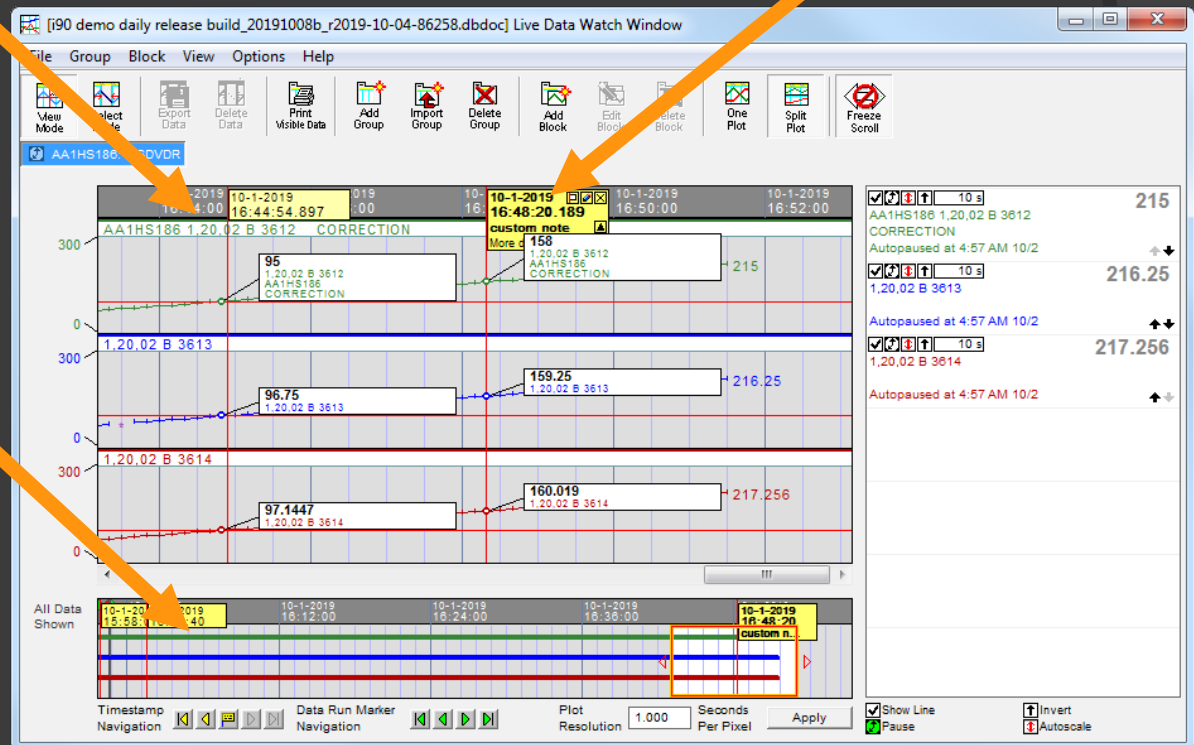


2.6.5.1 Watch Window highlights: Timestamps & Freeze Scroll

As you mouse over the plot, a crosshair shows data and time values.

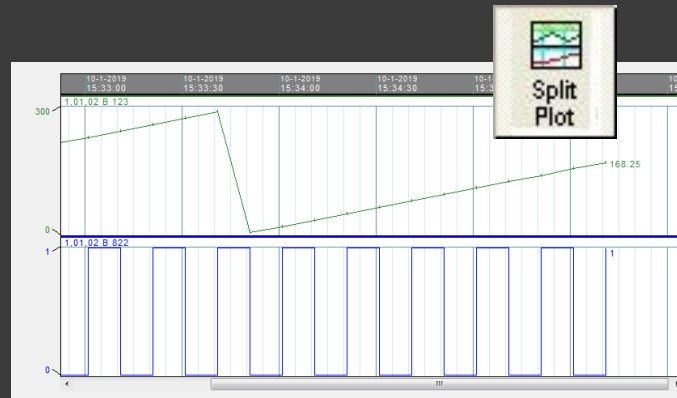
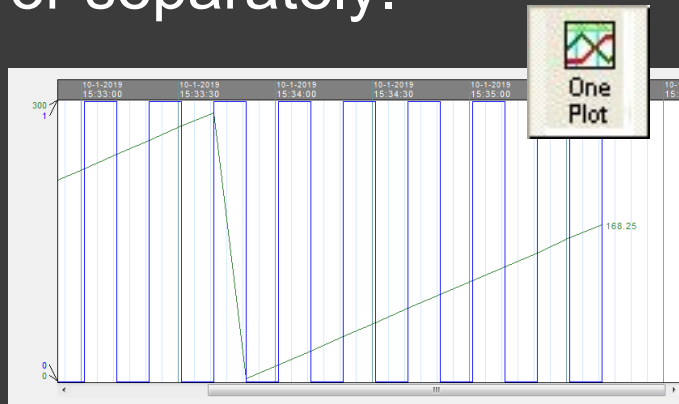
Click on the plot to make a permanent “timestamp” marking a plot location.

Navigation Plot shows a birds-eye view of all data collected.

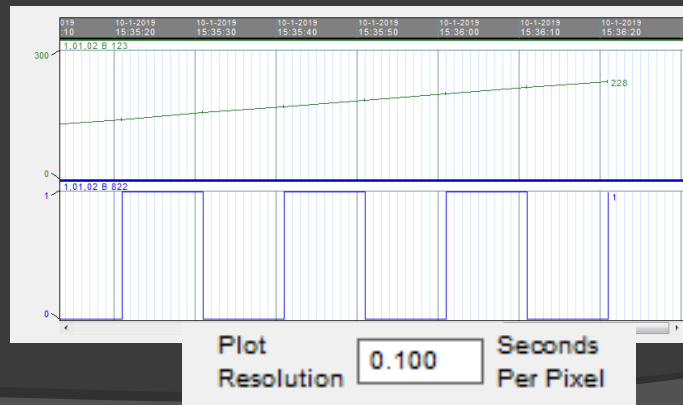


2.6.5.2 Watch Window highlights: Split Plot & Time Scale

Multiple plots in a group can be displayed overlapped or separately.

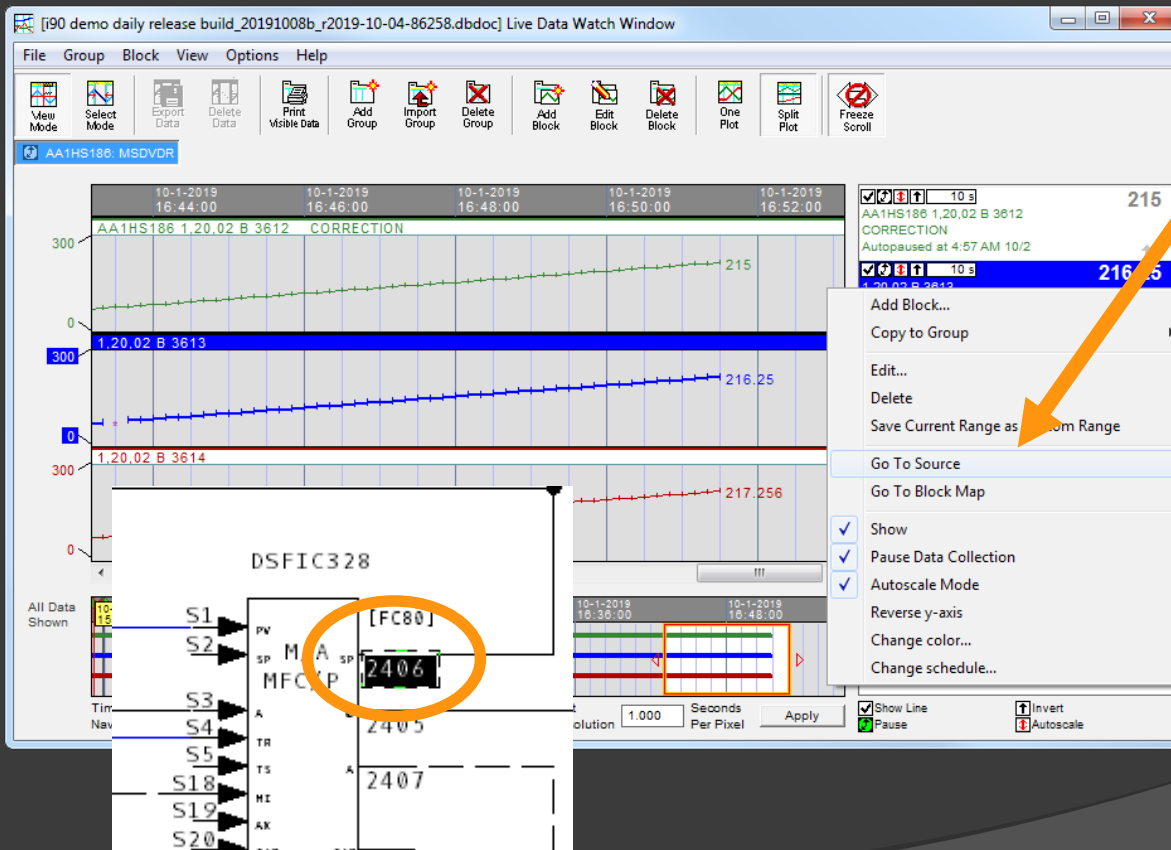


Set the time-scale to zoom in or out on the data.



2.6.5.3 Watch Window highlights: Go To Source, Go To Block Map

You can jump directly to a block source or block map from the Watch Window.



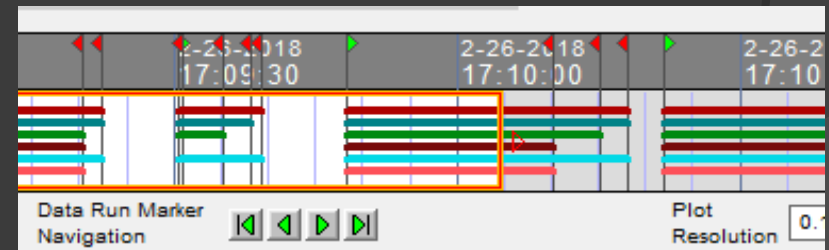
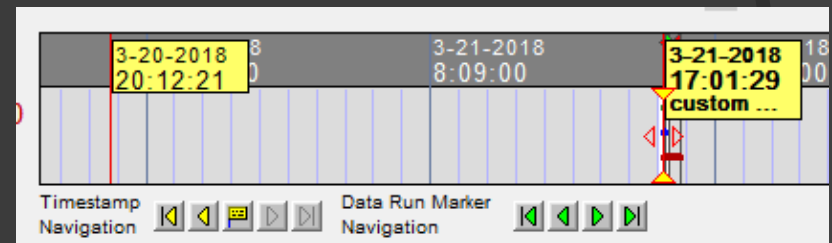
Right-click on a Watch Window block and choose **Go To Source**.

The block source in the configuration is displayed.

2.6.6 Navigating plot data

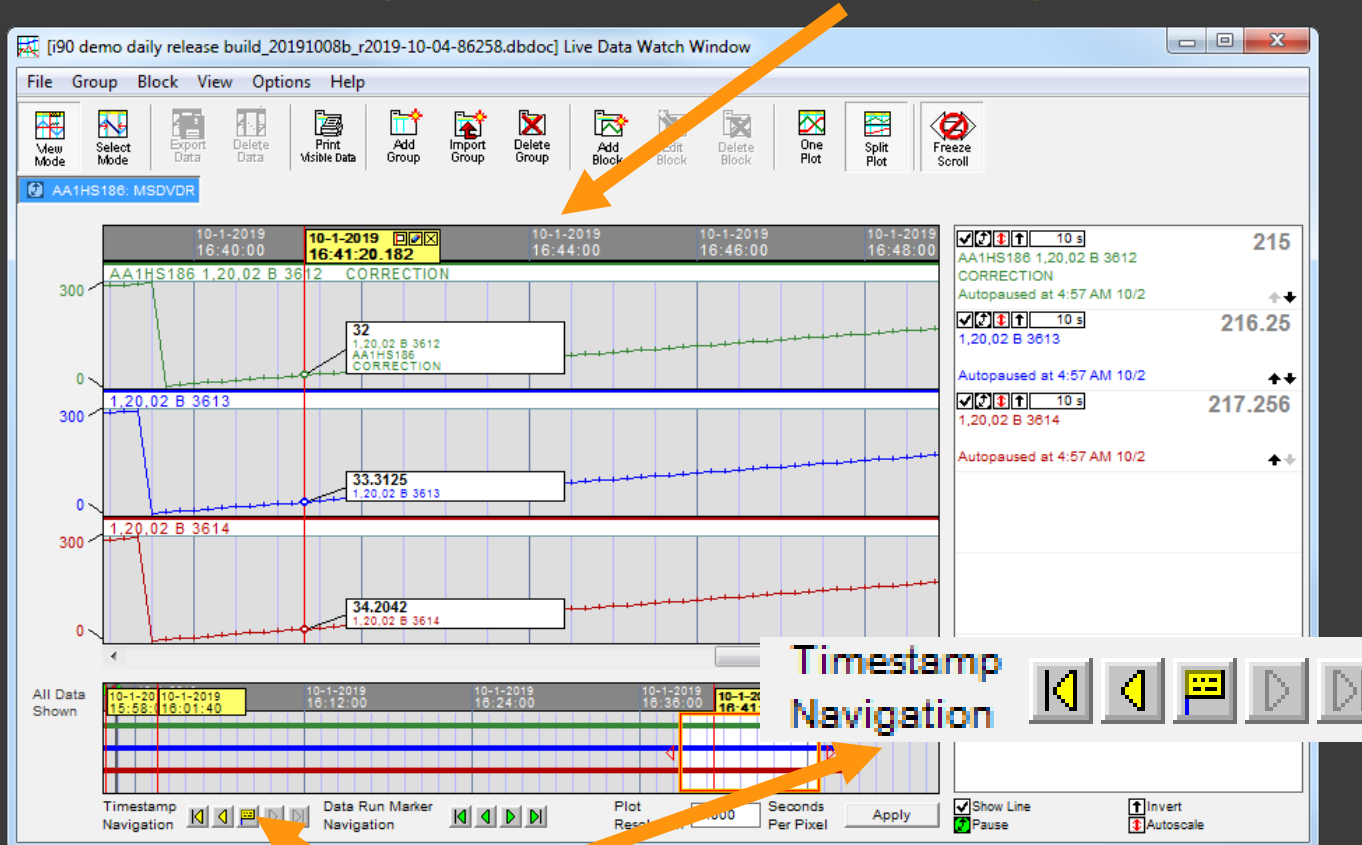
There are two shortcut ways to navigate your Watch Window data.

- Create timestamps and step through them (or jump directly to any timestamp)
- Step through data runs



2.6.6.1 Navigating with timestamps

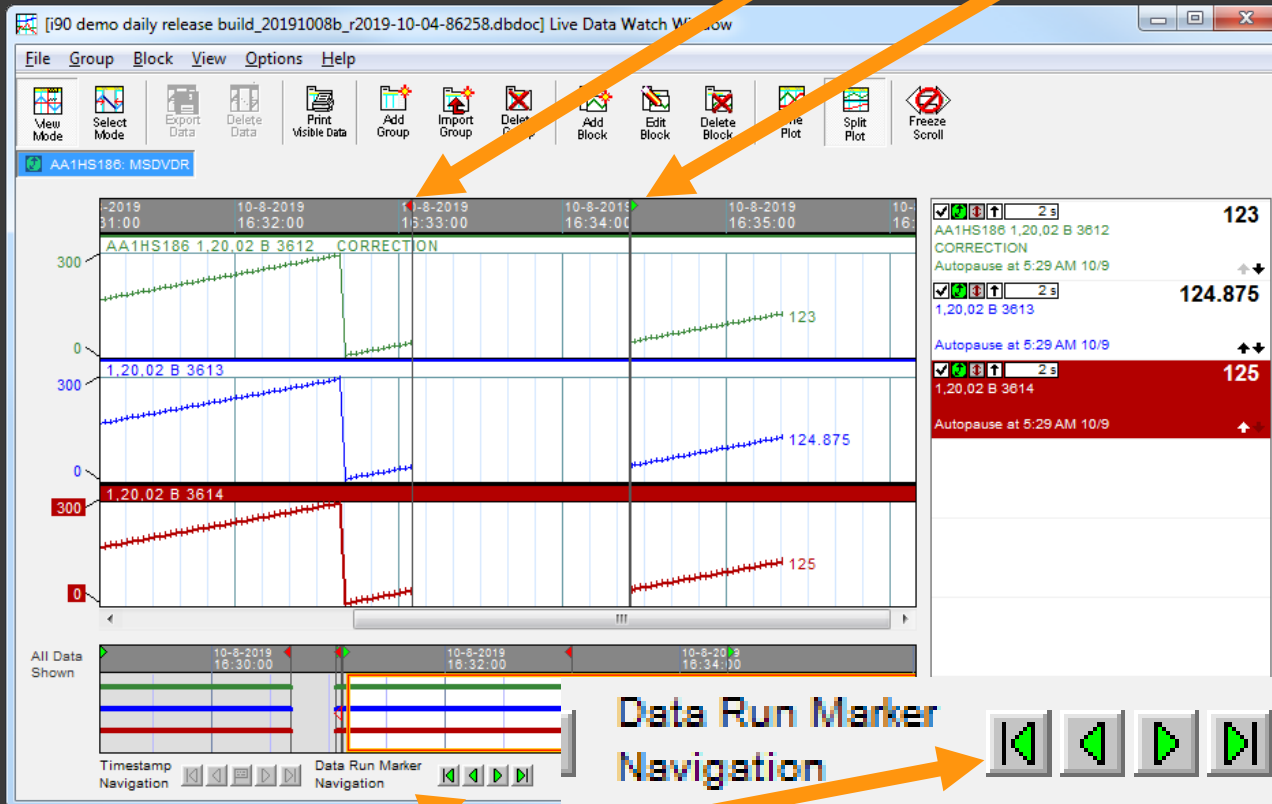
Click on the plot to create **timestamps**.



