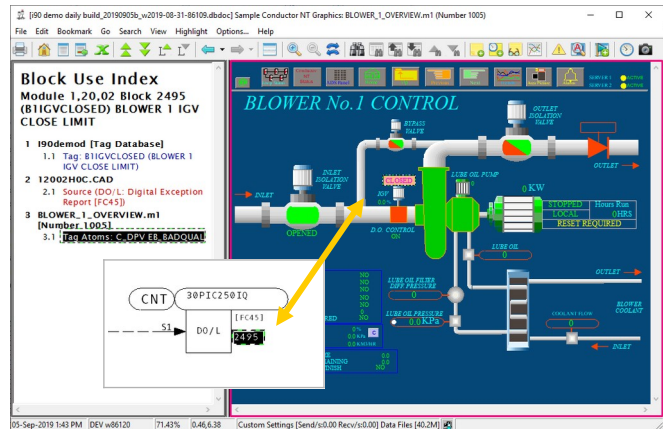


**DBDOC, the essential companion to your Harmony INFI 90® and AC 800M system software, complements your existing tools and enhances your productivity and effectiveness.**

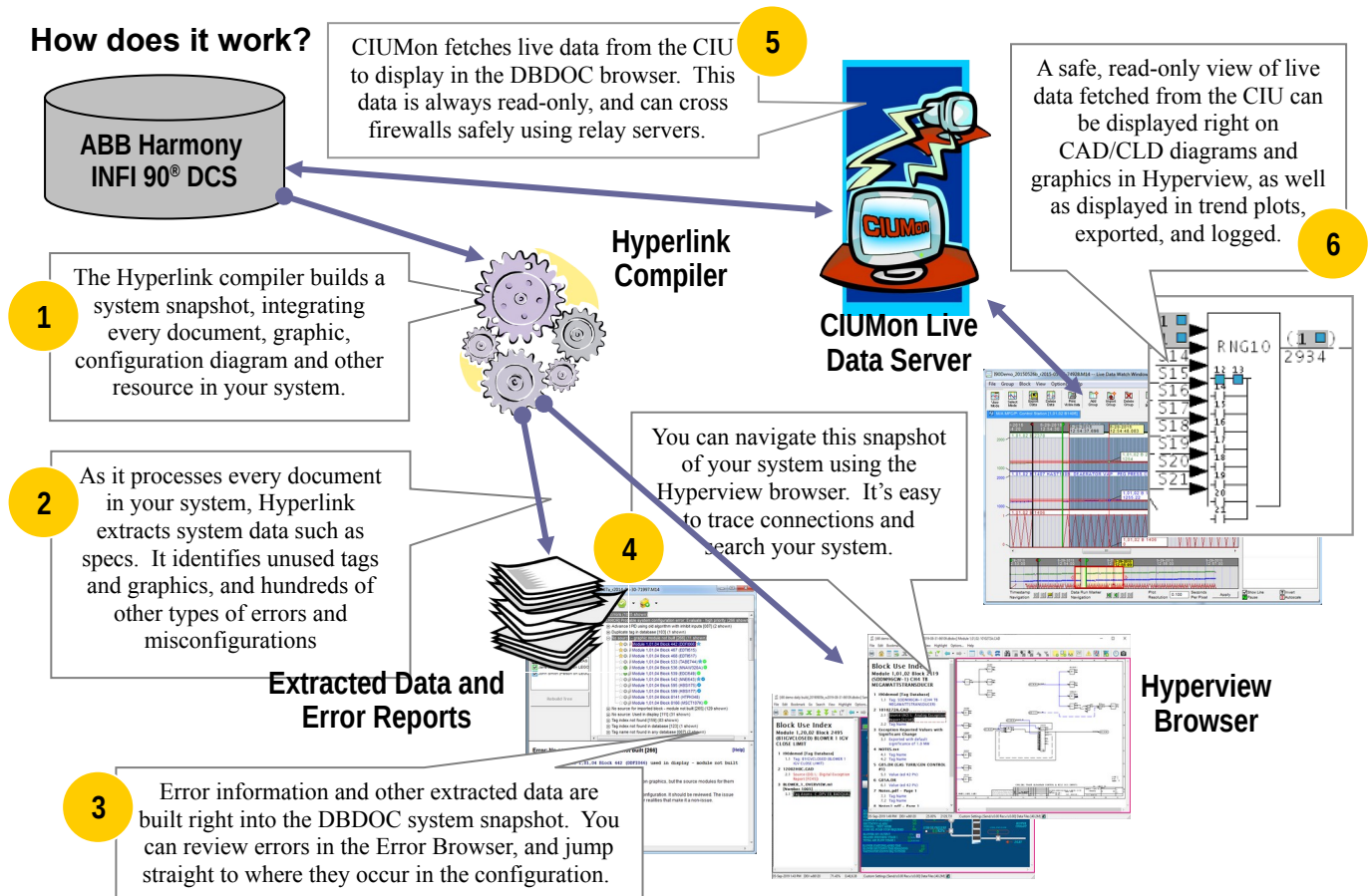
*Read on to learn more about important DBDOC features.*

