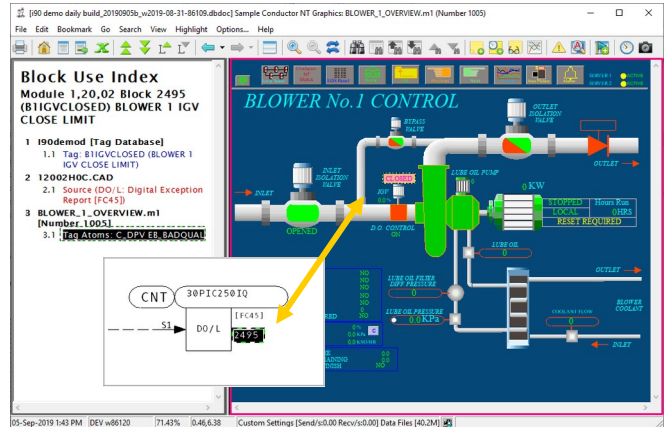


DBDOC, the essential companion to your Harmony INFI 90® and AC 800M system software, complements your existing tools and enhances productivity and effectiveness.

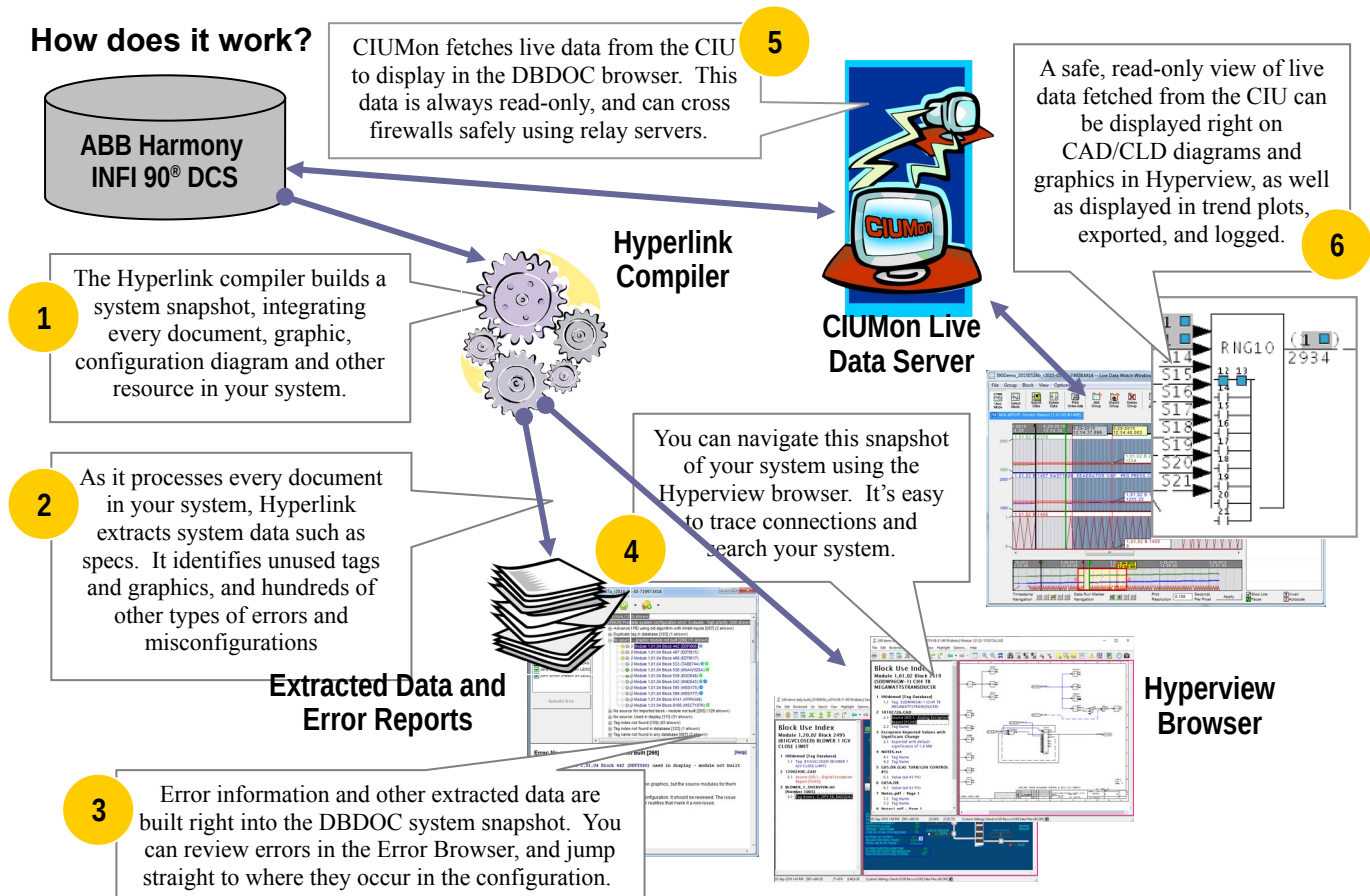
Read on to learn more about important DBDOC features.