Use these buttons to step through timestamps, and jump to specific locations in your data.

2.6.6.2 Jumping between data runs

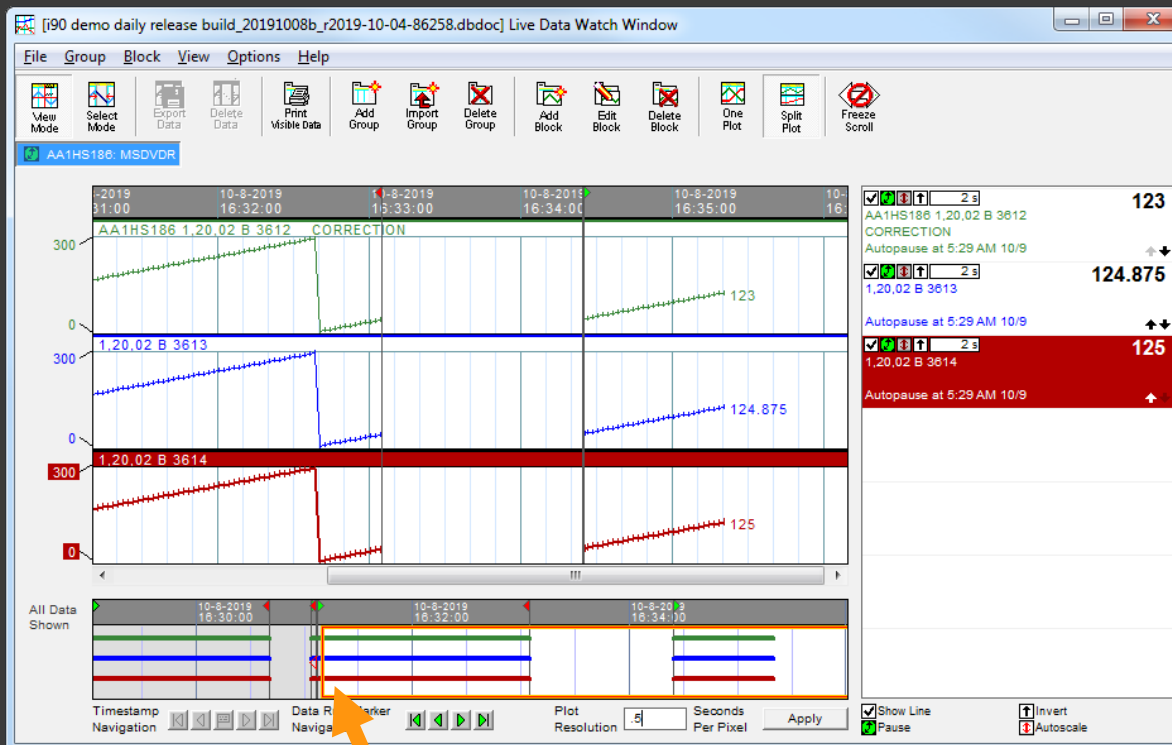
Automatic markers flag the **start** and **end** of each data run.



Use these buttons to **jump from data run to data run**, skipping over times when no data was collected.

2.6.6.3 Using the navigation plot

The navigation plot shows a birds-eye view of all the data that has been collected.



Drag the red frame to change the view in the detailed plot area above.

2.6.7 Managing Watch Window related bandwidth and disk usage

The Live Data Status Bar helps you to monitor how your system is being used



[Send/s:3.00 Recv/s:3.39] Data Files [294KB] 

The image shows a horizontal status bar with a white background and black text. It contains three main sections: '[Send/s:3.00 Recv/s:3.39]', 'Data Files', and '[294KB]'. To the right of the text is a small icon of a server rack. Three orange arrows point from the text below to the corresponding parts of the status bar.

Outgoing data requests per second

Incoming responses per second

Total of all watch window data on disk

2.6.7.1 Managing bandwidth

- CIU is limited to about 20 data fetches per second.
- Multiple Hyperviews share this bandwidth.
- Be aware of your bandwidth use.

Watch **Send/s** and **Recv/s**.

```
[Send/s:3.00 Recv/s:2.39] Data Files [405KB]
```



If $\text{Send/s} > \text{Recv/s}$, reduce data load.

2.6.7.1 Managing bandwidth (cont'd)

How to reduce data load:

- Pause data collection for a group or block by clicking on clock icon.



Collecting



Paused


- Reduce requests from main browser window by turning off live data, or switching to Snapshot mode.



Snapshot


- Make sure the Watch Window blocks are not updating more often than needed. Increase the update interval for groups or blocks.



| | |
|---|---------|
| ✓    <input type="text" value="10 s"/> | 209 |
| AA1HS186 1,20,02 B 3612 | |
| CORRECTION | |
| Autopause at 4:57 AM 10/2 | ↕ |
| ✓    <input type="text" value="10 s"/> | 210.25 |
| 1,20,02 B 3613 | |
| Autopause at 4:57 AM 10/2 | ↕ |
| ✓    <input type="text" value="10 s"/> | 211.258 |
| 1,20,02 B 3614 | |
| Autopause at 4:57 AM 10/2 | ↕ |

2.6.7.2 Managing disk usage

[Send/s:3.00 Recv/s:3.39] Data Files [294KB] 

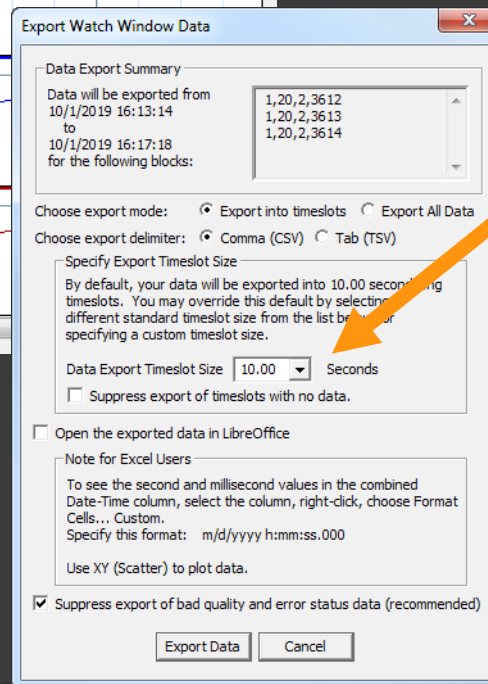
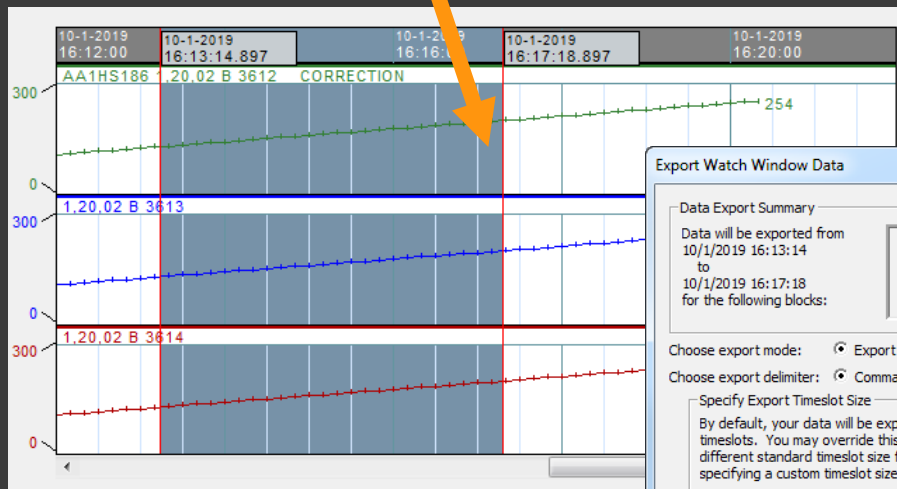
- Monitor **Data Files** 
- Avoid collecting data unnecessarily – remember, the Watch Window is collecting data even when it is not open.
- If necessary, move or delete data files directly. The *Managing Live Data Load* section later in this presentation will explain how to do this.

2.6.8 Selecting and exporting data

Press **Select Mode**, then drag the mouse to select data.



You can export the selected data, and import it into a spreadsheet.

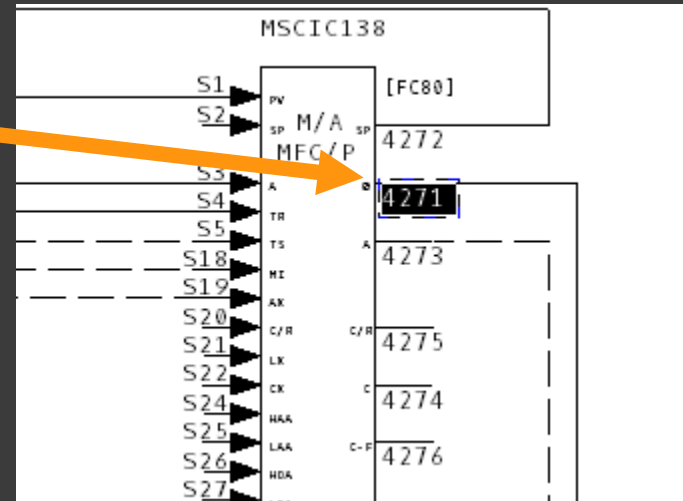
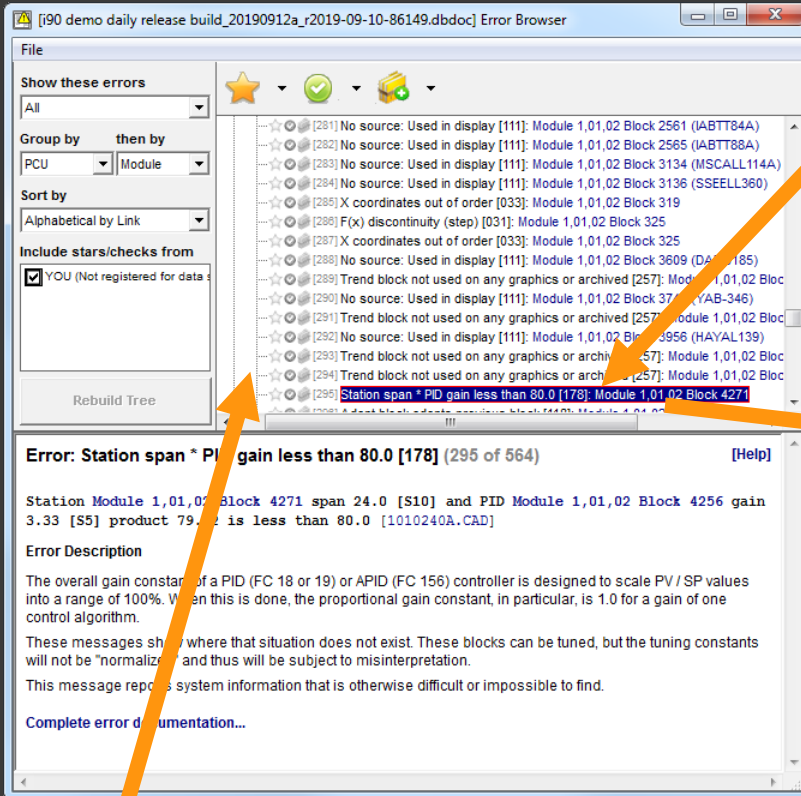


Specify an export timeslot size.

Data is saved in a CSV file, one datapoint per timeslot.

2.7 The Error Browser

Click on an error to display it in the Hyperview browser




All errors shown in tree

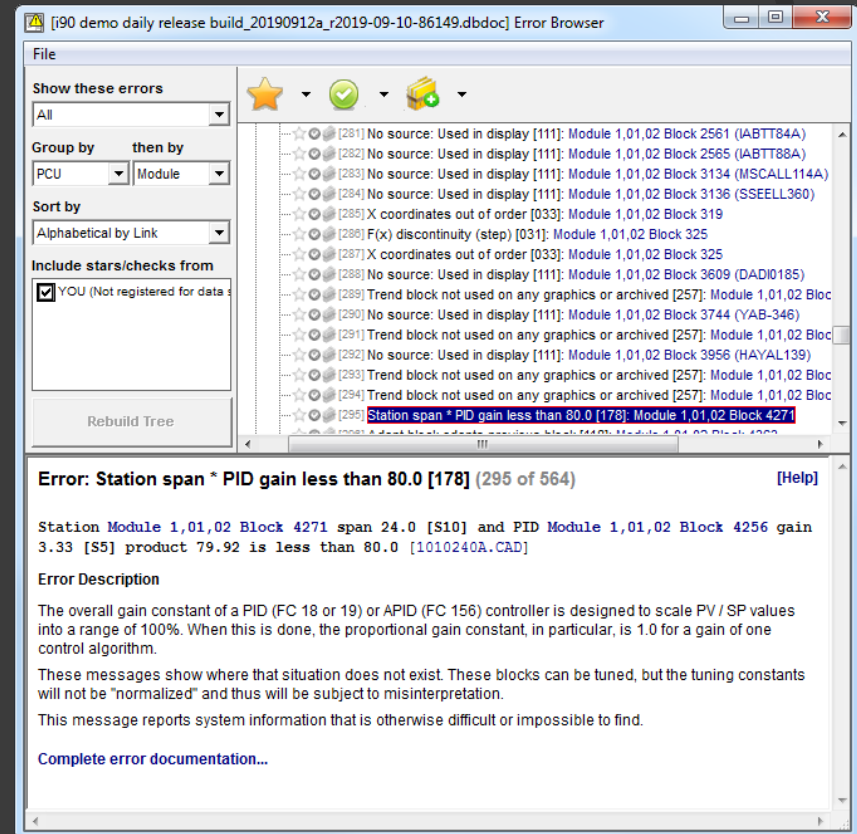
2.7.1 Error Browser Overview

- Errors are built into the project
- Errors displayed in special browser in Hyperview
- Group, filter, sort errors in useful ways
- Mark errors for special attention (add star)
- Review errors (add check) and indicate they have been seen
- Share error stars and checks with other users
- Hide errors that don't need attention

2.7.2 Opening the Error Browser




To open the Error Browser:

- Press the  button on the toolbar
- Press **E**
- Select **View | Error Browser**



2.7.3 Marking Errors

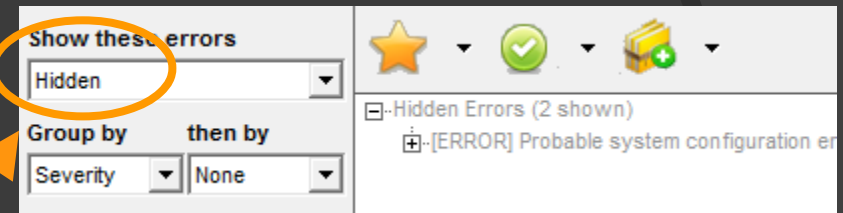
To manage errors, mark them. Then show only those errors you have marked.

-  Indicates that an error requires attention
-  Indicates that an error has been reviewed
-  Indicates that an error can be hidden

2.7.4 Filtering Errors

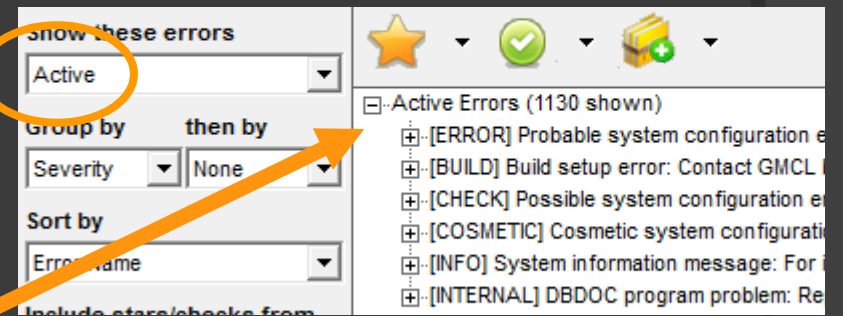
To manage errors, mark them. Then show only those errors you have marked.

Show only **Hidden** errors



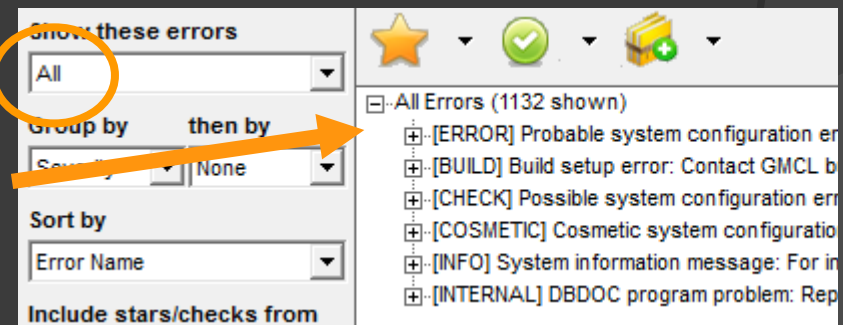
The screenshot shows the 'Show these errors' dropdown menu set to 'Hidden'. The 'Group by' dropdown is set to 'Severity' and the 'then by' dropdown is set to 'None'. The error list on the right shows 'Hidden Errors (2 shown)' with one error entry: '[ERROR] Probable system configuration error'.

Show only **Active** (not hidden) errors



The screenshot shows the 'Show these errors' dropdown menu set to 'Active'. The 'Group by' dropdown is set to 'Severity' and the 'then by' dropdown is set to 'None'. The 'Sort by' dropdown is set to 'Error Name'. The error list on the right shows 'Active Errors (1130 shown)' with several error entries including '[ERROR] Probable system configuration error', '[BUILD] Build setup error: Contact GMCL', '[CHECK] Possible system configuration error', '[COSMETIC] Cosmetic system configuration error', '[INFO] System information message: For', and '[INTERNAL] DBDOC program problem: Rep'.