## What is DBDOC?

- A **safe, read-only snapshot** of your Harmony INFI 90® system or AC 800M system.
- An **integrated** view of all your Composer® and CAD/CLD configuration drawings, graphics and databases, as well as third party resources like OsiSoft PI®, AutoCAD® and MicroStation® drawings, and any other
- An amazing suite of **troubleshooting and analysis** tools.
- The ability to **view live data for every block in your system**, even remotely.
- **Lightweight data trending**, especially for blocks not visible to ABB history software.
- A **perfect training environment** in which new operators and engineers can familiarize themselves with the system and learn fault finding techniques.
- The perfect companion for **effective audits**, efficient system **conversions** and system **cleanup**.



## How does it work?



## Signal tracing and troubleshooting have never been easier.

DBDOC's unique **point and click browser interface** makes it easy to trace signals throughout your system. Every resource is cross-linked and at your fingertips, making for efficient and effective troubleshooting.

- Just **double-click to trace a signal** from a graphic all the way to the slave.

When you click on a value, every place it is used is listed in this index.

Double click on any point in a graphic, and its source in the configuration is instantly displayed.

Double click again to trace the signal all the way back to the slave!

Clicking on any of the places the value is used will cause the use to be displayed in the browser. Even third party resources like MicroStation® and AutoCAD® drawings are linked in here. You can even include PDF documentation.

- **Right-click to follow any use** of a value, from configuration to graphics.

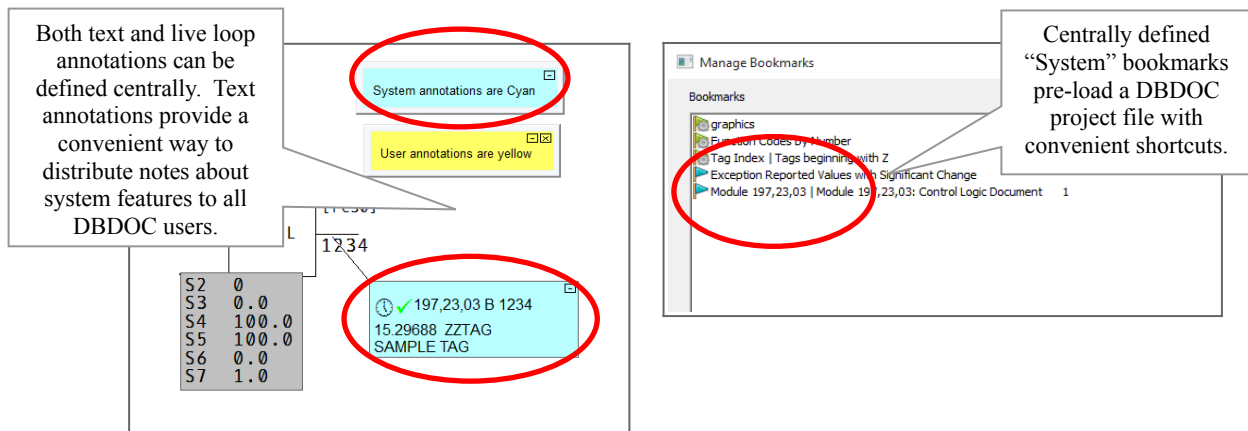
With a right-click, you can choose any of the uses of a value, and display it in the browser, all in one simple step.

Jump to any use of a value, directly from the popup menu!

## Bookmarks, annotations & home pages can be defined centrally for all users.

Hyperview is typically used by multiple users at a site, often by dozens. The DBDOC admin can **define “System” bookmarks, annotations, and home pages centrally**, which are automatically available to all the viewers of a particular project file.