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!

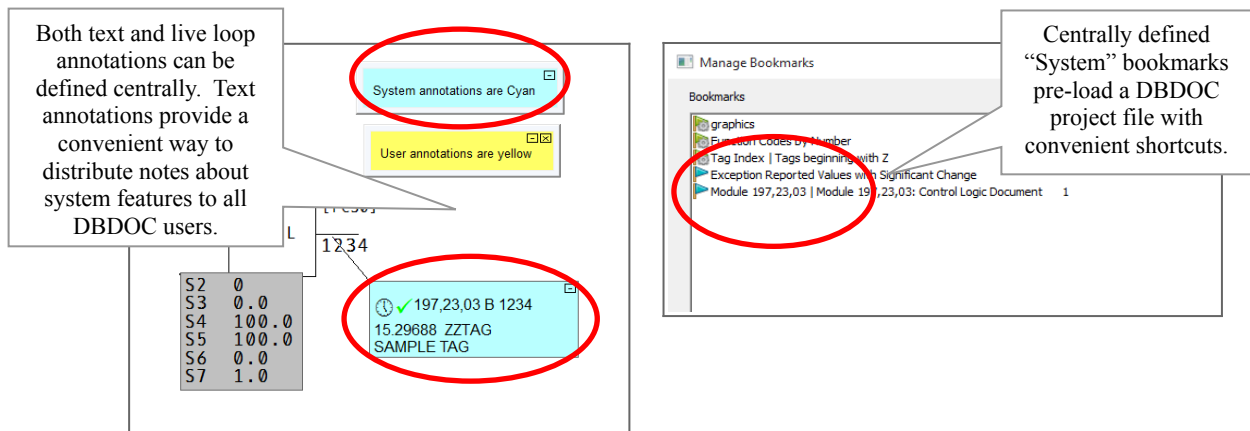
Retrace to (G05A.DR) Value (ed 42 PV)
Source (AO/L) Analog Exception Report (FC30)
Tag Name

Graphic: G05A.DR
Graphic: G05A.DR
Tag Definition: 190demod
Significant Change Report
Text Document: log41a.txt

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.

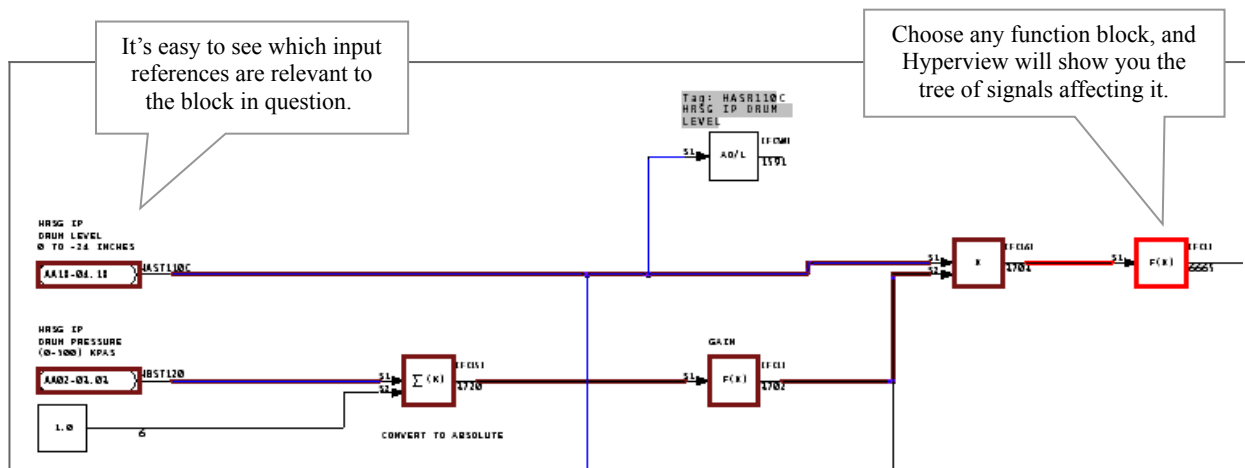
- Define a [System home page](#) as a convenient default for all users.
- Create [System annotations](#), to distribute notes about project details to all users.
- Create [System bookmarks](#) to serve as useful shortcuts automatically available to all users.