Show **all** errors



The screenshot shows the 'Show these errors' dropdown menu set to 'All'. The 'Group by' dropdown is set to 'Severity' and the 'then by' dropdown is set to 'None'. The 'Sort by' dropdown is set to 'Error Name'. The error list on the right shows 'All Errors (1132 shown)' with the same error entries as the 'Active' view.

2.7.5 Grouping Errors

To manage errors, mark them. Then show only those errors you have marked.

Errors grouped by their severity, and then by error name

The screenshot shows the 'Show these errors' panel on the left. The 'Group by' dropdown is set to 'Severity' and the 'then by' dropdown is set to 'Error Name'. An orange oval highlights these two dropdowns, with an arrow pointing to the error list on the right. The error list shows a tree view where errors are grouped by severity (e.g., 'All Errors (1132 shown)', '[ERROR] Probable system configuration error: Evaluate - h...') and then by error name (e.g., 'APID old algorithm and inhibit inputs [087] (2 shown)', 'Displayed tag has no source - module not built [266] (7...)', 'Duplicate tag in database [103] (1 shown)', 'F(x) uses large values and may not clamp output [034...').

Errors grouped by which subsystem they are associated with

The screenshot shows the 'Show these errors' panel on the left. The 'Group by' dropdown is set to 'System' and the 'then by' dropdown is set to 'None'. An orange oval highlights these two dropdowns, with an arrow pointing to the error list on the right. The error list shows a tree view where errors are grouped by subsystem (e.g., 'All Errors (1098 shown)', 'Configuration (217 shown)', 'Graphics (870 shown)', 'Database (10 shown)') and then by error name (e.g., 'Duplicate tag in database [103]: B1REMCON...', 'Tag renames block [144]: Module 1,01,02 BL...', 'Tag renames block [144]: Module 1,20,02 BL...', 'Unknown tag type [259]: PIC3000', 'Unknown tag type [259]: FIC3001').

2.7.6 Sharing Errors

You can share error stars and checks with other users. Share the task of reviewing errors.

Include error information from other users

The screenshot shows a web interface for managing errors. On the left, there are several filter and sorting options:

- Show these errors:** A dropdown menu set to "Starred".
- Group by:** A dropdown menu set to "Severity".
- then by:** A dropdown menu set to "Error Name".
- Sort by:** A dropdown menu set to "File".
- include stars/checks from:** A section with three checked checkboxes: "YOU: deeklyn on CTHULHU", "John Smith (IEUser on IE10W)", and "Jane Jones (IEUser on IE11W)". This section is circled in orange.

On the right, there is a list of errors under the heading "Starred Errors (5 shown)". The first error is "[ERROR] Probable system configuration error: Evaluate - high". Below it is a sub-entry "F(x) uses large values and may not clamp output [034] (5)". This sub-entry has five items, each with a star icon, a checkmark icon, and a file icon:

- [1] Module 1,01,02 Block 1336 (star, checkmark, file)
- [2] Module 1,01,02 Block 1641 (star, checkmark, file)
- [3] Module 1,01,02 Block 6665 (star, checkmark, file)
- [4] Module 1,01,02 Block 2337 (star, checkmark, file)
- [5] Module 1,20,02 Block 1029 (star, checkmark, file)

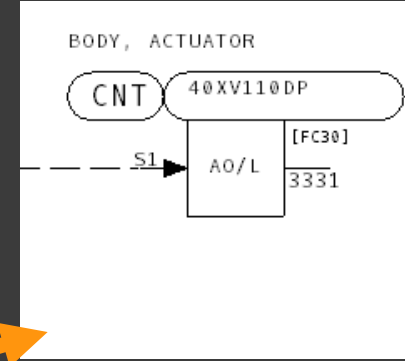
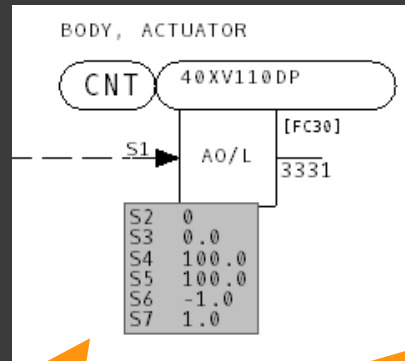
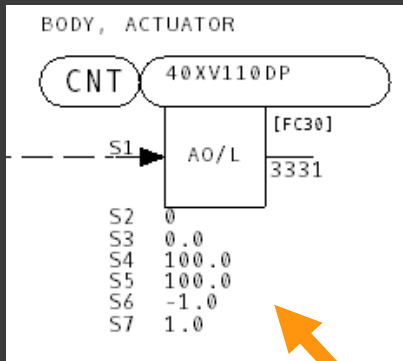
At the top of the error list, there are three icons: a yellow star, a green checkmark, and a yellow folder with a plus sign. An orange arrow points from the text "View and filter based on stars and checks added by other users" to the star and checkmark icons in the error list.

View and filter based on stars and checks added by other users

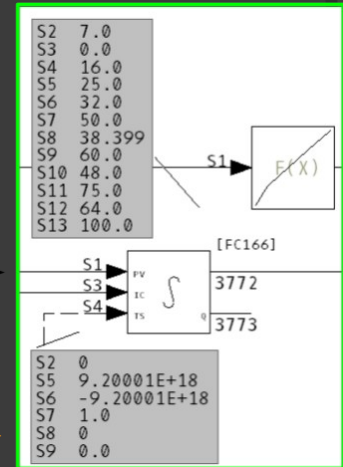
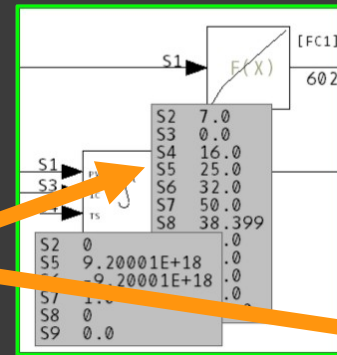
2.8 Customizing the display

- Many options for showing & hiding information
- View & hide specs, attributes, tag names
- Highlight search hits and hotspots
- Show thumbnails in graphical indexes

2.8.1.1 Specs on CAD and CLDs

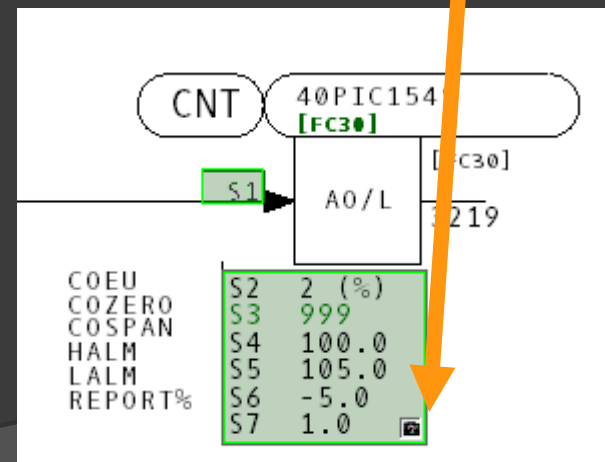
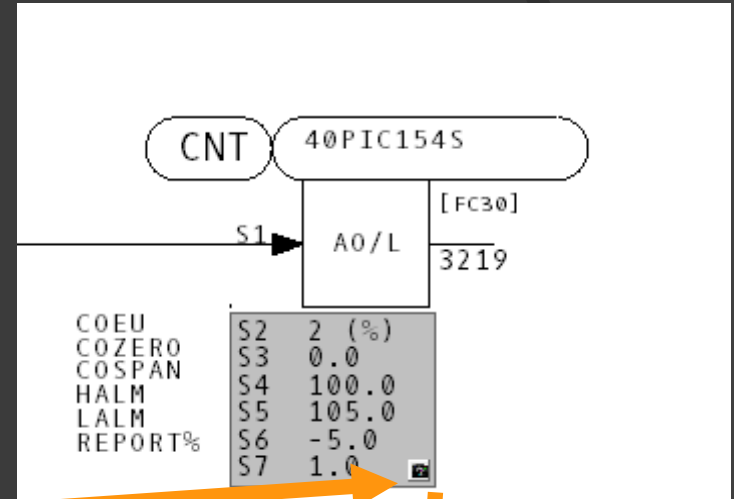


- Press S to show and hide specs
- The gray spec boxes can be moved around



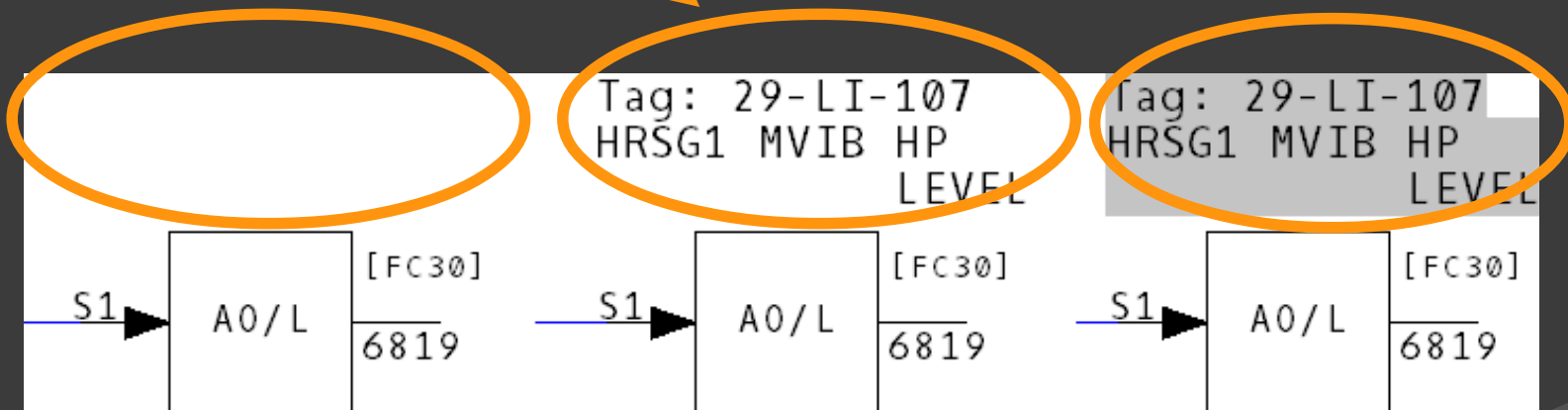
2.8.1.1.1 Live Specs on CAD and CLDs

- You can enable live specs by choosing **Enable Live Specs** from the **View Menu**
- Turn on live specs by clicking the camera under layered (gray) specs.
- Fetch live specs by clicking the camera icon again.



2.8.1.2 Attributes on CAD and CLDs

Toggle attributes on configuration diagrams by pressing **A**.



2.8.2.1 Highlighting search hits

Use **Highlight | Search Hits** to make it easy to see search results in the browser.

The screenshot shows a software window titled "[90 demo daily release build_20191008b_r2019-10-04-86258.dbdoc] Module 1,01,02: 1010203A.CAD". The window has a menu bar with "File", "Edit", "Bookmark", "Go", "Search", "View", "Highlight", "Options...", and "Help". Below the menu bar is a toolbar with various icons. The main content area is divided into a "Table of Contents" on the left and a main workspace on the right. The "Table of Contents" lists various sections like "Da", "Tag", "190", "190", "Con", "Sy", "Fun", "Fun", "Und", "Mis", "Mis", "Man", "Exc", "Aut", "Aut", "PCU", "Gr", "Sam", "Fac", "Ope", "con", "FP support", "SODGSYM", "Conductor Symbols". The main workspace displays a technical drawing with various components labeled, including "YHTP306 VAPOR TURBINE BYPASS FLOW", "FTAT115 HP VAPOR HEADER PRESSURE", "FTAT121 HP VAPOR TURBINE INLET PRESSURE", and "FTAT181 HRSRG IP VAP HDR". A "Search Results" dialog box is open in the foreground, showing the search criteria "turbine (match exact phrase)" and "350 hits found in 143 topics; 143 of 143 shown". The dialog box contains a table with the following data:

| Topic Title | Loop | PCU | Module | Block | Group |
|------------------------------|------|-----|--------|-------|-----------------------------|
| Module 1,01,02 Block 6685 | 1 | 1 | 2 | 6685 | Block Indices, Module Indic |
| Module 1,01,02 Block 6694 | 1 | 1 | 2 | 6694 | Block Indices, Module Indic |
| Module 1,01,02 Block 6701 | 1 | 1 | 2 | 6701 | Block Indices, Module Indic |
| Module 1,01,02 Block 6714 | 1 | 1 | 2 | 6714 | Block Indices, Module Indic |
| Module 1,01,02 Block 6718 | 1 | 1 | 2 | 6718 | Block Indices, Module Indic |
| Module 1,01,02 Block 6719 | 1 | 1 | 2 | 6719 | Block Indices, Module Indic |
| Module 1,01,02 Block 6724 | 1 | 1 | 2 | 6724 | Block Indices, Module Indic |
| Module 1,01,02: 1010203A.CAD | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |
| Module 1,01,02: 1010206a.cad | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |
| Module 1,01,02: 1010207A.CAD | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |
| Module 1,01,02: 1010208A.CAD | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |
| Module 1,01,02: 1010209A.CAD | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |
| Module 1,01,02: 1010210A.CAD | 1 | 1 | 2 | | CAD/CLD Sheets, Module 1 |

The dialog box also has a "Keep Open" checkbox, "Go To", "Print", "Show All", "Close", and "Search Again" buttons. An orange arrow points from the selected row in the table to the "YHTP306 VAPOR TURBINE BYPASS FLOW" label in the main workspace. The status bar at the bottom shows "08-Oct-2019 4:38 PM", "11.1 Alpha r86258", "100.00%", "3435,3544", "Custom Settings [Send/s:1.50 Recv/s:1.50] Data Files [5.1M]".

2.8.2.2 Highlighting hotspots

Use **Highlight | Hotspots** to highlight all the hyperlinks on a page

Release Bundles
Table of Contents

Databases
Tag Index (All Databases)
I90demod Tag Database
I90DEMOT Trend Database
Console1 XDC Configuration

System Information
Function Codes
Function Codes by Number
Undefined Tags
Missing Graphics
Missing Symbols or Submodels
Management of Change Report
Exception Reported Values with Significant
AutoCAD Files with Tag Links
AutoCAD Color Table
PCU Interactions (Block Imports & Exports)

Graphics
Sample Conductor NT Graph
Faceplates Graphics
Operators Graphics
conductor support Conductor NT M1 S
FP support Conductor NT M2 S
SODGSYM Symbols
sodq\sym Symbols

Configuration

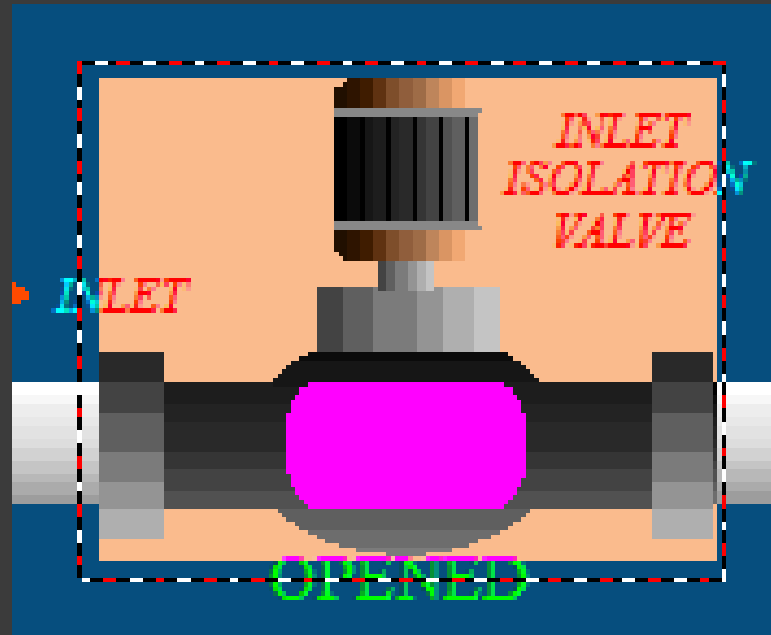
BLOWER No.1 CONTROL

INLET ISOLATION VALVE (OPENED)
BYPASS VALVE (CLOSED)
OUTLET ISOLATION VALVE
LUBE OIL PUMP (0 KW)
LUBE OIL FILTER DIFF. PRESSURE
LUBE OIL PRESSURE (0.0 KPa)
IGV (0%)
D.O. CONTROL (ON)
STOPPED LOCAL
Hours Run (0 HRS)
RESET REQUIRED
COOLANT FLOW
BLOWER COOLANT
INLET

ALARMS PRESENT NO
PRVNT STARTUP ALARM NO
STARTUP PERMITTED NO
STARTUP IN PROGRESS NO
SHUTDOWN ALARM NO
NORMAL / TEST MODE NO
LUBE OIL PUMP STOP REQUIRED NO
BLOWER IGV OUTPUT 0%
HEADER PRESSURE STAGE 1 0.0 KPa
TOTAL AIR FLOW STAGE 1 0.0 KMG/HR
BLOWER STARTUP ELAPSED TIME RT
BLOWER SHUTDOWN TIME REMAINING RT
WAITING FOR S/DOWN SEQ TO FINISH NO

2.8.2.3 Showing “Vegas Lights”

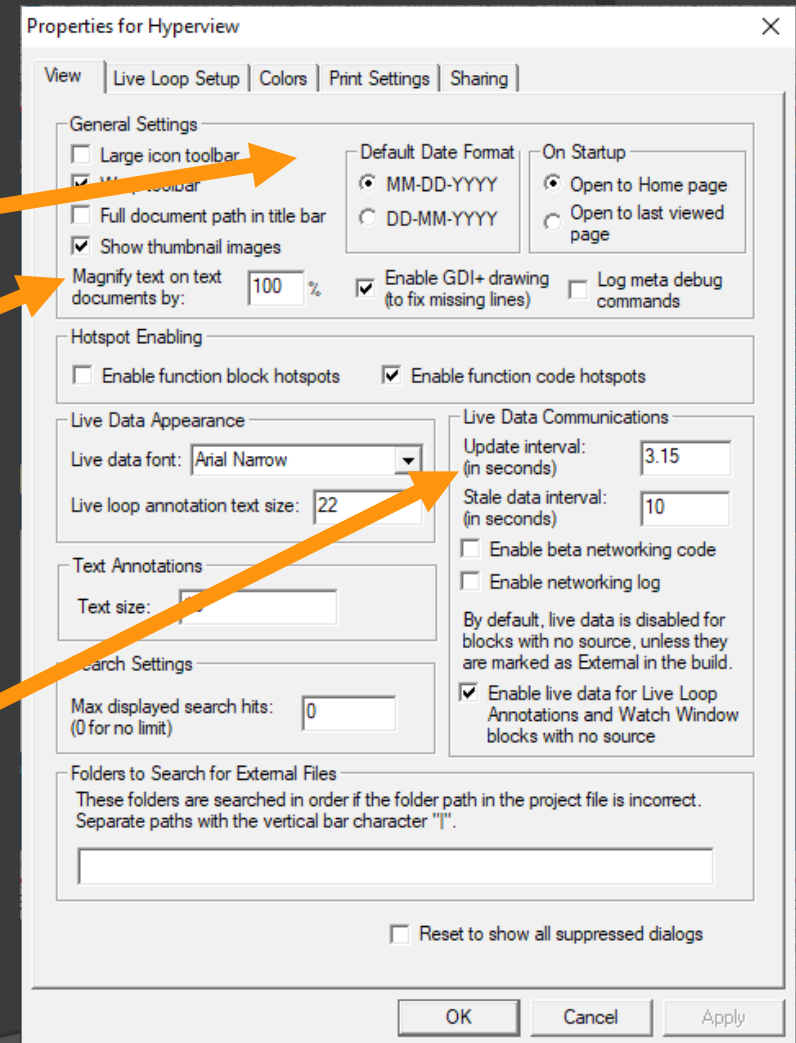
Vegas Lights are a colorful marquee that highlight selected hotspots. Enable them with **Highlight | Vegas Lights**.