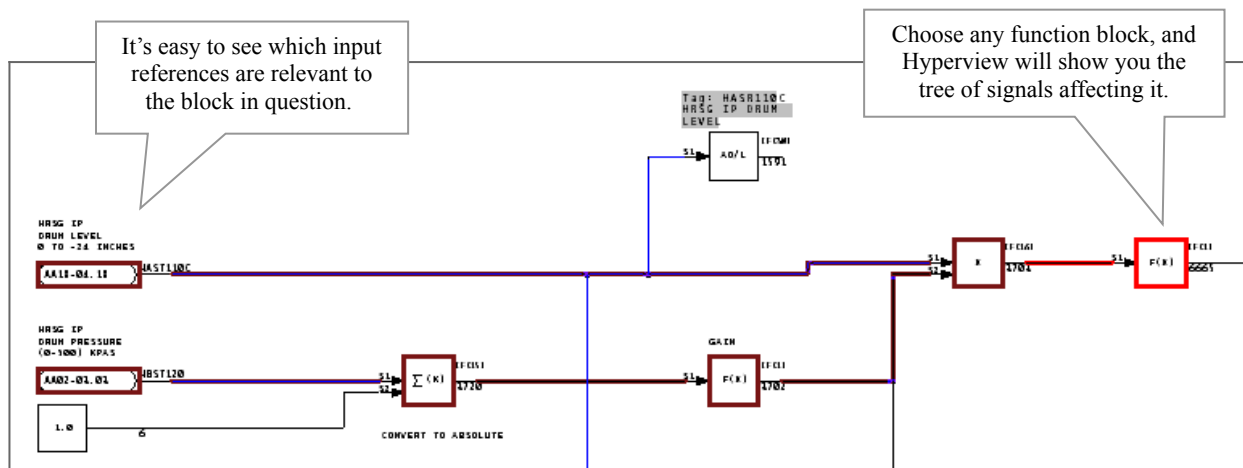
- Define a **System home page** as a convenient default for all users.
- Create **System annotations**, to distribute notes about project details to all users.
- Create **System bookmarks** to serve as useful shortcuts automatically available to all users.

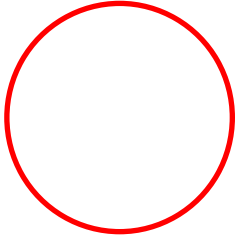


## Visual signal tracing tools let you see dependencies at a glance.

DBDOC can show you **input and output trees** for any block, allowing you to understand control flow at a glance, and making it even easier to trace connections and track down problems.

- Just right-click on a function block to see the **input tree** of signals that affect it. This tree can be traced to other CAD/CLD sheets via the input references.
- You can show the **output tree** for a block just as easily. As you trace signals onto other sheets, you can visually confirm that they are affected by the output of the original block of interest.





## Safe, read-only live data on every document.

- A **safe, read-only** view of live system data.
- Convenient **NERC compliant remote access** to live system data.
- **Incredibly efficient fetches.** DBDOC never fetches data you can't see.
- Live data on **MicroStation® and AutoCAD®** drawings.
- Live values in **ABB® Rung Block internal logic** shown right on the CAD or CLD.
- With add-on **RoviSys Turbo®**, live data can be increased 2-10x with decreased system load.

The screenshot displays a software window titled "Sample Conductor NT Graphics: GAS\_STORAGE\_AND\_COMPRESSION\_OVERVIEW.m1 (Number 1050)". The interface shows a complex industrial process diagram with various components like "Gas Comp 2", "Loading Station", and "Drive Status". Several callouts provide detailed information:

- Logic state labels are conveniently displayed on graphics.**: Points to "RUN" labels on the diagram.
- Live data is displayed right on MicroStation® and AutoCAD® drawings.**: Points to a value of "223.00" on a pressure sensor symbol.
- DBDOC live data graphics mimic operator graphics for intuitive browsing.**: Points to a bar chart showing "AERATION AIR FLOWS" with values for T1, T2, T3, and T4.
- Live values are even shown on internal rung block logic!**: Points to a ladder logic rung with values like "13.00 S1", "299.2656 S2", and "SPEED S3".
- Live analog and digital values are displayed right at block inputs as you trace values through the configuration.**: Points to a digital input block with values "280 12", "276 13", "S14", "S15", "S17", "S18", "S19", "S20", "S21".

## Plot and export live data for any block in the system.

- Plot live data from any block in the system, including blocks without tags.
- Automatic logging of all plotted data.
- Mouse drag selection makes it easy to visually select and export data.
- Easily import data into other applications such as Microsoft Excel® for analysis.
- Scheduled pauses to make data collection pause automatically when it is no longer needed.