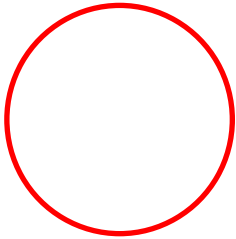


Visual signal tracing tools let you see dependencies at a glance.

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.

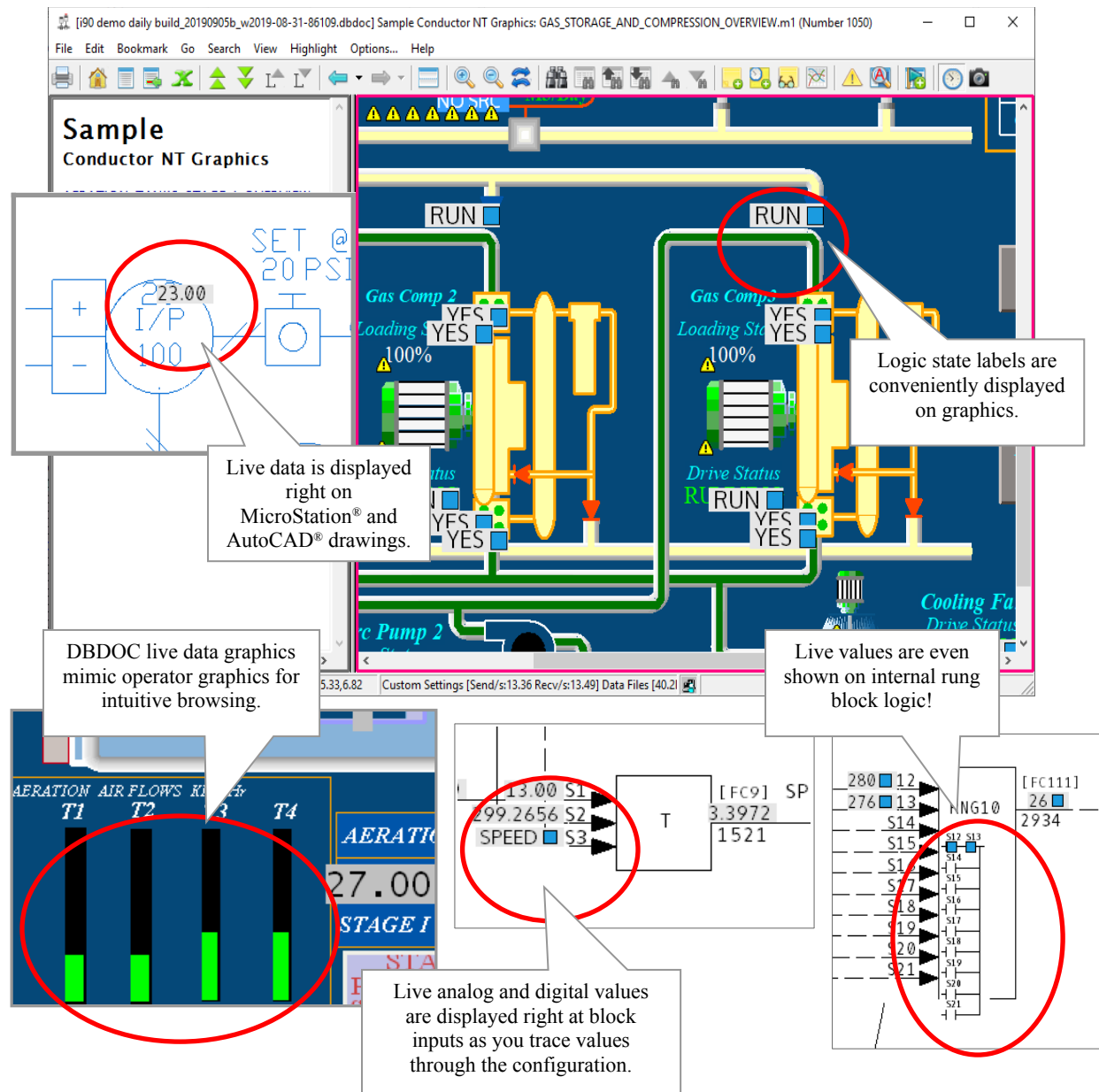
- Just right-click on a function block to see the [input tree](#) of signals that affect it. This tree can be traced to other CAD/CLD sheets via the input references.
- You can show the [output tree](#) for a block just as easily. As you trace signals onto other sheets, you can visually confirm that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