2.8.3.1 View options

These settings are in **Options | View**. Some useful options:

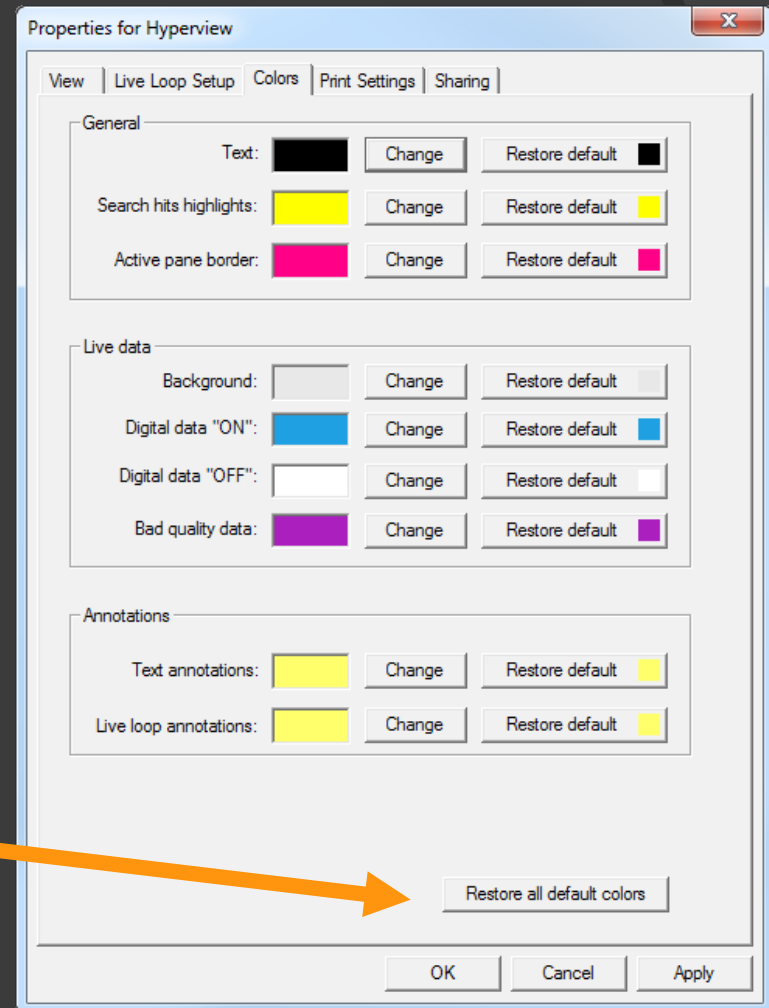
- **Default Date Format** – MMDD or DDMM
- **Show thumbnail image** – toggles display of thumbnails for graphical documents
- **Update interval** – defines how often live data on documents is updated



2.8.3.2 Color options

Use **Options | Color Scheme** to set the colors of various Hyperview features such as annotations and search hits.

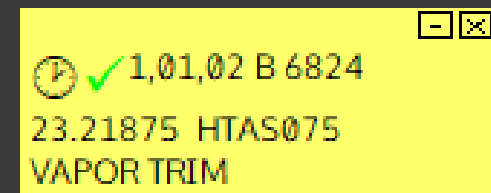
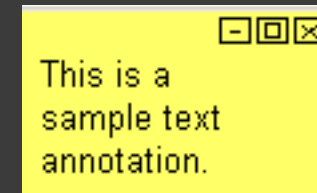
All colors can easily be set back to the default.



2.9 Text annotations: Making notes on documents

Annotations are like electronic sticky notes. There are two types:


- Text annotations (just text)
- Live loop annotations (live block, spec, or module status data)

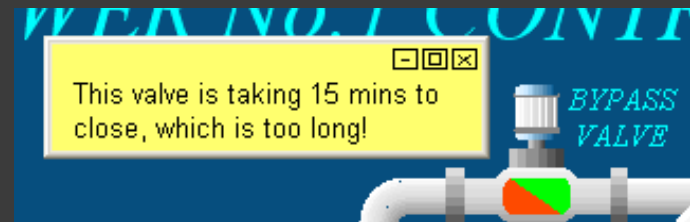


2.9.1 Text annotations

Annotations can be used as reminders, notes to colleagues, or as a way to communicate with consultants.

To create a text annotation:

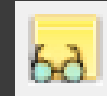
- Click on  in the toolbar
- Right-click on the document and choose **Text Annotation | Create**



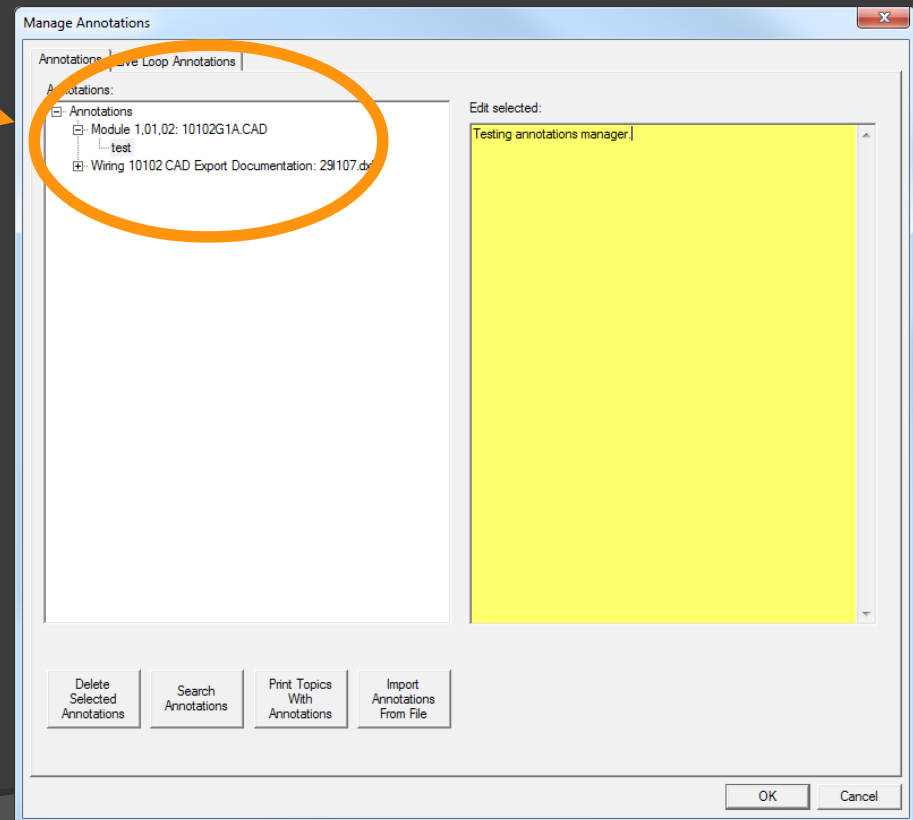
2.9.2 Managing annotations

In the **Annotation Manager**, you can see all the text annotations in your project at once.

To open the **Annotation Manager**, click

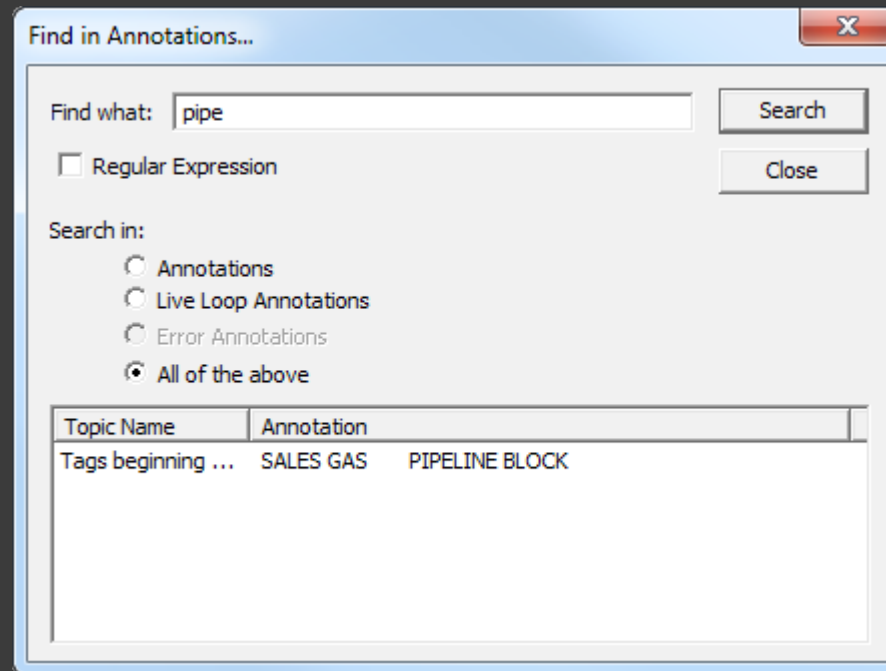


All the annotations are displayed here.



2.9.3 Searching annotations

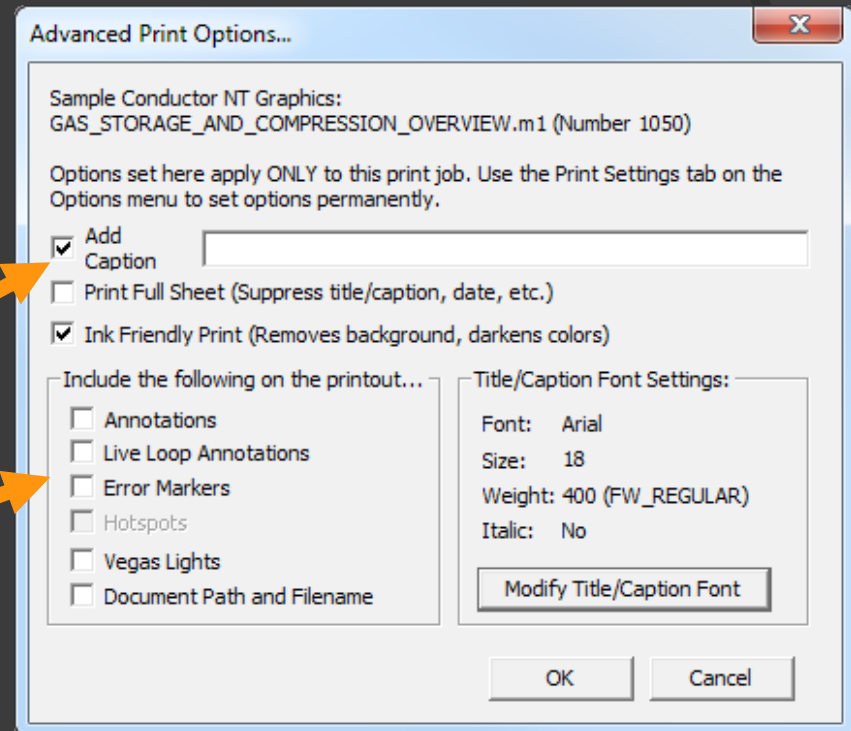
All the annotations in your project can be searched for particular text strings.



2.10.1.1 Advanced print options

These include the basic options shown earlier, plus other possibilities.

- Add a caption to the page.
- Choose whether to include various features on the printout.



2.10.1.2 Fast Print

If you print frequently, use **Fast Print**.

- Select **File | Fast Print** from the File menu
- Press **P** on the keyboard

The Print dialog choices from the first print will be applied to subsequent prints

2.10.2 Marking the current topic for later printing

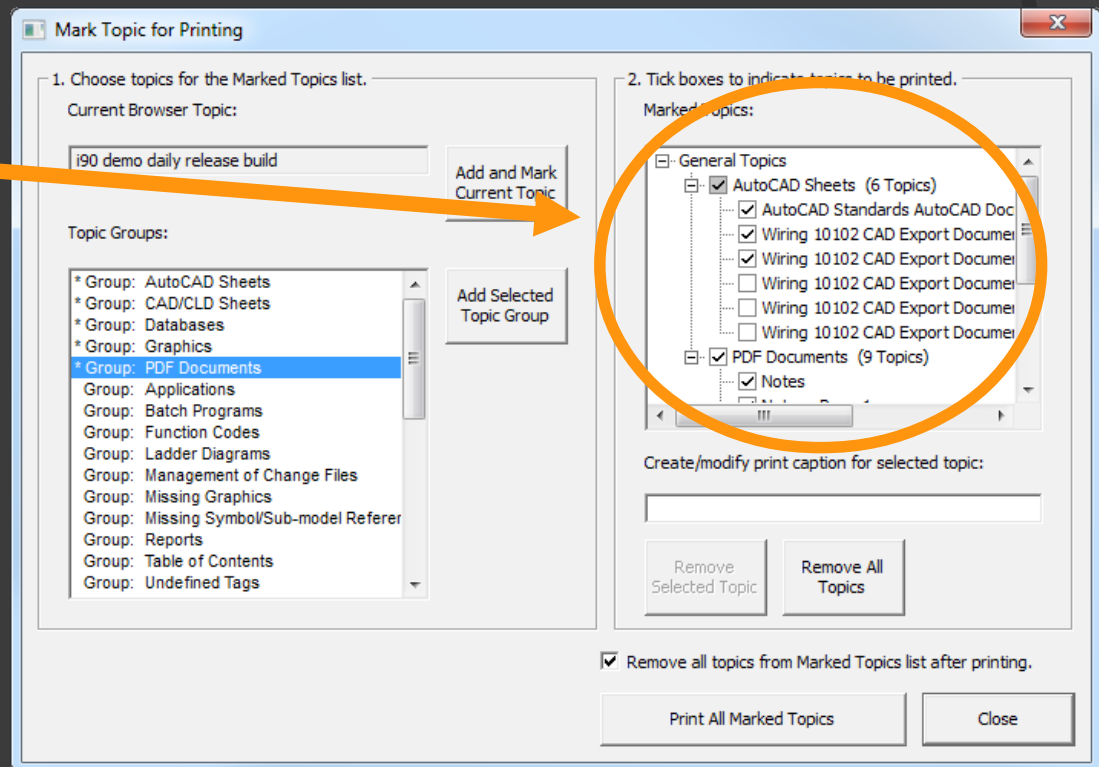
Using the right-click menu, you can mark a topic for later printing. This is convenient for printing many topics at once.

- Mark the current topic for printing with **Mark for Print | Mark <topic> for Printing**
- Over a block hotspot, mark the block's index for printing with **Mark for Print | Mark <block index> for Printing**
- Over a link hotspot, mark the linked topic for printing with **Mark for Print | Mark Linked Topic for Printing**

2.10.3 Using the Mark for Print dialog to print groups of topics

Later, you can print these marked topics from the **File | Mark Topic for Printing** dialog.

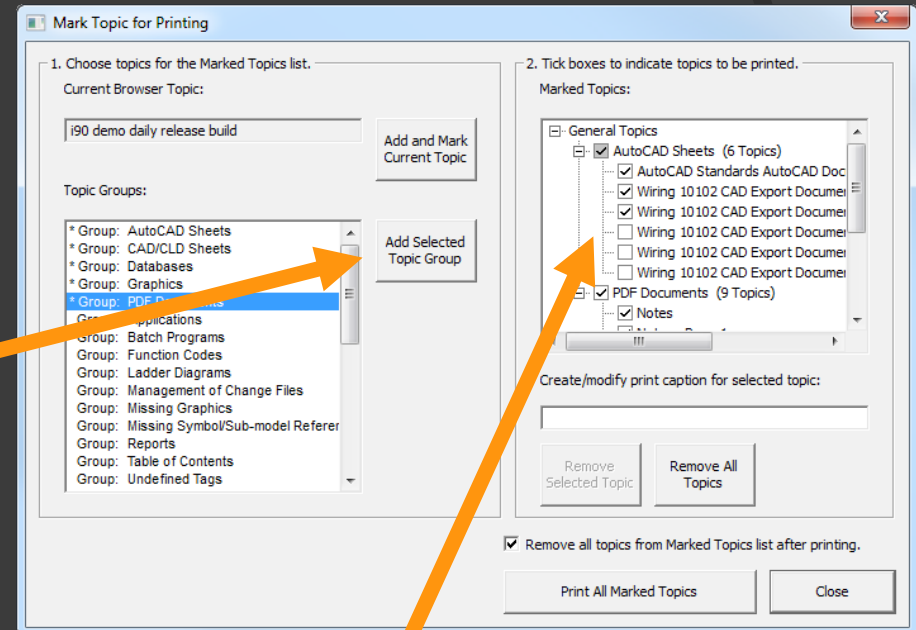
Marked topics are collected here. Some or all of them can be printed.