**With a click of the mouse, create a timestamp to mark a point of interest in the data. You can add notes to timestamps, to help you keep track of interesting locations.**

**Select data with the mouse for easy export.**

**You can add blocks from anywhere in your system to plot them together.**

**Schedule a time to automatically pause data collection for this block.**

**Drag the red frame on the navigation plot to scroll to an area of interest on the detailed trend plot above.**

**Use the green arrows to jump from data run to data run.**

**Quickly display points of interest in your data by jumping from timestamp to timestamp.**

**By adjusting the plot resolution, you can see days of data at a time, or zoom in to see a second by second close-up.**

**Exported data can be viewed in spreadsheets and other applications.**

| Timestamp           | Data Run                | Marker | Value 1  | Value 2  |
|---------------------|-------------------------|--------|----------|----------|
| 2018/03/21 17:00:48 | 2018/03/21 17:00:48.000 |        | 1,541.28 | 4,976.48 |
| 2018/03/21 17:00:49 | 2018/03/21 17:00:49.000 |        | 1,541.28 |          |
| 2018/03/21 17:00:50 | 2018/03/21 17:00:50.000 |        | 1,541.28 | 4,976.48 |
| 2018/03/21 17:00:51 | 2018/03/21 17:00:51.000 |        | 1,693.38 | 5,600.25 |
| 2018/03/21 17:00:52 | 2018/03/21 17:00:52.000 |        | 1,693.38 | 5,467.58 |
| 2018/03/21 17:00:53 | 2018/03/21 17:00:53.000 |        | 1,693.38 |          |
| 2018/03/21 17:00:54 | 2018/03/21 17:00:54.000 |        | 1,693.38 | 5,369.36 |
| 2018/03/21 17:00:55 | 2018/03/21 17:00:55.000 |        | 1,662.96 |          |
| 2018/03/21 17:00:56 | 2018/03/21 17:00:56.000 |        | 1,815.06 | 5,860.46 |
| 2018/03/21 17:00:57 | 2018/03/21 17:00:57.000 |        | 1,815.06 |          |

## Search documents or the database for text or blocks of interest

With DBDOC, you can instantly **find any word or text** in your Harmony INFI 90 system. All document types, including CAD sheets, graphics, databases, AutoCAD sheets, text files, embedded PDFs, batch and ladder files can be searched with equal ease.

- **Full text search** allows you to find text anywhere in your system, in any kind of document.

The screenshot shows the 'Search' dialog box with 'Full Text Search' selected. The search phrase is 'sludge'. The 'Scope' section is set to 'All Topics'. The 'Results display' section has 'Show Loop, PCU, Module, Block' checked. The search results are displayed in a browser window, showing a table of results with columns for Title, Loop, PCU, Module, Block, and Group. A red circle highlights the search results table, and a callout box says 'Search results are highlighted right on the graphic.' Another red circle highlights a specific result, and a callout box says 'Double-click to display any search result in the browser.'

It's easy to narrow your search to particular document types.

- **Database search** makes it easy to find particular blocks by number, tagname, or description text.
- **Topic title search** lets you find topics of interest interactively and incredibly quickly.

The screenshot shows the 'Search' dialog box with 'Database Search' selected. The search phrase is 'sddm'. The search results are displayed in a browser window, showing a table of results with columns for Topic Title, Loop, PCU, Module, Block, and Group. A red circle highlights the search results table, and a callout box says 'Finds all blocks in the database whose tagnames start with "sddm"'. Another red circle highlights a specific result, and a callout box says 'Double-click to see the source of the block you were looking for!'. The search results are also displayed in a browser window, showing a list of results with columns for Document Name and Description. A red circle highlights the search results list, and a callout box says 'As always, the topic you want to see is just a double-click away.'

Finds all blocks in the database whose tagnames start with "sddm"

With topic title search, just start typing. Topic titles instantly appear!