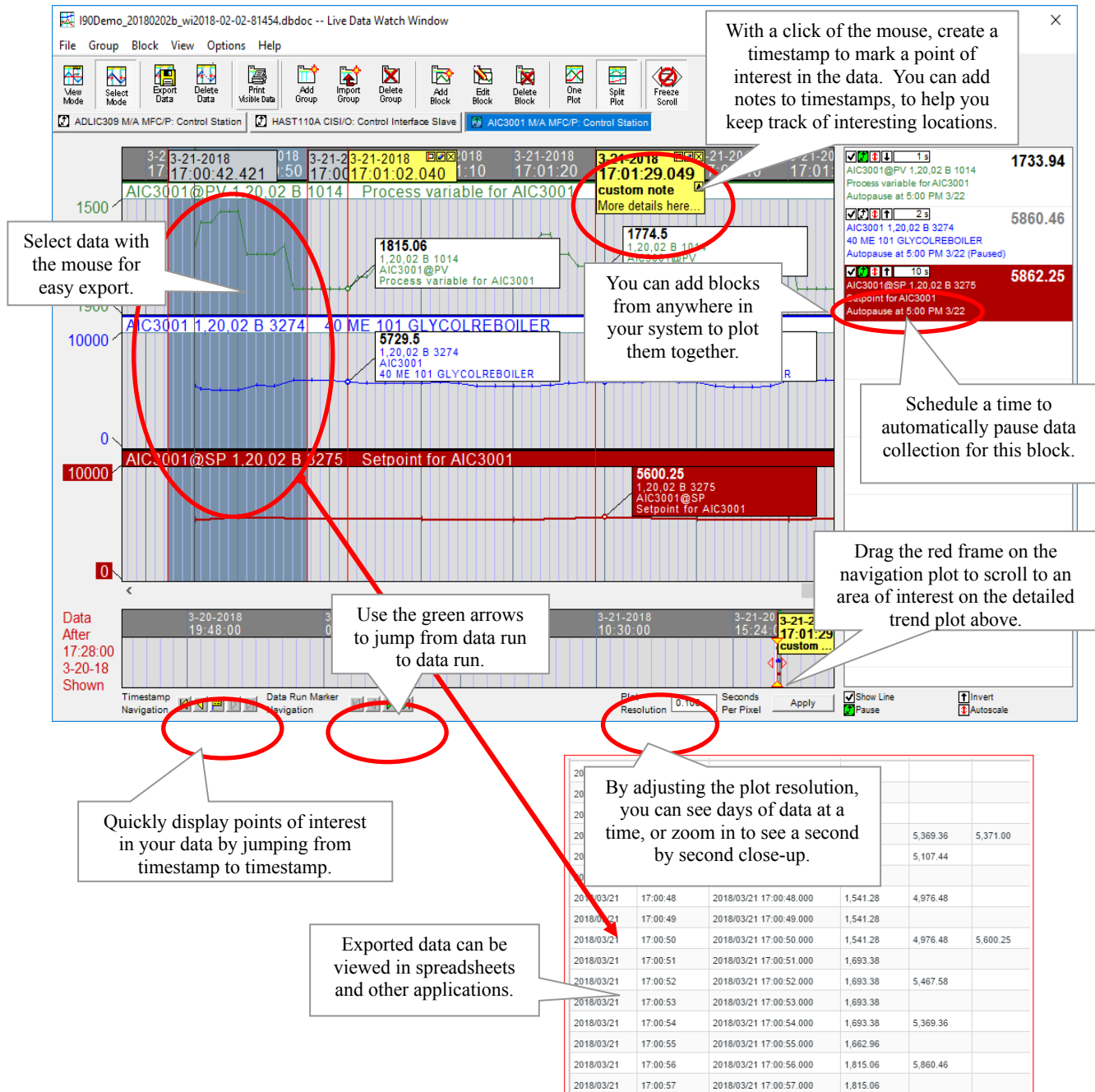
Safe, read-only live data on every document.