2.10.3.1 Marking a group of topics for printing

To select an entire category of topics for printing:

1. Select a group of topics from the **Groups** list.
2. Click **Add Selected Topic Group**.



The topics will be added to the tree in the **Marked Topics** area. Expand and uncheck any topics you do not wish to print.

2.11 Tools, reports and indexes

A variety of reports and indexes are built into the the project system snapshot.

In addition, Hyperview provides tools such as the Audit Window and Graphics Cross Reference Window.

PCU Report Page 1: 1,00 to 3,05

How to read this report:
 The PCU on the left is read first, then "E" or "I", then the PCU on the top.
 "E" means "PCU left exports to PCU top."
 "I" means "PCU left imports from PCU top."
 The number preceding "E" or "I" is the export or import count.

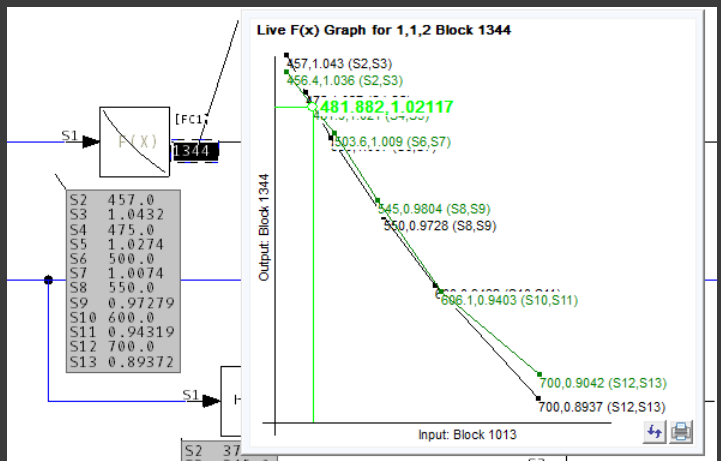
| | 1,00 | 2,01 | 2,02 | 2,05 | 3,01 | 3,02 | 3,03 | 3,04 | 3,05 |
|------|------|------|------|------|------|------|------|------|------|
| 1,00 | | | | | | | | | |
| 2,01 | | | | | | | | | |
| 2,02 | | 4I | 2E | 2I | 4E | | | | |
| 2,05 | | | | | 62I | 22E | 3I | 1E | 1I |
| 3,01 | | | | 23I | 57E | | | | |
| 3,02 | | 10I | | | | | | | |
| 3,03 | | | | | | | | | |
| 3,04 | | | | | | | | | |
| 3,05 | | | | | | | | | |
| 3,06 | | | | | | | | | |
| 3,10 | | | | | | | | | |
| 5,01 | | | | | | | | | |
| 5,02 | | | | | | | | | |
| 5,03 | | | | | | | | | |
| 5,04 | | | 9I | | | | | | |
| 5,05 | | | | | | | | | |
| 5,07 | | | | | | | | | |
| 5,08 | | | | | | | | | |
| 5,09 | | | | | | | | | |
| 6,50 | | | | | | | | | |
| 6,51 | | | 9I | | | | | | |
| 7,01 | | | | | | | | | |
| 7,01 | | | | | | | | | |
| 7,01 | | | | | | | | | |
| 7,01 | | | | | | | | | |

Interactions between PCU 2,02 and PCU 2,01

PCU 2,02 exports to PCU 2,01
 Exported Point Module 2,02,20 Block 9565
 Imported by Module 2,01,10 Block 4286
 Exported Point Module 2,02,20 Block 9567
 Imported by Module 2,01,10 Block 4285

PCU 2,02 imports from PCU 2,01
 Module 2,02,20 Block 5419 gets value from Module 2,01,20 Block 127
 Module 2,02,20 Block 951 gets value from Module 2,01,20 Block 177
 Module 2,02,10 Block 5519 gets value from Module 2,01,20 Block 36
 Module 2,02,20 Block 9542 gets value from Module 2,01,10 Block 4298

| 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 |
|------|------|-----|-----|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 3200 | 3211 | 322 | 322 | 3224 | 3225 | 3225 | 3227 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 335 | 337 | 338 | 339 |
| 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 |
| 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 |
| 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 |
| 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 |
| 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 |
| 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 |
| 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 |
| 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 |




Module 1,01,02: Block Map Reports
 Blocks with No Source in Configuration
 Blocks with No Source used in Graphics
 Blocks with No Source named in Database
 List of Unused Tags

Graphical Block Map
 Blocks 0-999
 Blocks 1000-1999
 Blocks 2000-2999
 Blocks 3000-3999
 Blocks 4000-4999
 Blocks 5000-5999
 Blocks 6000-6844

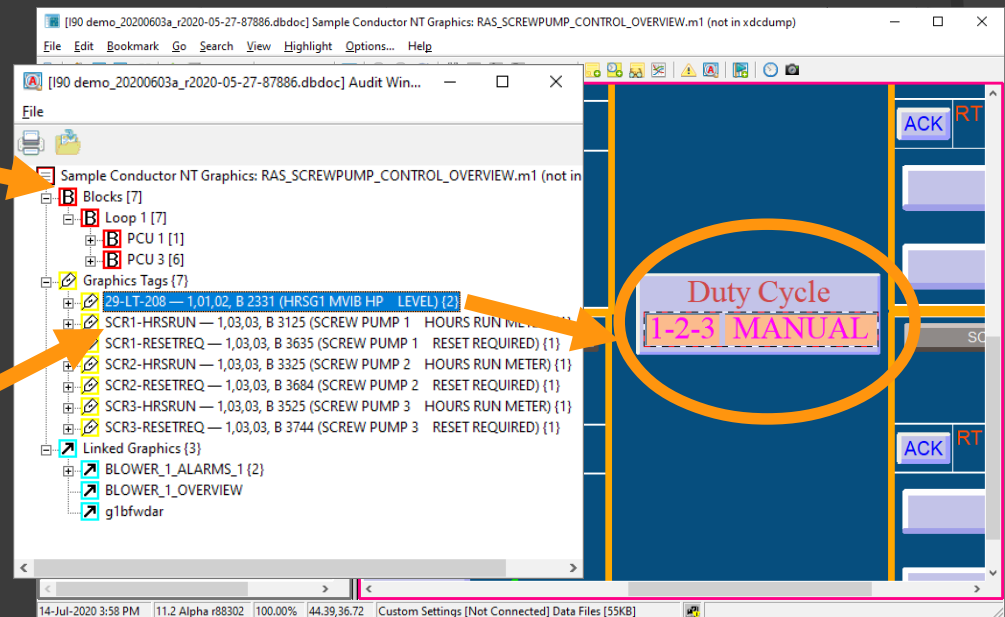
2.11.1 The Audit Window

The Audit Window shows at a glance all the resources used in a CAD/CLD or graphic.

- Open the Audit Window with **View | Audit Window**
- Press  on the toolbar

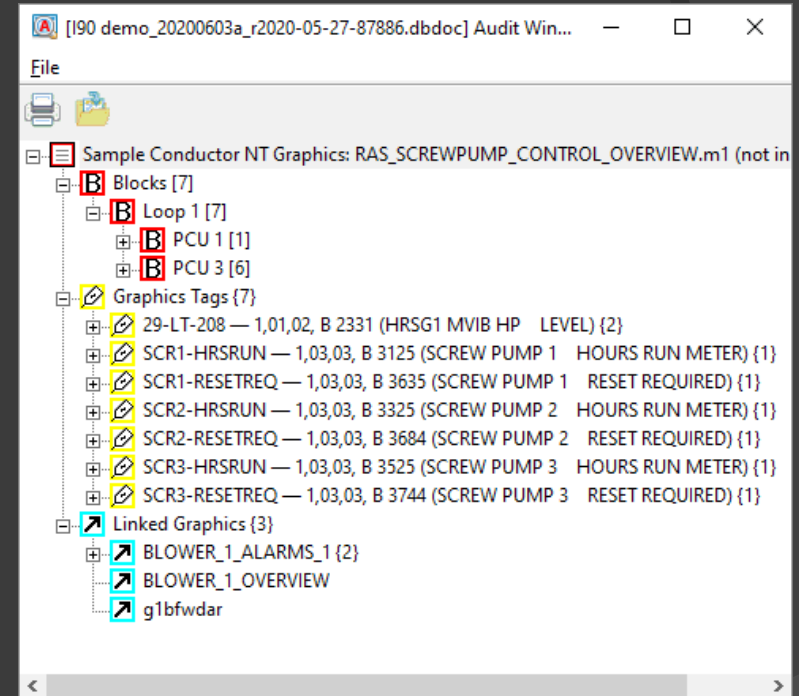
Lists the blocks, tags, input and output references and function codes on the graphic.

Click on any item to highlight it on the document.



2.11.1.1 Why use the Audit Window?

- Checklist for tags
- Check all places a block is used on the CAD/CLD or graphic
- Verify that a block is used consistently
- See the tags on an AutoCAD or MicroStation sheet
- On graphics, determine if the uses of a tag are spread across the page



2.11.2 PCU Report

Use the PCU Report to see what blocks are exported and imported between units.

To see the PCU Report, click on **PCUMap.txt** in the **Miscellaneous Indices** chapter in the main table of contents, then choose one of the **PCU Report** links.

Click on any entry in the table to see the exports and imports between two particular blocks.

PCU Report Page 1: 1,00 to 3,05
How to read this report:
The PCU on the left is read first, then "E" or "I", then the PCU on the top.
"E" means "PCU left exports to PCU top."
"I" means "PCU left imports from PCU top."
The number preceding "E" or "I" is the export or import count.

| | 1,00 | 2,01 | 2,02 | 2,05 | 3,01 | 3,02 | 3,03 | 3,04 | 3,05 |
|------|------|---------|---------|---------|----------------|-------|-------|--------|---------|
| 1,00 | | | | | | | | | |
| 2,01 | | | 2I 4E | | 5I 9E 1I | | | | |
| 2,02 | | 4I 2E | | 62I 22E | 3I 1E 1I | | | 1I | |
| 2,05 | | | 23I 57E | | | | | | |
| 3,01 | | 10I | 1I 3E | | | 5I 6E | 1I 3E | 2I 11E | 10I 7E |
| 3,02 | | | 1E | | 6I 5E | | 2I 6E | | 2E |
| 3,03 | | | | | 3I 1E 6I 2E | | | 1I 4E | 2I 1E |
| 3,04 | | | 1E | | 11I 2E 2I | | 4I 1E | | 10I 5E |
| 3,05 | | | | | 7I 10E 2I | | 1I 2E | 5I 10E | |
| 3,06 | | | | | 1I 4E 8I 6E | | | | |
| 3,10 | | | | | 1I | | 1I 5E | 13I 6E | 15I 12E |
| 5,01 | | | | | 1I | | | | |
| 5,02 | | | 1E | | | 1E | | | |
| 5,03 | | 9I 7E | | | | | | | |
| 5,04 | | | 2E | | | | | | |
| 5,05 | | 3E 2I | | | 1I 2E 1I | | | | |
| 5,07 | | | | | | | | | |
| 5,08 | | | 2E | | | | | | |
| 5,09 | | | 2E | | | | | | |
| 6,50 | | | | | | | 1I | 2I | 1I |
| 6,51 | | 9I | | | 4I | 2I | 1I | 1I | 1I |
| 7,01 | | | | | | | | | |
| 7,02 | | | | | | | | | |
| 7,05 | | 15I 12E | | | 13I 10E 11I 2E | | | 1I | |
| 7,07 | | 4I 1E | | | | | | | |
| 7,08 | | | | | | | | | |

Interactions between PCU 2,02 and PCU 2,01
PCU 2,02 exports to PCU 2,01
Exported Point Module 2,02,20 Block 9565
Imported by Module 2,01,10 Block 4286
Exported Point Module 2,02,20 Block 9567
Imported by Module 2,01,10 Block 4285

PCU 2,02 imports from PCU 2,01
Module 2,02,20 Block 5419 gets value from Module 2,01,20 Block 127
Module 2,02,20 Block 951 gets value from Module 2,01,20 Block 177
Module 2,02,10 Block 5519 gets value from Module 2,01,20 Block 36
Module 2,02,20 Block 9542 gets value from Module 2,01,10 Block 4298

2.11.3 Graphical Block Map

The Graphical Block Map is a visual representation of how each block in the system is used.

To view the Graphical Block Map:

➤ Right-click on a graphic or CAD/CLD and choose **Go To Block Map**

➤ Choose the **Block Map** link at the start of any Module chapter in the table of contents

Module 1.01.02: Block Map

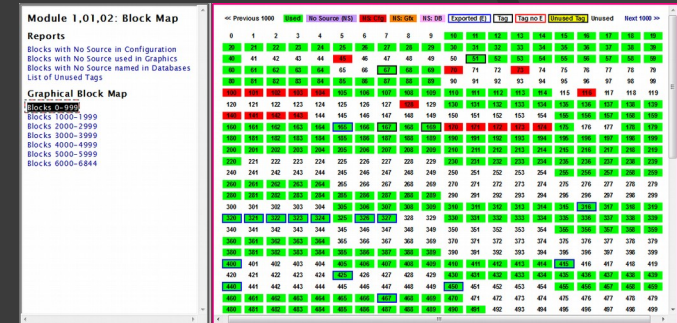
Reports
Blocks with No Source in Configuration
Blocks with No Source used in Graphics
Blocks with No Source named in Databases
List of Unused Tags

Graphical Block Map
Blocks 0-999
Blocks 1000-1999
Blocks 2000-2999
Blocks 3000-3999
Blocks 4000-4999
Blocks 5000-5999
Blocks 6000-6844

| << Previous 1000 | | | | | | | | | | | | | | | | Used | No Source (NS) | NS: Cfg | NS: Gfx | NS: DB | Exported (E) | Tag | Tag no E | Unused Tag | Unused | Next 1000 >> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|------|----------------|---------|---------|--------|--------------|-----|----------|------------|--------|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 |

2.11.3.1 Graphical Block Map: color coding

The Graphical Block Map shows how each block in the system is used.



- **Used** Used
- **NS: Cfg** Used in the configuration, but no source (or source not built)
- **NS: Gfx** Used on a graphic, but not sourced in the configuration
- **NS: DB** Referenced in a database, but not sourced in the configuration
- **No Source (NS)** Has no source, but is sourced somewhere in the system
- **Exported (E)** Has no source, but is sourced somewhere in the system
- **Tag no E** Exported, but not tagged (blue border)
- **Tag** Tagged but not exception reported.
- **Unused Tag** Tagged and exported (black border)
- **Unused** Block is tagged, but not used
- Completely unused

1041

The Perfect Block:
tagged, exported, used

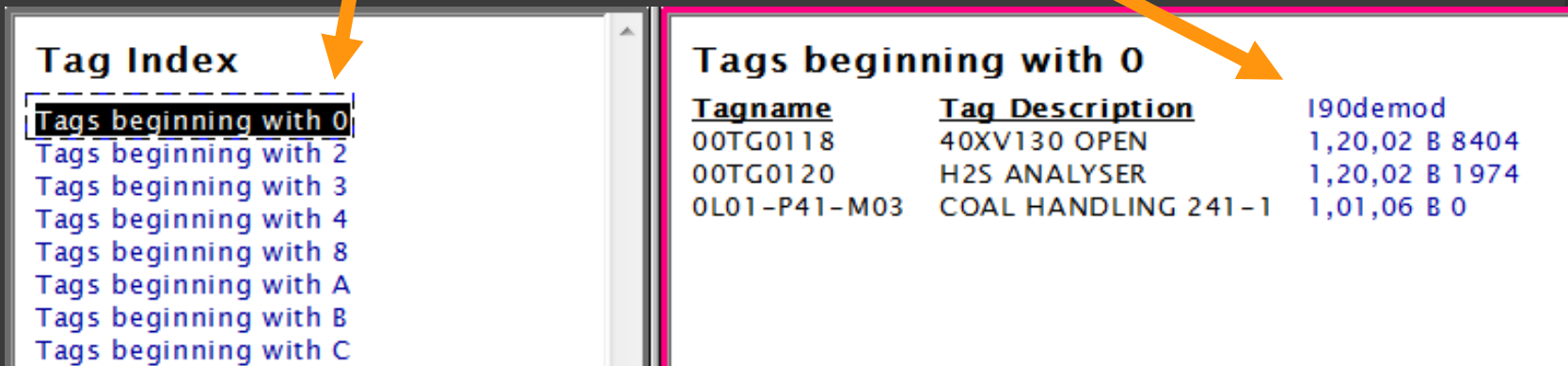
2.11.4 Tag Index

The Tag Index is an index of all the tags in your databases.

To view the Tag Index, select **Tag Index** in the Databases chapter of the table of contents.

Alphabetical
index of tags

The block associated with each tag
in each database is shown.