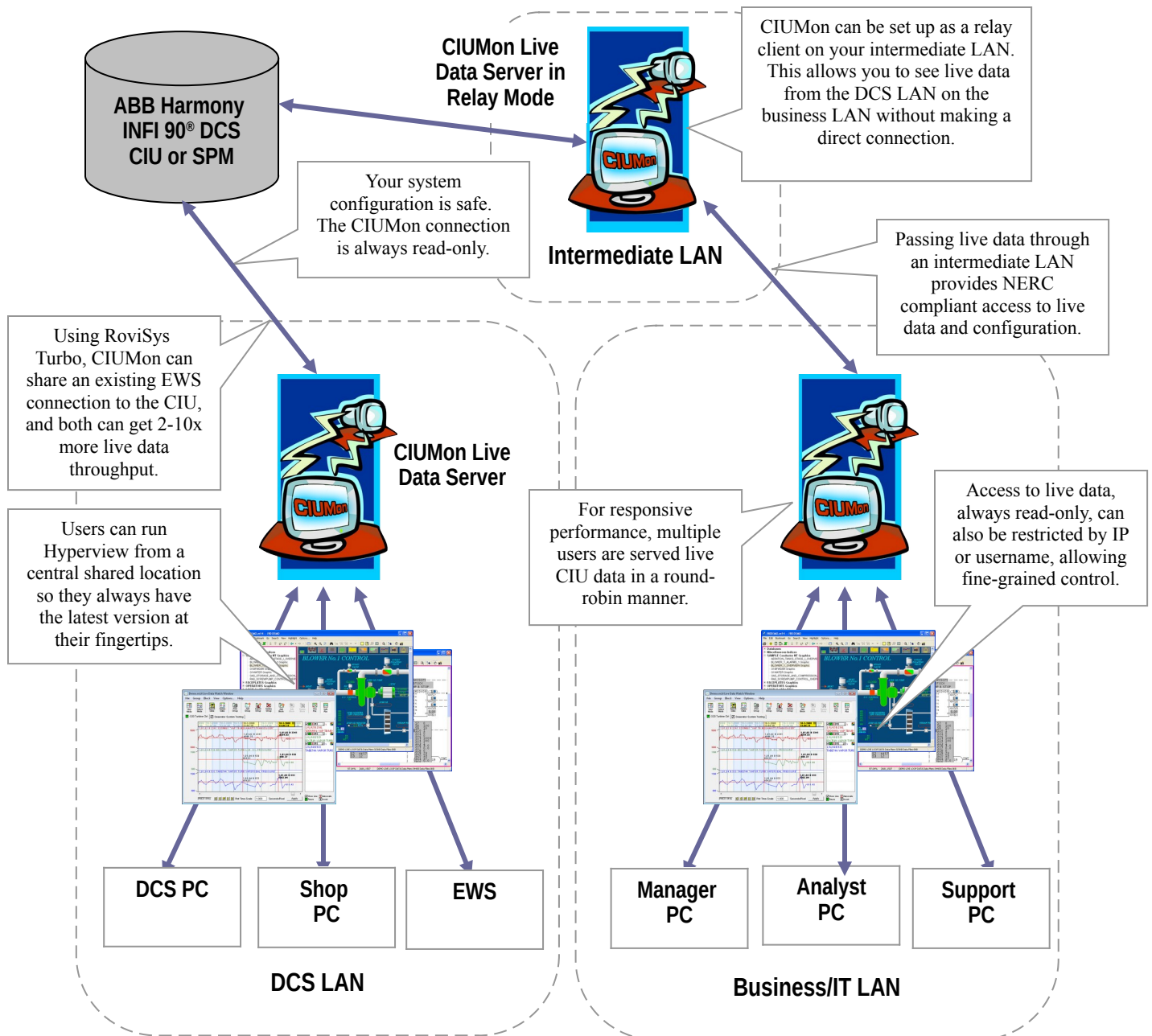
Finds all blocks in the database with "megawatt" in the description text.

Double-click to see the source of the block you were looking for!

As always, the topic you want to see is just a double-click away.

## Safe, read-only system access from the business LAN and offsite.

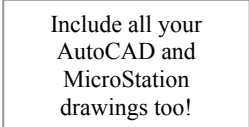
- Safely troubleshoot, perform system analysis, and train support staff on your **business LAN**.
- DBDOC provides **read-only access to your system** at home, on courses, and on other projects, and in other parts of the plant.
- For **total NERC compliance**, a relay server can be used to pass live data via an intermediate LAN.
- With add-on software **RoviSys Turbo®**, get 2-10x more live data without overloading your system.



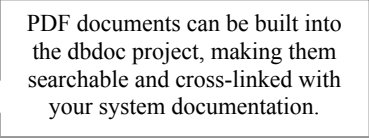


## View graphics, PDFs, and third party drawings.

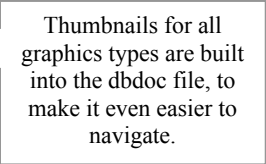
With DBDOC, you can [integrate system graphics](#), [third party documents like AutoCAD and MicroStation drawings](#), and [arbitrary PDFs](#) into one cross-linked and searchable representation that you search and browse. Text documentation and many other system support documents can also be included. You can even include documents with links to external URLs – they will be opened in a web browser.