- 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.



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.



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.

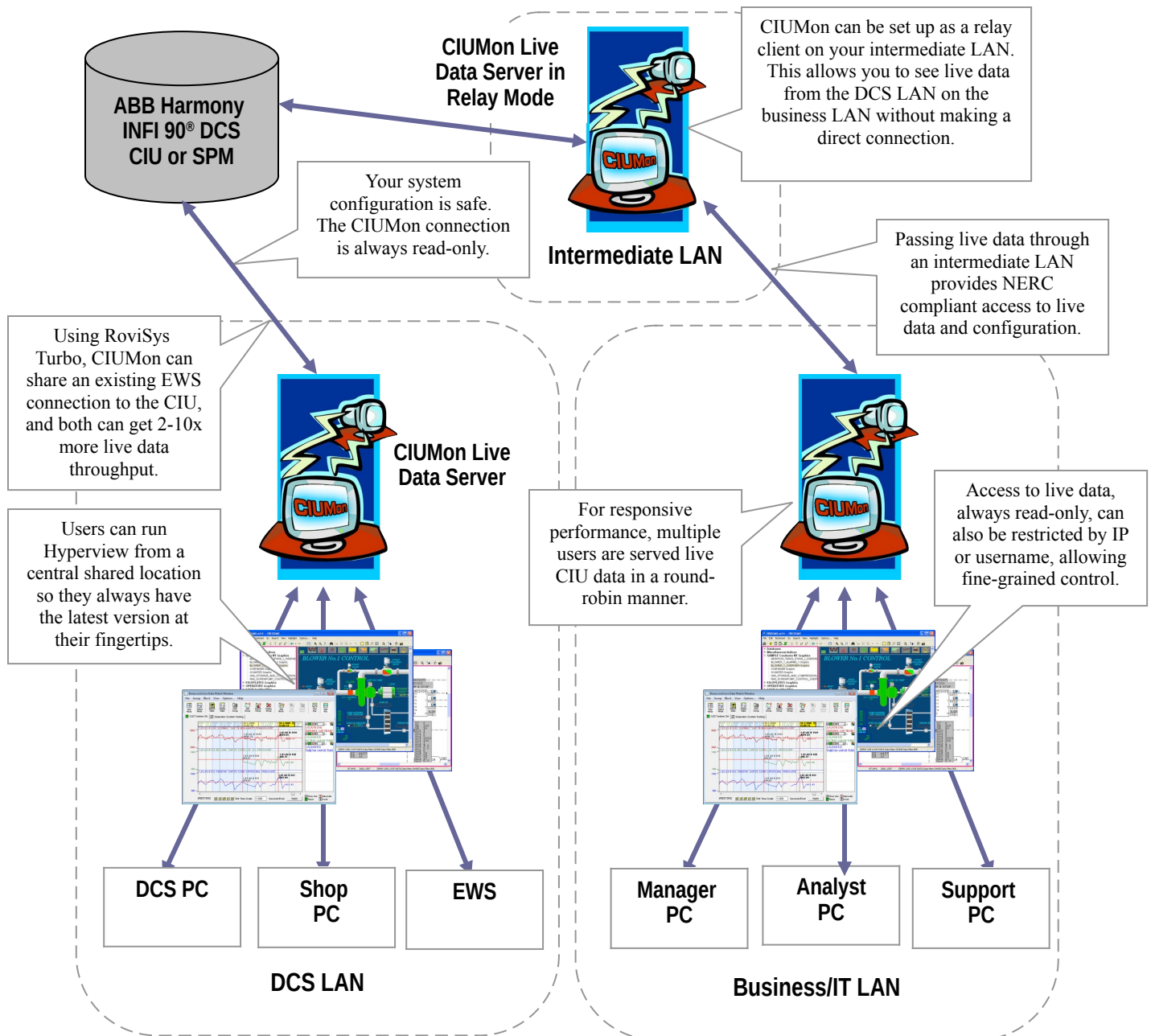
The screenshot shows the 'Search' dialog box with the 'Full Text Search' tab selected. The search phrase is 'sludge'. The 'Scope' section shows 'All Topics' selected. The 'Results display' section has 'Show Loop, PCU, Module, Block' checked. The search results are displayed in a table with columns: Title, Loop, PCU, Module, Block, Group. The results list 'Module 2, 10.03 Block 6160' and 'Module 2, 10.03 Tag Index'. A red circle highlights the search results in the project browser, and another red circle highlights the search results in the process graphic. A callout box says: 'Search results are highlighted right on the graphic.' Another callout box says: 'Double-click to display any search result in the browser.' A third callout box says: '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 first screenshot shows the 'Database Search' tab with the search phrase 'sdm'. The search results are displayed in a table with columns: Topic Title, Loop, PCU, Module, Block, Group. The results list 'SDM001 (VAP TB MEGAWATTSTRANDUCER)' and 'SDM96GW-1 (CH4 TB MEGAWATTSTRANDUCER)'. A callout box says: 'Finds all blocks in the database whose tagnames start with "sdm"'. The second screenshot shows the 'Full Text Search' tab with the search phrase 'megawatt'. The search results are displayed in a table with columns: Topic Title, Loop, PCU, Module, Block, Group. The results list 'SDM001 (VAP TB MEGAWATTSTRANDUCER)' and 'SDM96GW-1 (CH4 TB MEGAWATTSTRANDUCER)'. A callout box says: 'Finds all blocks in the database with "megawatt" in the description text.' The third screenshot shows the 'Topic Title Search' tab with the search phrase 'sdm'. The search results are displayed in a table with columns: Topic Title, Loop, PCU, Module, Block, Group. The results list 'SDM001 (VAP TB MEGAWATTSTRANDUCER)' and 'SDM96GW-1 (CH4 TB MEGAWATTSTRANDUCER)'. A callout box says: 'With topic title search, just start typing. Topic titles instantly appear!'. A fourth callout box says: 'Double-click to see the source of the block you were looking for!'. A fifth callout box says: '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 and manage system errors with the integrated error browser.