The screenshot shows a software interface with two panels. The left panel, titled "Tag Index", contains a list of categories: "Tags beginning with 0", "Tags beginning with 2", "Tags beginning with 3", "Tags beginning with 4", "Tags beginning with 8", "Tags beginning with A", "Tags beginning with B", and "Tags beginning with C". The "Tags beginning with 0" category is selected and highlighted with a dashed border. An orange arrow points from the text "Alphabetical index of tags" to this list. The right panel, titled "Tags beginning with 0", displays a table of tag data. An orange arrow points from the text "The block associated with each tag in each database is shown." to this table.

| <u>Tagname</u> | <u>Tag Description</u> | |
|----------------|------------------------|----------------------------|
| 00TG0118 | 40XV130 OPEN | 190demod 1,20,02 B 8404 |
| 00TG0120 | H2S ANALYSER | 1,20,02 B 1974 |
| 0L01-P41-M03 | COAL HANDLING 241-1 | 1,01,06 B 0 |

2.11.4.1 Using the Tag Index: absent and inconsistent tags

Each column lists
the block for the tag
in that database.

ABSENT indicates a
tag is not used in
this database

Tags beginning with 53-3

| <u>Tagname</u> | <u>Tag Description</u> | PrimHarmServ | TD_CHEMTG_CH | TD_KILN_KILN |
|-----------------|--------------------------------|---------------|--------------|--------------|
| ++ 53-30 | | 5,08,10 B 334 | ABSENT | ABSENT |
| 53-30 RUN | 53-30 RUN TIMER | ABSENT | ABSENT | ABSENT |
| 53-30-RUN | 53-30 RUN TIMER | 5,08,10 B 943 | ABSENT | ABSENT |
| 53-31 | HWH GEOTHERMAL COND. PUMP NO.1 | 5,08,10 B 364 | ABSENT | ABSENT |
| 53-32 | GEO DA FEEDWATER PUMP #1 | 5,08,10 B 354 | ABSENT | ABSENT |
| 53-32 RUN | 53-32 RUN TIMER | ABSENT | ABSENT | ABSENT |

To find inconsistent tags,
do a text search for ++

++<tag name> indicates an
inconsistent tag. The tag is
associated with different blocks in
different databases. This could be
a concern.

2.11.5 Graphics Cross-Reference Window

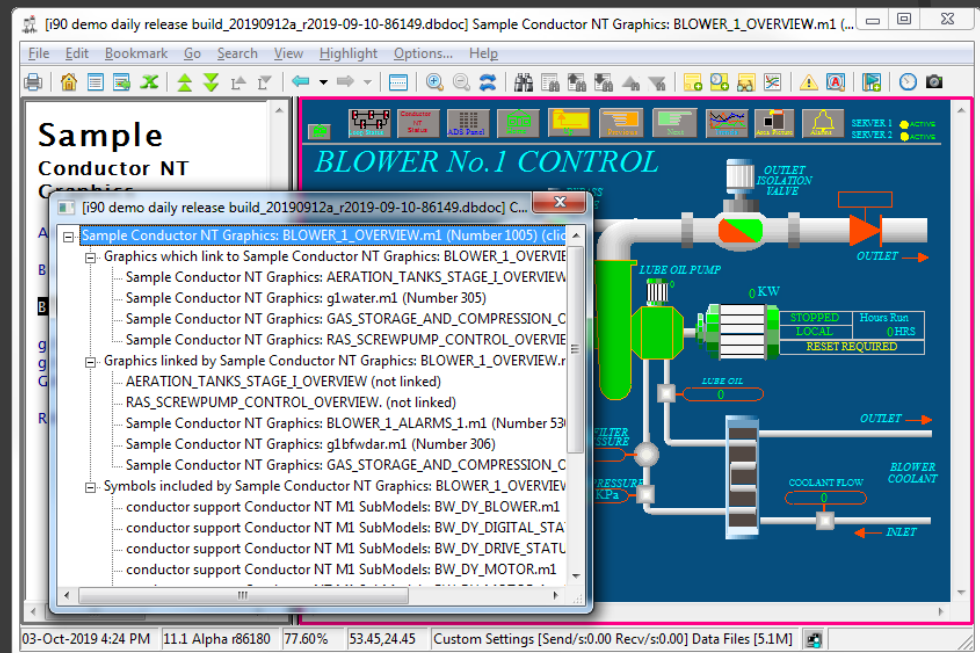
The Graphics Cross-Reference Window shows all the graphics that link to and from a given graphic, plus included symbols.

To show the Graphics Cross-Reference Window:

➤ Open the Graphics Cross-Reference Window with **Go | Display Cross References**

➤ Press  on the toolbar

➤ Type **X**



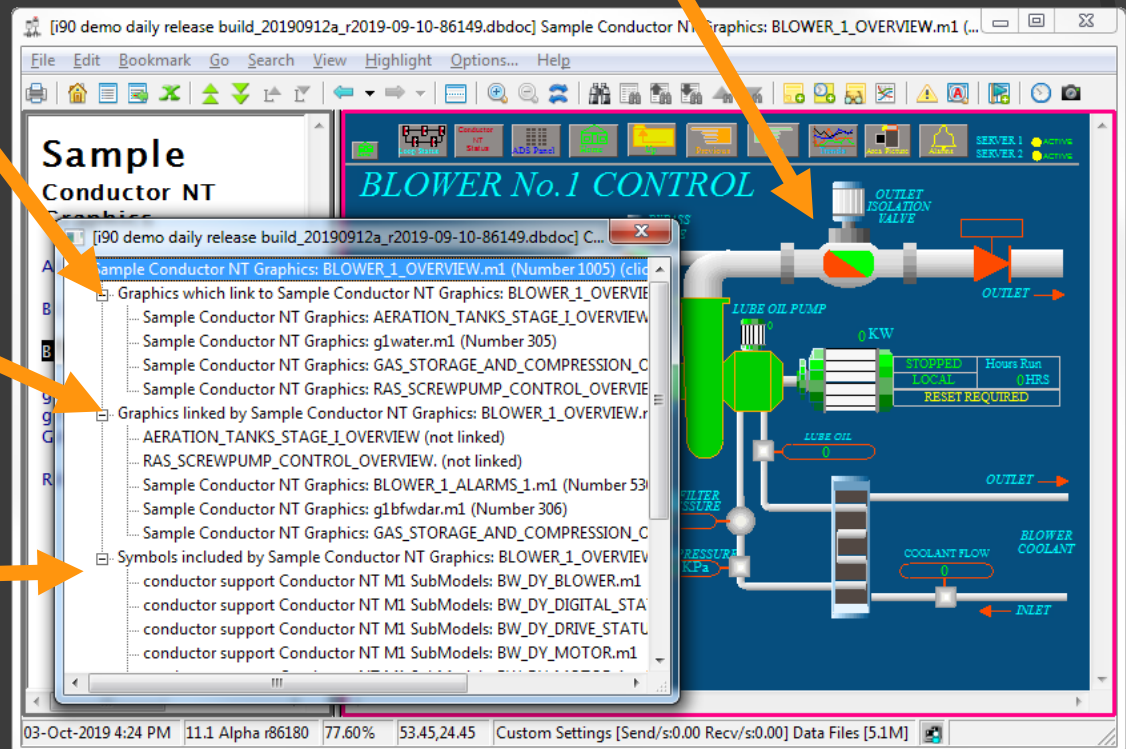
2.11.5 Graphics Cross-Reference Window (cont'd)

Click on any item in the Graphics Cross-Reference Window to display it in the browser.

Graphics that link to the one shown

Graphics that the shown graphic links to

Symbols included on this graphic



2.11.5.1 Using cross-references to find symbols no longer used by your graphics

- Step through your symbol chapters
- Bring up the cross-references for each symbol
- Symbols that are never used will have a blank cross-reference page

2.11.5.2 Using cross-references to locate graphics linked to but not built

- Step through your graphics chapters
- Bring up the cross-references for each graphic
- Entries followed by **(not linked)** in the Cross-Reference Index indicate that DBDOC was unable to build the graphics called for; either the build was incomplete or some of the graphics are trying to link to graphics that no longer exist

2.11.6 Function Descriptions and Uses

The **Function Code Descriptions and Uses** index lists and links every instance of each function code in your system.

To view it click on **Function Codes** in the table of contents.


| | | | |
|---------|---------|------------|----------------------------------|
| < | [FC11] | USES (1) | Low Select |
| > | [FC10] | USES (2) | High Select |
| A | [FC2] | USES (110) | Manual Set Constant (Signal Gene |
| A-INT | [FC52] | USES (40) | Manual Set Integer |
| ADAPT | [FC24] | USES (45) | Adapt |
| AI/B | [FC25] | USES (56) | Analog Input (Periodic Sample) |
| AI/L | [FC26] | USES (3) | Analog Input/Loop |
| AIS/FBS | [FC132] | USES (42) | Analog Input/Slave |
| AND 2 | [FC37] | USES (389) | AND (2-Input) |
| AND 4 | [FC38] | USES (76) | AND (4-Input) |

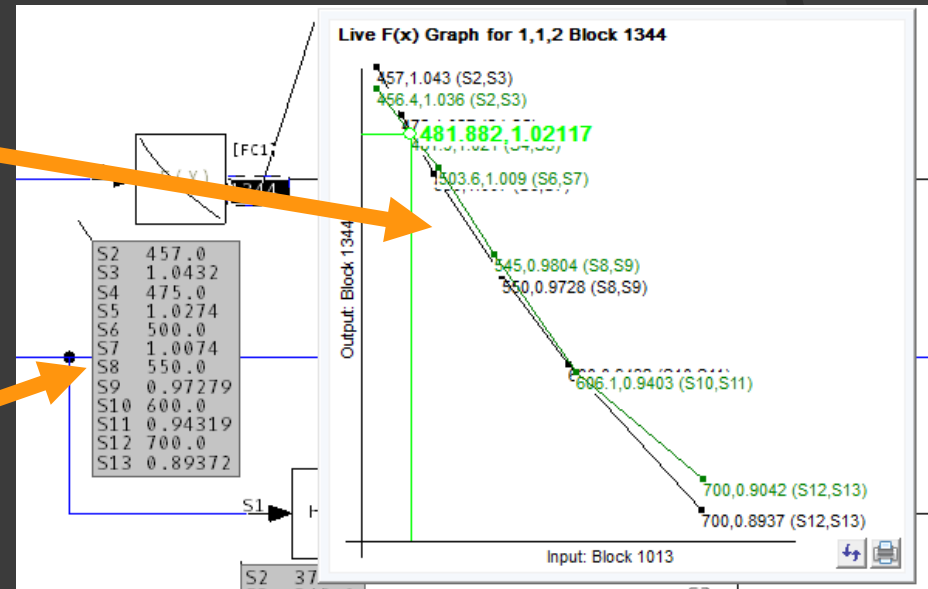
Click on the **function name** to see a description of its specs and outputs.

Click on **USES** to see an index of all the places that function code is used.

2.11.7 Graph of F(x) Function Code 1

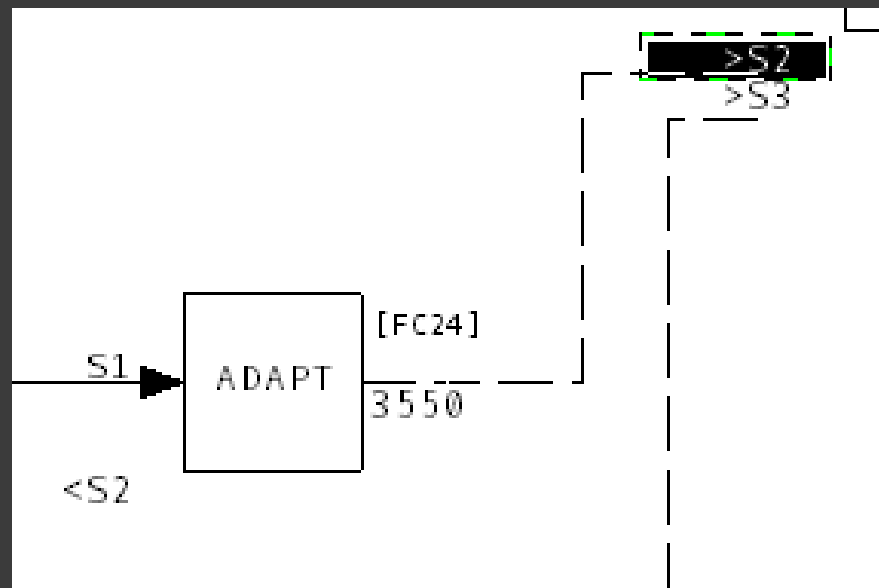
INFI 90 Function Code 1 implements user specified piece-wise linear functions.

- To view the graph right on the CAD/CLD, right-click on a FC1 block, and select **Show Function Graph for Block**.
- Press **S** to view the specs on which the graph is based.
- The live data will update along with live data on the underlying CAD/CLD. Press  to update on demand.




2.11.8 Adapt blocks

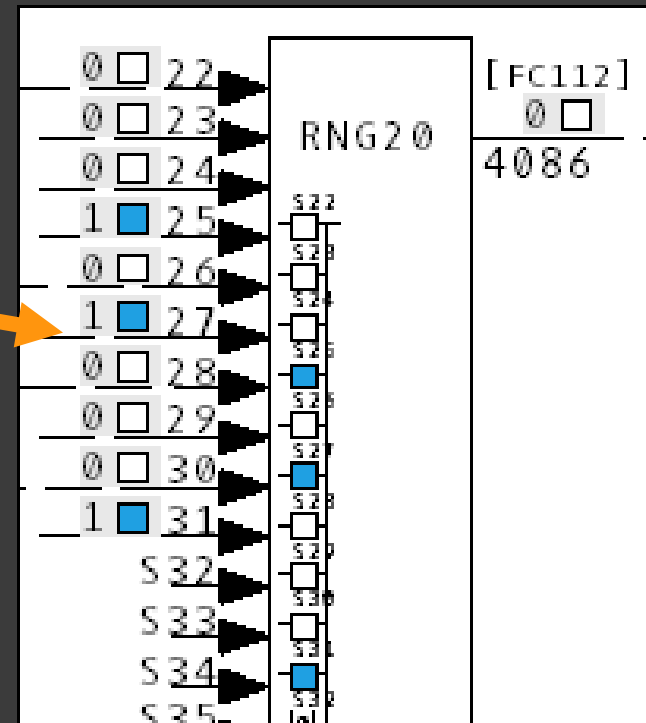
- Click on **Function Code 24** in the **Function Code Index** to see a list of all the Adapt Blocks in the system.
- Right-click **Go To Use** on an adapt block output tells you what block it adapts. Double-click to jump there.



2.11.9 Rung block display

Rung blocks are heavily used in some systems, e.g. ETSI turbine control systems.

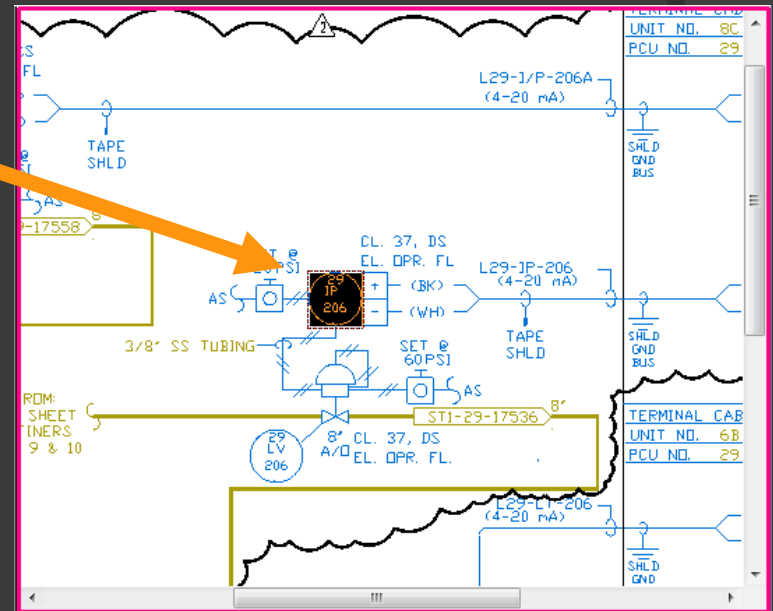
- Press **S** to display the ladder diagram describing the rung block function.
- Press  to display live input, output, and internal values right on the ladder diagram.



2.11.10 AutoCAD and MicroStation

AutoCAD and MicroStation drawings are integrated right into the DBDOC snapshot.

- Tag names are used to build these links.
- Live data can be displayed AutoCAD and MicroStation drawings.
- The phrase-match algorithm used for constructing links can be modified in BuildPlus. We can also customize it, to make sure you get the links you want.



2.12 Managing live loop data connections

In order to fetch live data to display on documents, Hyperview needs to know the location of at least one CIUMon server (the DBDOC live data server).