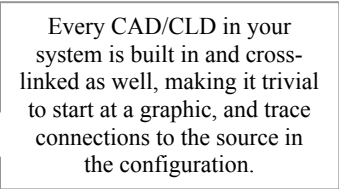
Include all your AutoCAD and MicroStation drawings too!



PDF documents can be built into the dbdoc project, making them searchable and cross-linked with your system documentation.



Thumbnails for all graphics types are built into the dbdoc file, to make it even easier to navigate.



Every CAD/CLD in your system is built in and cross-linked as well, making it trivial to start at a graphic, and trace connections to the source in the configuration.

## Integrated tools, reports, and indexes make your job easier.

Without DBDOC, there is no easy way to see which blocks are imported from and exported to PCUs in your system. Figuring this out manually is laborious and error-prone. With DBDOC's **PCU Interaction Report**, this **import and export information is at your fingertips.**

- Find every block exported by a PCU **before taking it out of service.**
- Decouple parts of the plant by **finding and addressing dependencies.**

### Report of blocks imported into and exported from each PCU

PCU Report Page 1: 1,01 to 1,25  
 PCU Report Page 2: 1,30 to 1,32

With a single click, display a summary report for any given PCU pair.

The PCU Interaction Report shows you every dependency among PCUs at a glance.

|      |      |      |
|------|------|------|
| 1,01 | 1,02 | 1,03 |
| 1,02 | 4I   | 9E   |
| 1,03 |      |      |

### DBDOC Login

Username:

Password:

**Login**

Imported by Module 1,01,02 Block 2086  
 Exported Point Module 1,01,02 Block 4264  
 Imported by Module 1,06,02 Block 8102

### Block Use Index

Module 1,01,02 Block 2086  
 (TASS96GRR-2) CH4 TURB VAR TRANSDUCER

- 190demod [Tag Database]
  - 1.1 Tag: TASS96GRR-2 (CH4 TURB VAR TR...
- 1010271A.CAD
  - 2.1 Source (AO/L: Analog Exception Report
  - 2.2 Tag Name
- Exception Reported Values with Significant C
  - 3.1 Exported with default significance of 1
- log41.txt
  - 4.1 Tag Name
- log41a.txt
  - 5.1 Tag Name
- G05.DR (GAS TURB/GEN CONTROL #1)
  - 6.1 Value (ed 42 PV)
- G05A.DR
  - 7.1 Value (ed 42 PV)

### Full Text Search

Search phrase or terms:

Wildcards: ? (any one character) \* (zero or more characters)

Match exact phrase  Match each term exactly

Find any search term  Find all search terms

Operators: AND, OR, NOT (upper case required)  
 Quotes: "Find this exact phrase"

Scope:  All Topics  Current Topic  Groups

Results display:  Show Loop, PCU, Module, Block columns  
 Show number of hits per topic  
 Show topic group

**Search**

### Search Results

Searched for topics with the following text: aeration (match exact phrase)

18 hits found in 9 topics

| Topic Title                | Group               | Hits |
|----------------------------|---------------------|------|
| Module 1.03.03 Block 1064  | Block Use Indice... | 2    |
| Module 1.03.03 Block 6410  | Block Use Indice... | 2    |
| Block Index                | Module Block In...  | 2    |
| AERATION_TANKS_STAGE...    | Graphics, Sampl...  | 4    |
| 190demod (L:190demo ne...  | Taglists            | 2    |
| FIC3003 (AERATION CHAN...  | Databases           | 2    |
| PIC3000 (STAGE 1 AERATI... | Databases           | 2    |
| Tags beginning with F      | Tag Index           | 1    |
| Tags beginning with P      | Tag Index           | 1    |

**Search Again**

### Search All Titles

Type a word:

| Document title                                  |
|---|
| C.T. MW CNTL MNLK                               |
| C.T. ON   |
| G05.DR (GAS TURB/GEN CONTROL #1) [Graphics]     |
| G05A.DR [Graphics]                              |
| G07   |
| G12   |
| G16   |
| G19   |
| g1bfvdr.m1 (number 306) [Conductor NT Graphics] |
| g1water.m1 (number 305) [Conductor NT Graphics] |