- While building your project file, DBDOC **detects errors in your system configuration**. These are built right into the project file and can be viewed using **the integrated error browser**.
- You can **review** errors, **flag** them for attention, and permanently **hide** them from view.
- Errors are **classified according to severity**, so you can easily focus on those that are most serious.
- Errors can be **filtered, grouped and sorted** in a wide variety of other ways, to make them easy to understand and correct at the source.

Click on an error to display its location in the main Hyperview browser.

Errors can be marked with checks and stars, hidden entirely if they are not a concern to your system.

Errors can be displayed and filtered. This is useful when multiple users share the system of error review.

Information is available to the user.

Error: TSTQ tests a block which does not have quality

Error Description

The TSTQ block inputs must have a quality (FC 9) and Square Root blocks (FC 7) are ones that are often tested in error.

This message is likely to show an error in the system configuration. It should be reviewed. The issue raised may be in unused logic or graphics, or have other realities that make it a non-issue.

[Complete error documentation...](#)

The screenshot displays the DBDOC software interface. On the left, a sidebar shows a list of CAD files (e.g., 1010214A.CAD, 1010215A.CAD, etc.) and a list of error messages. The main area shows a Hyperview browser with a process flow diagram. A specific error is highlighted: 'Error: TSTQ tests a block which does not have quality'. The error description explains that the TSTQ block inputs must have a quality (FC 9) and Square Root blocks (FC 7) are often tested in error. The interface also includes a 'Complete error documentation...' link and a status bar at the bottom showing '[No CIUMon Comms] Data' and '[OKB]'.

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**.

DBDOC Login

Username

Password

Login

6

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.

PCU Report Page 1:
How to read this report:
The PCU on the left is read first, then "E" or "I", then the PCU on the right.
"E" means "PCU left exports to PCU top."
"I" means "PCU left imports from PCU top."
The number preceding "E" or "I" is the block number.

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

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

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 TRANSDUCER)
- 1010271A.CAD
 - 2.1 Source (AO/L: Analog Exception Report)
 - 2.2 Tag Name
- Exception Reported Values with Significant Change
 - 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
aeration

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

Groups:
* Group: AutoCAD Sheets
* Group: CAD/CLD Sheets
* Group: Databases
* Group: Process Control