Live loop connections can be configured

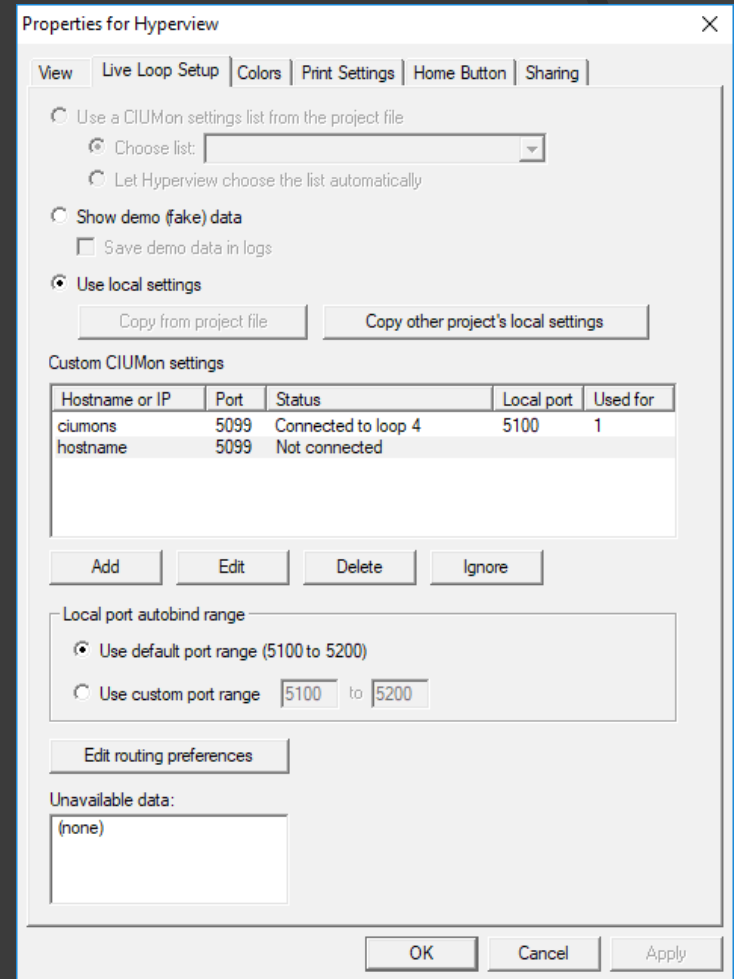
- In BuildPlus, and built into the project snapshot (the usual and preferred approach)
- In Hyperview, using **Options | Live Loop Settings**

2.12.1 About live data settings

- Live data can be displayed on documents in Hyperview.
- Data is fetched from the CIU via one or more DBDOC data servers (CIUMon).
- Some systems have one CIUMon server. Some have multiple CIUMon servers.
- Sometime certain CIUMons are available on one network (e.g. DCS LAN) and other on another network (e.g. business LAN).
- Usually the settings (i.e. list of data servers) are built into the project file.
- Possible to create “Custom” local settings in Hyperview.

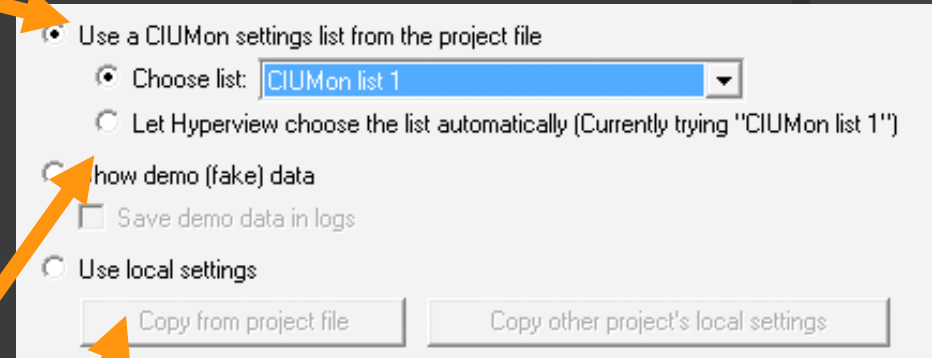
2.12.2 Live Loop Setup dialog

- View and manage connections to CIUMon data servers.
- Settings are usually built into the project file, but can be configured locally (“Custom settings”)



2.12.3 Choosing a settings list

- Usually one or more server lists are built into the project (project) file.
- Multiple lists are usually for multiple network contexts.
- Hyperview can autoselect the best list.
- You can define a local custom list of servers.



Use a CIUMon settings list from the project file

Choose list: **CIUMon list 1**

Let Hyperview choose the list automatically (Currently trying "CIUMon list 1")

Show demo (fake) data

Save demo data in logs

Use local settings

Copy from project file Copy other project's local settings

Usually you would use the built in settings in the project file.

2.12.4 Understanding your current live loop settings

You can see whether servers are connected, blocked, unavailable, and also which data requests are being sent to each server.

List of CIUMons this Hyperview is connected to.

The CIUMon on asclepius port 5099 is connected to a CIU on Loop 3.

The CIUMon on localhost is blocking this user.

Each connection to a CIUMon uses a local port.

Data requests for these loops are being routed to this CIUMon.

CIUMon settings:

| Location | Port | Status | Local port | Used for |
|------------|------|---------------------------|------------|----------|
| asclepius | 5099 | Connected to loop 3 | 5100 | 6,197,1 |
| archimedes | 5099 | Connection status unknown | | |
| localhost | 5098 | Blocked | 5101 | |

Add Edit Delete Ignore

2.12.5 Adding or modifying live loop connections

Usually settings should be configured in BuildPlus, and built into the shared project file.

However, in some situations, you might need to change your personal live loop settings using Hyperview:

- No settings are built into the project file.
- You need to override the settings built into the project file.
- You want to use a specific CIUMon connected to a particular CIU or Serial Port Module.
- The built-in CIUMons settings are not accessible in your network context.

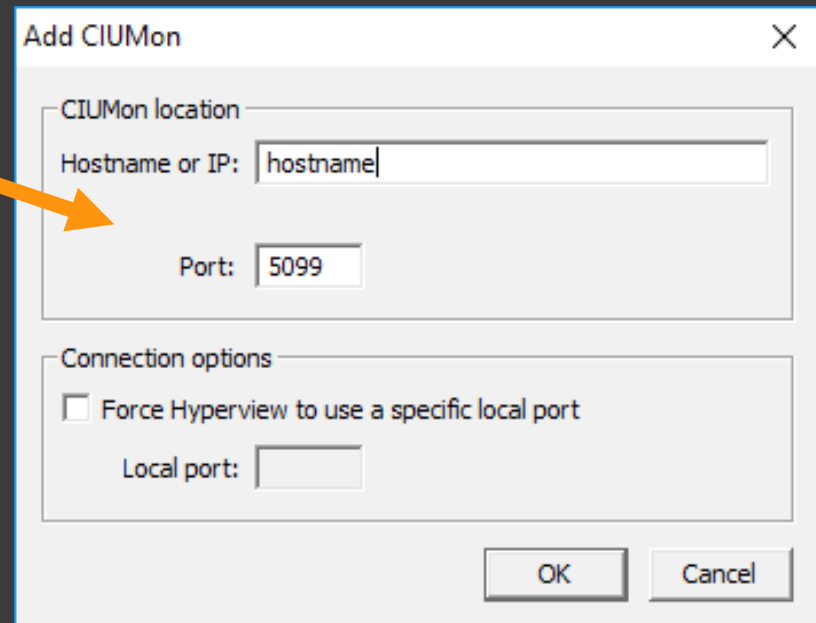
2.12.5.1 Adding a connection

- Press “Add”.
- Specify the computer name and port for the CIUMon server you want to connect to.



| | | | | |
|------------|------|---------------------------|------|-----------|
| asclepius | 5099 | Connected to loop 3 | 5100 | 6, 197, 1 |
| archimedes | 5099 | Connection status unknown | | |
| localhost | 5098 | Blocked | 5101 | |

Buttons: Add, Edit, Delete, Ignore



Add CIUMon

CIUMon location

Hostname or IP:

Port:

Connection options

Force Hyperview to use a specific local port

Local port:

OK Cancel

2.12.6 Specifying a non-default local port range

- Usually Hyperview automatically chooses ports in the default port range.
- On occasion, to get through a firewall, you might specify a particular set of ports for Hyperview to use when talking to CIUMon.

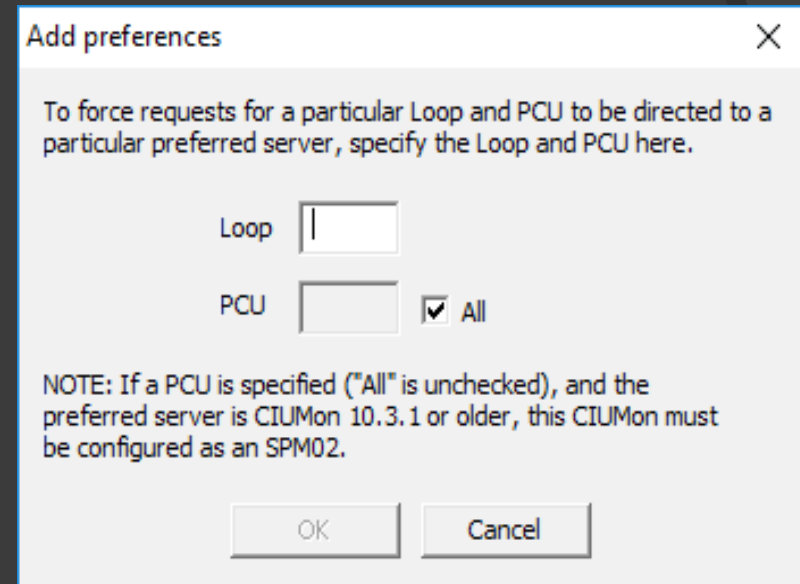
Local port autobind range

Use default port range (5100 to 5200)

Use custom port range to

2.12.7 Adding routing preferences

- Hyperview automatically routes data requests to an appropriate CIUMon (if there is more than one).
- In unusual circumstances you can force data requests for a particular Loop (and PCU) to go to a specified CIUMon server by creating a routing preference.



Add preferences

To force requests for a particular Loop and PCU to be directed to a particular preferred server, specify the Loop and PCU here.

Loop

PCU All

NOTE: If a PCU is specified ("All" is unchecked), and the preferred server is CIUMon 10.3.1 or older, this CIUMon must be configured as an SPM02.

OK Cancel

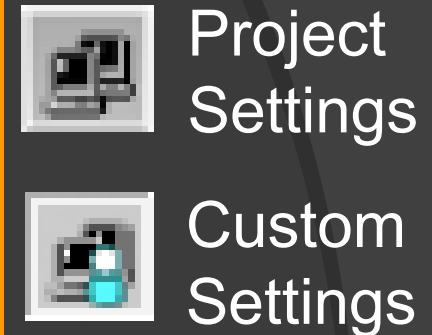
2.12.8 Unavailable data

- Loops and PCUs for which Hyperview can't get data are displayed.
- If live data is turned on in the browser, but there are no connected CIUMons, you will see items here.



2.12.9 Status of live data connections

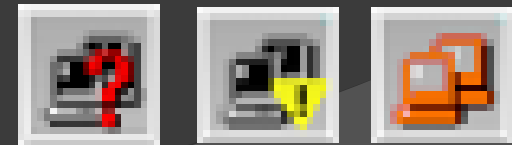
The connection icon in the browser's status bar shows the the current connection status:



Mouse over the connection icon to see the status of each specified connection summarized in a tooltip.







CIUMON Connections: [Loop:1 PCU:All archimedes:5099 OK] [Loop:2 PCU:All pluto:5099 Not Connected]

Watch out for these icons. They indicate a communication or connection configuration problem.



2.12.9 Status of live data connections (cont'd)

You may see any of these icons in the toolbar. Where multiple connections have different statuses, the “best” status is shown.

-  Connection OK – Using built-in settings
-  Connection OK – Using local custom settings
-  Unable to connect – None of the specified connections have been made, or requested data is not accessible
-  No connections have been specified at all
-  Connection blocked – This user or IP is not allowed to talk to a CIUMon needed for requested data
-  Demo settings – Fake data is being displayed

2.12.10 Compression of Hyperview data requests

Both Hyperview and CIUMon try to compress multiple requests for the same data.

- If multiple requests are made for the same data in the same update interval, Hyperview combines them.
- If multiple Hyperviews request the same data from CIUMon in the same interval, CIUMon combines the requests before passing them on to the CIU.

2.13 Managing live data load

On most systems, live data fetch rate is very limited. 10-20 values per second per CIU is typical. Multiple Hyperviews may share this bandwidth among themselves and with your other applications.

General strategies to cope:

- **Use Rovisys OPC90 Server to get 50-100 values per second! Contact GMCL for more information.**
- **Be aware of the live data load you are creating!**
- Know how to minimize your own live data load.
- Use more CIUMon servers if you have multiple CIUs.
- Make use of any serial port modules you may have available.

2.13.1.1 Constraints on live data fetch rate

Fast facts:

- A single CIU can give up to 20 values/s
- Multiple CIUs can give up to 20 values/s each
- Serial port modules can give 80 values/s
- **Rovisys OPC90 Server gives 50-100 values/s**

To increase bandwidth:

- Multiplex CIUMon servers to your EWS CIUs using OPC90 Servers.
- Use multiple CIUMon servers

2.13.1.2 Constraints on live data fetch rate (cont'd)

Single CIU

- Will probably be on Ring 1 (unless not possible, or main system not Loop 1)
- Limited to 20 values / second
- Non Loop-1 data will be fetched via Loop 1 – be aware of increased Loop 1 load

2.13.1.3 Constraints on live data fetch rate (cont'd)

Multiple CIUs

- You have more than one EWS, connected to CIUs on different loops. CIUMon can share the CIU connection with the EWS
- Multiplex CIUMon and EWS using RoviSys OPC90 Server Lite Plus. **DOUBLE or TRIPLE data rate with new 2010 OPC90 Server .**
- 10-20% cost of CIU makes its spare bandwidth available for DBDOC
- Get up to 20 more values/s in Hyperview for each connected CIU

2.13.1.4 Constraints on live data fetch rate (cont'd)

Serial Port Modules


- SPMs very useful when used with DBDOC
- Each can give up to 80 values / second
- System directly gains throughput, since data fetched via an SPM does not load the CIU

2.13.2 Managing live data load for the Watch Window

Tips for managing live data load due to blocks you are plotting in the Watch Window.

- Watch the **Send** and **Recv** numbers in the status bar. They show requests and responses per second from both the Watch Window and live data on documents.

[Send/s:3.00 Recv/s:3.39] Data Files [294KB] 

- Increase the **Update Interval** in **Options | View**.
- Pause  data collection for blocks or groups of blocks you are not actively trending.
- Increase the block update interval where possible.
- Be aware that Watch Window blocks collect data even when the Watch Window is not open.

2.13.3 How to tell how much data is being requested

- Watch the **Send** and **Recv** numbers in the status bar. They show requests and responses per second from both the Watch Window and live data on documents.

[Send/s:3.00 Recv/s:3.39] Data Files [294KB] 

- If **Recv** < **Send**, CIUMon can't keep up. Reduce data load.
- Remember that all the Hyperviews sharing a CIUMon-CIU connection share the available bandwidth.
- View CIUMon statistics for a global picture of how multiple Hyperviews are loading a CIUMon. Use CIUMon Options or turn on CIUMonController statistics.

2.14 Using Hyperview from a web browser

- DBDOC supports using a subset of Hyperview functionality from a standard web browser
- This is an ideal setup for tablets and other non-Windows devices

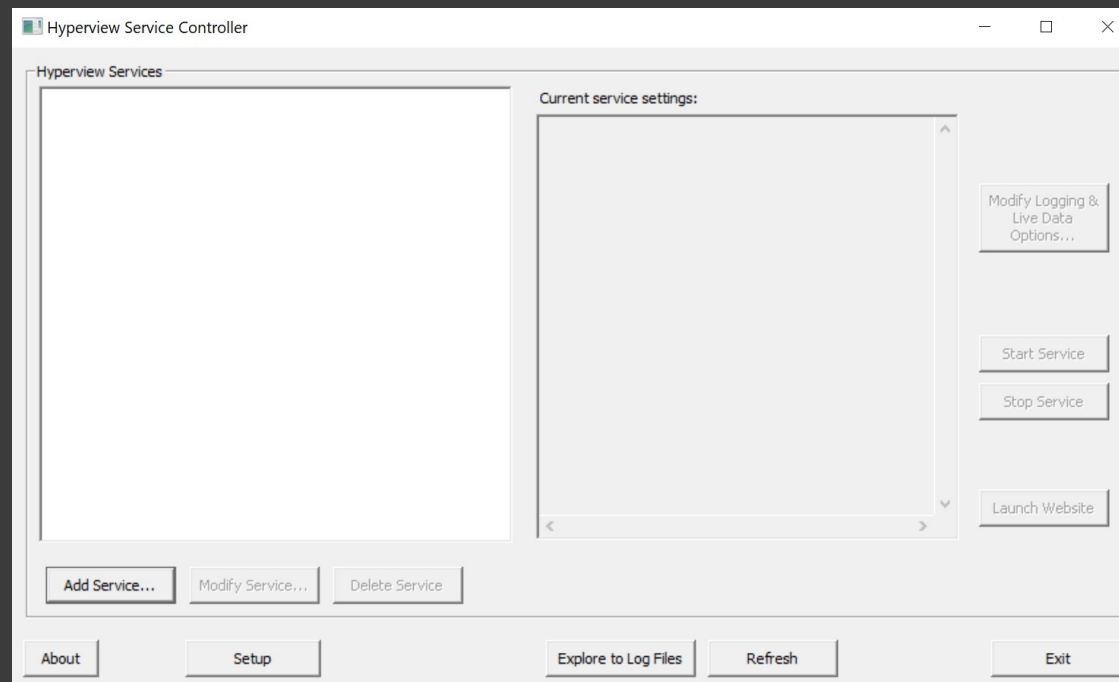
The screenshot displays the DBDOC Hyperview web interface. The browser address bar shows the URL: localhost:8000/hyperview?cmd=bmk&toc=dbdoc%3A%2F%2Ftoc%2F&topic=dbdoc%3A%2F%2F... The page title is "[Demo.dbdoc] Tag: 00TG0118 (40XV130 OPEN)" and the user is signed in as "admin". The interface includes a navigation menu on the left with sections like "Demo", "Databases", "System Information", and "Graphics". The main content area shows the tag details for "00TG0118" in the "I90demod [Tag Database]".

| Property | Value |
|-----------|--------------|
| TAGNAME | 00TG0118 |
| TAGDESC | 40XV130 OPEN |
| LPMB | 1,20,2,8404 |
| TAGINDEX | 13889 |
| CUSTTAGID | 12002L4C |
| TAGTYPE | DIGITAL |
| EUINDEX | |
| VALO | .0 |
| SPAN | .0 |
| SETPVALO | .0 |
| NUMDECP | |
| ZEROSTATE | |
| ONESTATE | |
| LOOP | 1 |
| PCU | 20 |
| MODULE | 2 |
| BLOCK | 8404 |
| ALMSTATE | |
| H2ALARM | .0 |
| H3ALARM | .0 |
| L2ALARM | .0 |

The bottom status bar shows the date and time "09 Feb 2024 2:15 PM", the version "11.5 Alpha i95993", and the user "CIUMON Commis: Custom Settings [No Connections Specified]".