### Block Use Index (Detailed)

Module 1,01,02 Block 2086  
 (TASS96GRR-2) CH4 TURB VAR TRANSDUCER

20.0 MW  
 280.0 MVAR  
 277.0 KVOLTS

GENERATOR

BREAKER  
 OPEN

273  
 279  
 274

278

Factor

ST

EL SELECTION

### Diagram

Tag: TASS96GRR-2  
 CH4 TURB VAR TRANSDUCER

S1 → AO/L [FC30] → 2086

S2 52 (VAR)  
 S3 -50.0  
 S4 150.0  
 S5 100.0  
 S6 -5.0  
 S7 1.0

S1 → TREND [FC66] → 2085

S2 1  
 S3 0

One of the many tools DBDOC provides is a **graphical block map**, showing at a glance how every block in your system is used.

- See **used and unused** blocks.
- Instantly identify **blocks with no source**.
- See **exported blocks** at a glance.

The graphical block map shows at a glance how blocks are used throughout your system.

Block 2007 is used but not tagged

Click on any block to display its source in the configuration.

Block 2040 is used and tagged.

Block 2206 is used on a graphic but not sourced in the configuration. Likely an error.

DBDOC provides a variety of useful reports and summaries for every module.

Module 1,01,02

Reports

- List of Used Blocks
- List of Unused Blocks
- Blocks with No Source in Config
- Blocks with No Source used in G
- Blocks with No Source named in
- List of Unused Tags

Graphical Block Map

Blocks 0-499

Blocks 500-999

Blocks 1000-1499

Blocks 1500-1999

Blocks 2000-2499

Blocks 2500-2999

Blocks 3000-3499

Blocks 3500-3999

Blocks 4000-4499

Blocks 4500-4999

Blocks 5000-5499

Blocks 5500-5999

Blocks 6000-6499

|      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |      |      |      |
| 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 |      |      |      |
| 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 |      |      |      |
| 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 |      |      |      |
| 2121 | 2122 | 2123 | 2124 | 2125 | 2126 | 2127 | 2128 | 2129 |      |
| 2141 | 2142 | 2143 | 2144 | 2145 | 2146 | 2147 | 2148 | 2149 |      |
| 2161 | 2162 | 2163 | 2164 | 2165 | 2166 | 2167 | 2168 | 2169 |      |
| 2181 | 2182 | 2183 | 2184 | 2185 | 2186 | 2187 | 2188 | 2189 |      |
| 2200 | 2201 | 2202 | 2203 | 2204 | 2205 | 2206 | 2207 | 2208 | 2209 |
| 2220 | 2221 | 2222 | 2223 | 2224 | 2225 | 2226 | 2227 | 2228 | 2229 |
| 2240 | 2241 | 2242 | 2243 | 2244 | 2245 | 2246 | 2247 | 2248 | 2249 |
| 2260 | 2261 | 2262 | 2263 | 2264 | 2265 | 2266 | 2267 | 2268 | 2269 |

LIMITS?

S1 → H//L → (12) 2165 → 2166



Double click on the reference to trace the signal to where it comes from.

## Hyperview in a Web Browser

The [Hyperview Web Application](#) supports Hyperview's basic functionality in a [touch-screen friendly](#) browser framework. It is suitable for tablets over wifi, and in most browsers on any networked machine. User accounts can add an extra layer of security.

Browser Hyperview supports the following:

- Basic index and hotspot based [navigation](#).
- Text and title [search](#).
- [Live data](#) on documents.
- Bookmarks and home pages.

Browser Hyperview runs in most web browsers. The interface is very similar to Desktop Hyperview.

Larger buttons, pinch-zoom, drag-pan, and a revised menu structure make Browser Hyperview tablet friendly.

Index and hotspot-based navigation allows basic signal tracing.

Text search is fully supported.

Attributes and movable specs can be shown on CAD/CLDs.

Optional login to use the web browser version of Hyperview. Configuration without login is also possible.

Live data on documents is fully supported.

## Support for AC 800M Systems

DBDOC supports AC 800M. Whether your system has both INFI 90 and AC 800M or AC 800M only, DBDOC will provide full navigational and search support (live data is not yet supported in AC 800M).

- Click on an AC 800M function block to see all the places it is used.
- Double click to trace signals to their I/O channel source.
- Search configuration, sequence diagrams, definitions and more quickly and easily.
- AFW files are interpreted to create graphics.
- AC 800M database is searchable and linked alongside other databases in a mixed system.
- Multi-page sequence diagrams are automatically stitched together for easy visualization.
- Elements and their components on 800xA graphics are located and linked.