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

Search

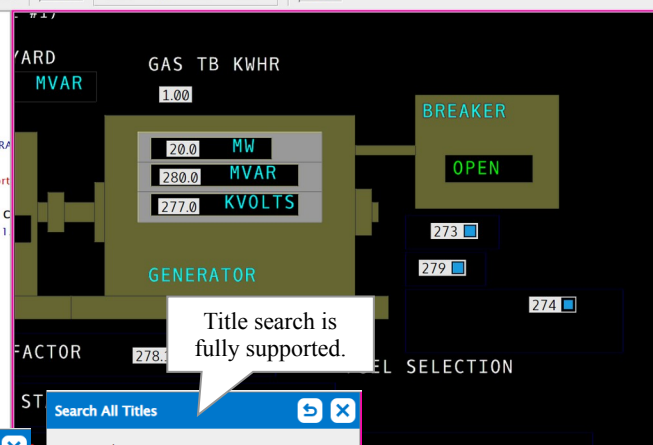
Search Results

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

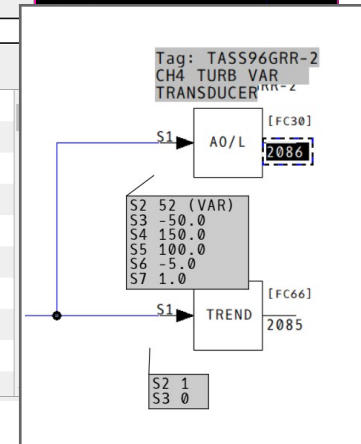
18 hits found in 9 topics

Topic Title	Group	Hits
Module 1,03,03 Block 1064	Block Use Index...	2
Module 1,03,03 Block 6410	Block Use Index...	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



Title search is fully supported.



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
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
2060	2061	2062	2063	2064	2065	2066	2067	2068	2069
2070	2071	2072	2073	2074	2075	2076	2077	2078	2079
2080	2081	2082	2083	2084	2085	2086	2087	2088	2089
2090	2091	2092	2093	2094	2095	2096	2097	2098	2099
2100	2101	2102	2103	2104	2105	2106	2107	2108	2109
2110	2111	2112	2113	2114	2115	2116	2117	2118	2119
2120	2121	2122	2123	2124	2125	2126	2127	2128	2129
2130	2131	2132	2133	2134	2135	2136	2137	2138	2139
2140	2141	2142	2143	2144	2145	2146	2147	2148	2149
2150	2151	2152	2153	2154	2155	2156	2157	2158	2159
2160	2161	2162	2163	2164	2165	2166	2167	2168	2169
2170	2171	2172	2173	2174	2175	2176	2177	2178	2179
2180	2181	2182	2183	2184	2185	2186	2187	2188	2189
2190	2191	2192	2193	2194	2195	2196	2197	2198	2199
2200	2201	2202	2203	2204	2205	2206	2207	2208	2209
2210	2211	2212	2213	2214	2215	2216	2217	2218	2219
2220	2221	2222	2223	2224	2225	2226	2227	2228	2229
2230	2231	2232	2233	2234	2235	2236	2237	2238	2239
2240	2241	2242	2243	2244	2245	2246	2247	2248	2249
2250	2251	2252	2253	2254	2255	2256	2257	2258	2259
2260	2261	2262	2263	2264	2265	2266	2267	2268	2269

LIMITS?

S1

H//L

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.

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

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.

Live data on documents is fully supported.

Text search is fully supported.

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

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

- 1 DILUTION.WHITE_WATER: 16M1610: High Press Shower Pump (Page 6)
 - 1.1 Location
- 2 Databases: AFW2 AC 800M Tag List (AC800MTags.tsv)
 - 2.1 Tag Details
- 3 DILUTION.WHITE_WATER: AC 800M F
 - 3.1 Definition
- 4 GP Big Island LM System : 16 OCC G
 - 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 vAckl
 - 4.3 Element <GPBI_Mot01_Conv>

OCC_16DCS8540.1.2.3 OCC_16DCS8545_STN2_BLK3 AI815 Channels

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

Lo-Lo Level Alarm (L3)

16LALL198:47 GPBI_Connect

In

Out1

Out2

Out3

Out4

Out5

Out6

6: 16M1610.IBs1

7: 16M1615.IBs1

8: 16M1620.IBs1

9: 16M1630.IBs1

11: 16M1635.IBs1

12: 16M1890.IBs1

Running Shower Oscillator Running

and:63

IN1

IN2

IN3

F_Trig:1:64

Clk

Q

IB2

IB3

IB4

IBs1

IBs2

IBs3

IBs4

T2

T3

TWarn

TSoftStop

SSConfirm

E1Start

Stop

LEnbl

Run