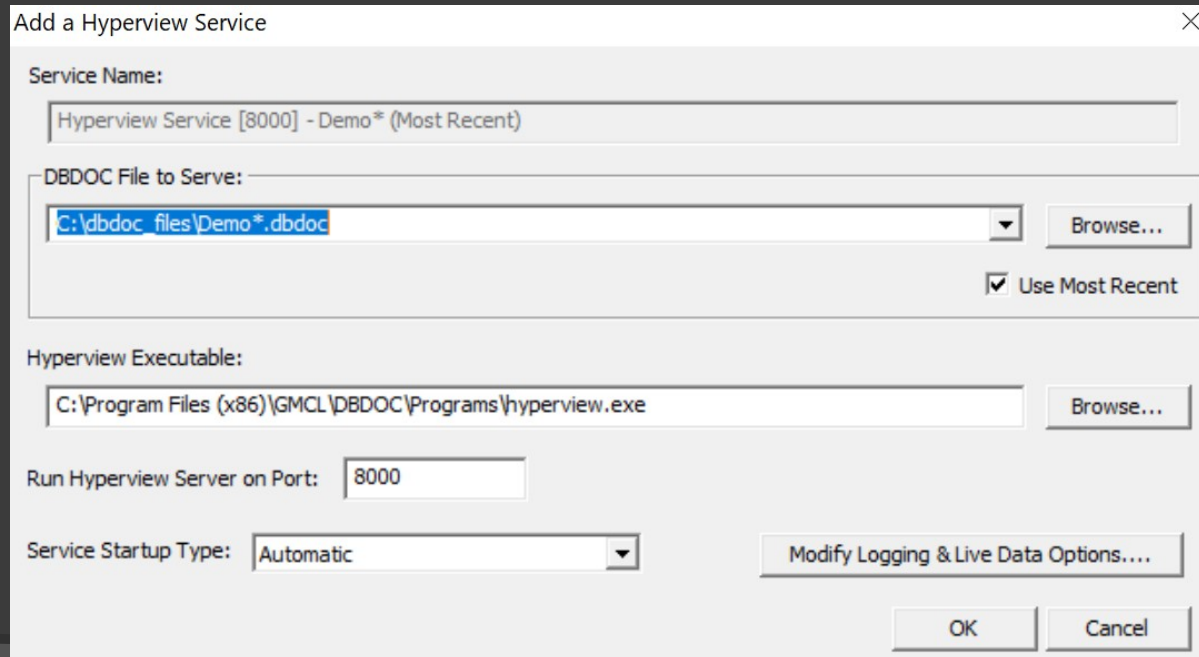
2.14.1 Running the Hyperview Service Controller

- The Hyperview Service Controller will manage Hyperview services.
- It will need to be run as administrator for full functionality.



2.14.2 Creating a Hyperview service

- Click **Add Service...** to set up the new service.
- Most of the information will be filled in and should work by default. The main thing required is the path to a .dbdoc file.

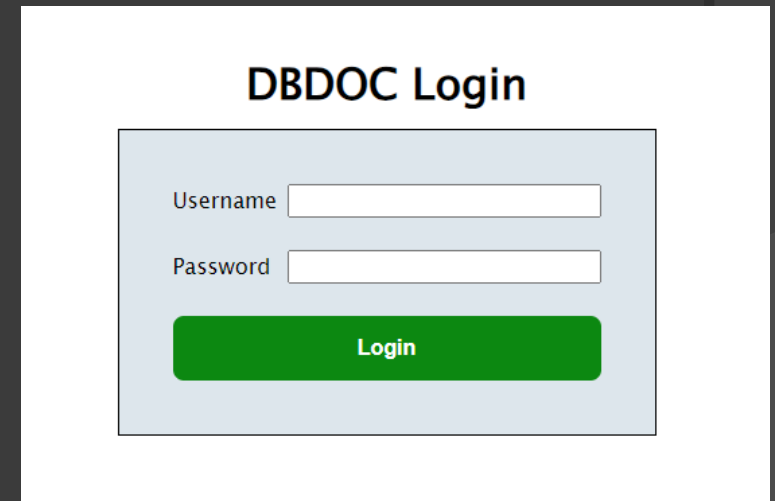
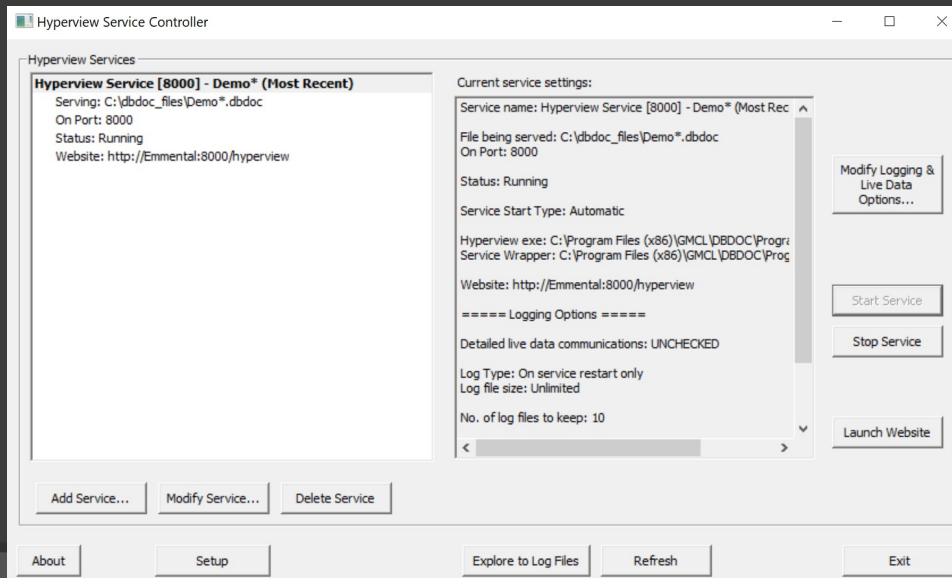


The screenshot shows the 'Add a Hyperview Service' dialog box with the following fields and options:

- Service Name:** Hyperview Service [8000] - Demo* (Most Recent)
- DBDOC File to Serve:** C:\dbdoc_files\Demo*.dbdoc (with a 'Browse...' button and a checked 'Use Most Recent' checkbox)
- Hyperview Executable:** C:\Program Files (x86)\GMCL\DBDOC\Programs\hyperview.exe (with a 'Browse...' button)
- Run Hyperview Server on Port:** 8000
- Service Startup Type:** Automatic (with a 'Modify Logging & Live Data Options...' button)
- Buttons:** OK and Cancel

2.14.3 Running a Hyperview service

- Once the service is created, select it and click **Start Service** to start up the web server.
- The link is displayed in the Website entry but you can also click **Launch Website** to open the link in your default browser.

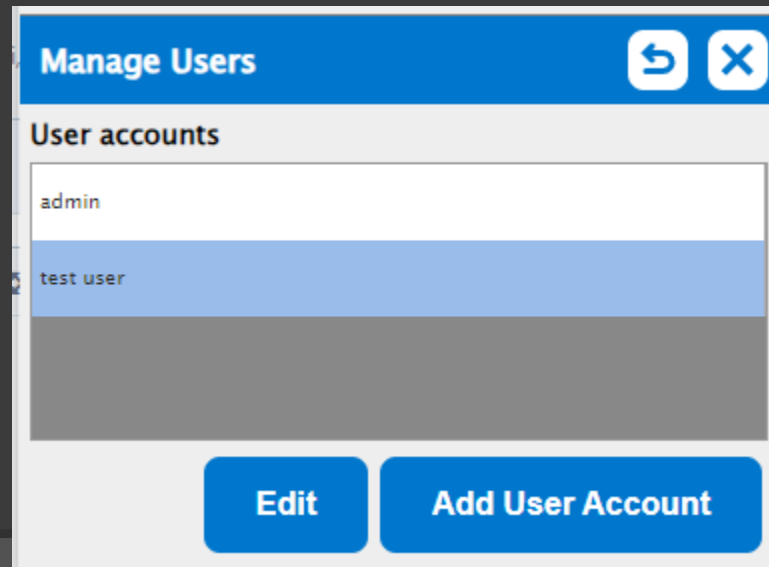


2.14.3 Running a Hyperview service (cont'd)

- The Hyperview service will be available to anyone on the same local network as the host.
- The address should be “<hostname>:<port>” where hostname is the name of the host machine on the network.
- The port can be changed in the service settings.

2.14.4 Browser Hyperview accounts

- Access to the Hyperview service is restricted through user accounts.
- By default there is a single admin account that can create and manage further accounts.
 - Contact GMCL for the default admin password.



2.14.5.1 Browser Hyperview functionality - navigation

- Navigation can be done much like in regular Hyperview, using links and hotspots.
- The browser's forward and back history will work here too.

The screenshot shows a web browser window with the following content:

- Browser Address Bar:** `emmental:8000/hyperview?cmd=bmk&toc=dbdoc%3A%2F%2Findex%2Fblock%2F1%2F20%2F2...`
- Page Title:** [Demo.dbdoc] Sample Conductor NT Graphics: AERATION_TANKS_STAGE_I_OVERVIEW_newname.m1 (not in xcdump)
- Navigation Bar:** Home, Back, Forward, Refresh, and other standard browser icons.
- Block Use Index (Left Panel):**
 - Module 1,20,02 Block 3274 [AIC3001, 40TIC614-1-CO-R]
 - 1 190demod [Tag Database]
 - 1.1 Tag: AIC3001 (40 ME 101 GLYCOLREBO)
 - 2 12002LIC.CAD
 - 2.1 Source (M/A MFC/P: Control Station [FC
 - 2.2 Tag Name
 - 2.3 Tag Name
 - 2.4 Tag Name
 - 2.5 Tag Name
 - 2.6 TSTALM Reference
 - 2.7 Input S3 to block 3263 (APID: Advance
 - 3 1200299C.CAD
 - 3.1 Input S1 to block 585 (SUM(K): Summer
 - 4 AERATION_TANKS_STAGE_I_OVERVIEW_newname.m1
 - 4.1 **Dynamic Bar** (highlighted)
 - 4.2 Tag Reference
 - 4.3 Tag Atoms: EB_BADQUAL EB_STNMODE
 - 4.4 Tag Atom: C_AOUTPUT
 - 4.5 Tag Atom: EB_ALMSTATUS_T
- Main Control Panel:**
 - TANK3 AIR CONTROL:** PV 0.00 KM3/HR, SP 0.00 KM3/HR, CO 0.0 %
 - TANK4 AIR CONTROL:** PV 0.00 KM3/HR, SP 0.00 KM3/HR, CO 0.0 %
 - CONTROLLING PROBES:** Bar chart with 4 probes, all at 0.0.
 - STATUS TABLE:**

| STATUS | FEEDBACK |
|---------|-----------|
| RUNNING | 0.0 % IGV |
| RUNNING | 0.0 % IGV |
| RUNNING | 0.0 % IGV |
 - Bottom Status:** AUTO STARTUP IN PROGRESS YES

2.14.5.1 Browser Hyperview functionality-navigation (cont'd)

- Many of the navigation tools found in regular Hyperview are in the toolbar

- Go to Home 
- Go to Table of Contents 
- Synch Table of Contents 
- Next/Previous topic 
- Next/Previous index entry 

2.14.5.2 Browser Hyperview functionality – text search

- You can search the entire project file for a phrase.
- Open the main menu, expand the Search menu, and click Full Text Search.

The image consists of three sequential screenshots from a software application's search interface, illustrating the process of performing a full-text search.

First Screenshot: Shows the main menu with the 'Search' option expanded. The 'Full Text Search' option is highlighted with an orange arrow.

Second Screenshot: Shows the 'Full Text Search' dialog box. The search phrase 'pump' is entered in the 'Search phrase or terms' field. The 'Match exact phrase' radio button is selected. The 'Scope' is set to 'All Topics'. The 'Results display' options are checked for 'Show number of hits per topic' and 'Show topic group'. A green 'Search' button is at the bottom.

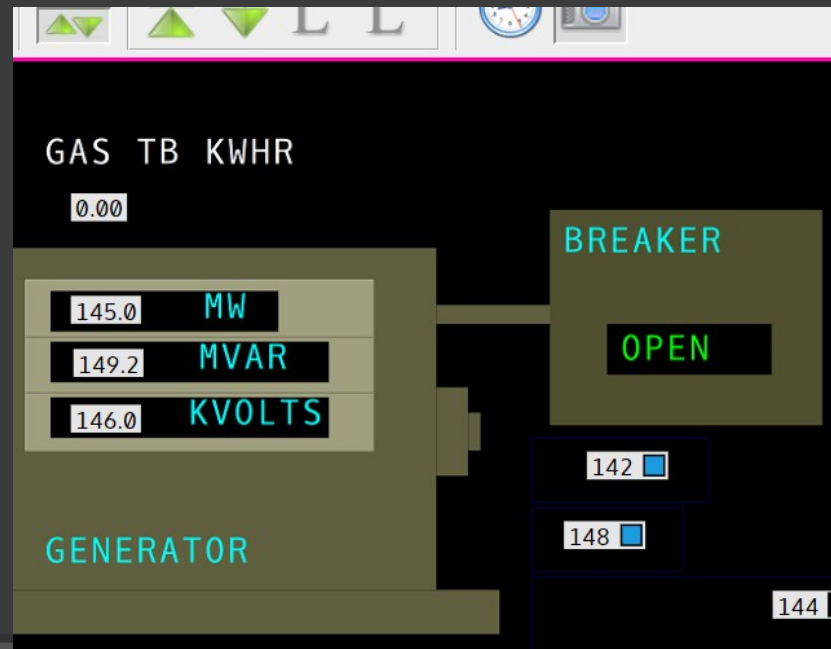
Third Screenshot: Shows the 'Search Results' window. It displays the search criteria: 'Searched for topics with the following text: pump (match exact phrase)'. It reports '862 hits found in 539 topics'. A table lists the results:

| Topic Title | Group | Hits |
|----------------------------|--------------------|------|
| 10203a.b90 (JUICER #2 ...) | Batch Programs... | 5 |
| EVAMTR Ladder Program | Module 1.01,14,... | 79 |
| Block 1099 | Ladder Diagram... | 2 |
| Block 1100 | Ladder Diagram... | 1 |
| Block 1101 | Ladder Diagram... | 2 |
| Block 1102 | Ladder Diagram... | 1 |
| Block 1103 | Ladder Diagram... | 2 |
| Block 1109 | Ladder Diagram... | 1 |
| Block 1113 | Ladder Diagram... | 1 |

An orange arrow points from the 'Search' button in the second screenshot to the first row of the table in the third screenshot.

2.14.5.4 Browser Hyperview functionality – live data

- Live data settings need to be built into the .dbdoc file in BuildPlus to appear in Browser Hyperview.
- The Hyperview service will fetch and display the live data in the browser just like in regular Hyperview.



2.14.5.5 Browser Hyperview functionality – bookmarks

- Bookmarks can also be defined using the main menu.
- A bookmark URL can be copied from the browser's navigation tab and shared between browsers and machines on the same network just like any other URL.

The screenshot shows a web browser window with the following elements:

- Browser Tab:** Demo.dbdoc - DBDOC
- Address Bar:** Not secure | emmental:8000/hyperview?cmd=bmk&toc=dbdoc%3A%2F%2Fchapter%2FTEXTCHP%2F%2F%2FEL
- Page Title:** [Demo.dbdoc] Documentation Text Documentation: LOG40.txt
- Navigation Bar:** Home, Back, Forward, Refresh, Print, and other utility icons.
- Bookmarks Panel (Left):**
 - Bookmark current browser contents:
 - Name: Documentation | LOG40.txt
 - TOC: Documentation
 - Topic: Documentation Text Documentation: LOG40.txt
 - Add Bookmark** (Green button)
 - Bookmarks list: Documentation | LOG40.txt
 - Show in Tab** (Blue button), **Edit** (Blue button), **Delete** (Red button)
- Documentation Panel (Middle):**
 - Text Documentation
 - LOG40.txt
 - log41.txt
 - log41a.txt
- LOG40.txt Panel (Right):**
 - LOG40 Text File

```
LOG START TIME: 23:59:59 08-SEP-96
LOG #40
DAY/TIME      YA323      PHASE I
MHR           MHR       MHR
09 00:59      0.000     0.000
09 01:59      0.000     0.000
09 02:59      0.000     0.000
09 03:59      0.000     0.000
09 04:59      0.000     0.000
09 05:59      0.000     0.000
09 06:59      0.000     0.000
09 07:59      0.000     0.000
09 08:59      0.000     0.000
09 09:59      0.000     0.000
09 10:59      0.000     0.000
09 11:59      0.000     0.000
09 12:59      0.000     0.000
09 13:59      0.000     0.000
09 14:59      0.000     0.000
09 15:59      0.000     0.000
09 16:59      0.000     0.000
09 17:59      0.000     0.000
09 18:59      0.000     0.000
09 19:59      0.000     0.000
09 20:59      0.000     0.000
09 21:59      0.000     0.000
09 22:59      0.000     0.000
09 23:59      0.000     0.000
TAG          ANLG163   ANLL001
TREND#       249       250
```

System tray at the bottom: 09 Feb 2024 3:38 PM | DEV w95542 | CIUMON Comms: Custom Settings [No Connections Specified]

For more information on the Hyperview Browser

See the online documentation at gmcl.com, or the built in application help.

G. Michaels Consulting Ltd