This index shows all the places the AC 800M function block is used.

Click on the function block name to see all the places it is used.

Double click to jump to the location in the configuration.

The function block is used in an element on a graphic.

Double click to trace to the I/O channel input to this function block.

All the detailed components of each element are listed.

**AC 800M Function Block Use Index**  
 -16M1610 (16M1610) High Pressure Shower Pump

- DILUTION.WHITE\_WATER: 16M1610: High Press Shower Pump (Page 6)
  - Location
- Databases: AFW2 AC 800M Tag List (AC800MTags.tsv)
  - 2.1 Tag Details
- DILUTION.WHITE\_WATER: AC 800M F
  - 3.1 Definition
- GP Big Island LM System : 16 OCC G Dilution Water
  - 4.1 Element <GPBI\_Mot01\_Status>
  - 4.2 Element <GPBI\_Mot01\_Pump>
    - AlarmConditionState\_Descendants
    - AlarmPriorityLevel\_Descendants
    - InPar.JogEnbl
    - InPar.LocalEnbl
    - M1 Name
    - OprExp.RunInt1Override
    - OprExp.RunInt2Override
    - OutPar.LkBlk
    - OutPar.Mode
    - OutPar.NormalMode
    - OutPar.SFTTestPass
    - StartWarn vAck
  - 4.3 Ele

**'16M1610' GPBI\_Mot01**

|             |                                      |
|-------------|--------------------------------------|
| Name        | '16M1610'                            |
| Description | '16M1610: High Pressure Shower Pump' |
| Enable      | Enable                               |
| o16M1610ST  | SO1IO                                |
| ioUnused    | SO2IO                                |
| i16M1610RUN | Ack1IO                               |
| ioUnused    | Ack2IO                               |
| i16M1610RDY | RdyIO                                |
| i16M1610    | MCIO                                 |
| v1610_InPar | InPar                                |
| 1           | DeviceType                           |
| T1          | StartWarn                            |
|             | NoInt                                |
|             | NoIBnt                               |
|             | Trip                                 |
|             | Blk                                  |
|             | RFS                                  |
|             | SO1                                  |

**OCC\_16DCS8540.1.2.3 OCC\_16DCS8545\_STN2\_BLK3 AI815 Channels**

| Channel   | Name       | Variable                                  | I/O description                 | Signal | Min | Max   | Unit | Fra |
|-----------|------------|---|---------------------------------|--------|-----|-------|------|-----|
| IW1.2.3.1 | Input 1    | COARSE_SCREENING.TURBO_2.I16FT131         | #2 Turbo Rej Dil Flow           |        | 0.0 | 300.0 | GPM  | 0   |
| IW1.2.3.2 | Input 2    | LIGHTWEIGHT_CLEANING.S1_CLEANER.I16LT202  | S1 Feed Tank Level              |        | 0.0 | 11.0  | FT   | 1   |
| IW1.2.3.3 | Input 3    | REJECTS.WATER_EXTRACTOR.I16LT374          | Water Extractor Standpipe Level |        | 0.0 | 51.0  | IN   | 1   |
| IW1.2.3.4 | Input 4    | REJECTS.WATER_EXTRACTOR.I16FT532          | Water Extractor Shower Flow     |        | 0.0 | 75.0  | GPM  | 1   |
| IW1.2.3.5 | Input 5    | PULPING.DETRASHER_2.I16IT1870             | #2 DETRASHER AMPS               |        | 0.0 | 200.0 | AMPS | 0   |
| IW1.2.3.6 | Input 6    | LIGHTWEIGHT_CLEANING.S1_CLEANER.I16IT1960 | S1 LW CLEANER FEED PUMP AMPS    |        | 0.0 | 200.0 | AMPS | 0   |
| IW1.2.3.7 | Input 7    | DILUTION.WHITE_WATER.I16IT1610            | HP SHOWER PUMP AMPS             |        | 0.0 | 200.0 | AMPS | 0   |
| IW1.2.3.8 | Input 8    |   |                                 |        |     |       |      |     |
| IW1.2.3.9 | UnitStatus |   |                                 |        |     |       |      |     |

**Lo-Lo-Level Alarm (L3)**  
 -16LALL198:47  
 GPBI\_Connect

**4\_16LALL198.Out1**

**and:63**

**F\_Trig:1:64**