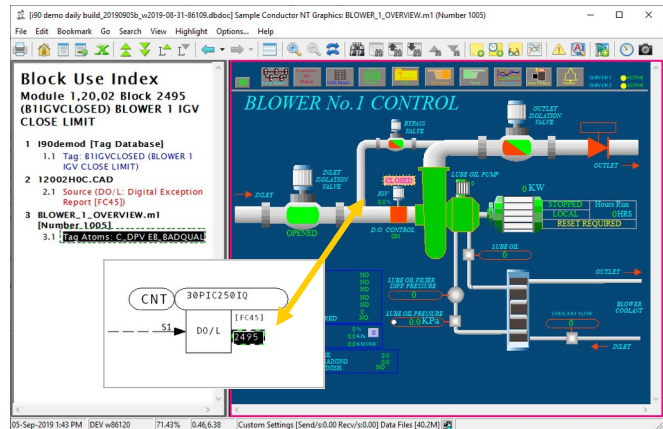


**DBDOC is the essential companion to your Harmony INFI 90® system software, complementing your existing tools and enhancing productivity and effectiveness.**

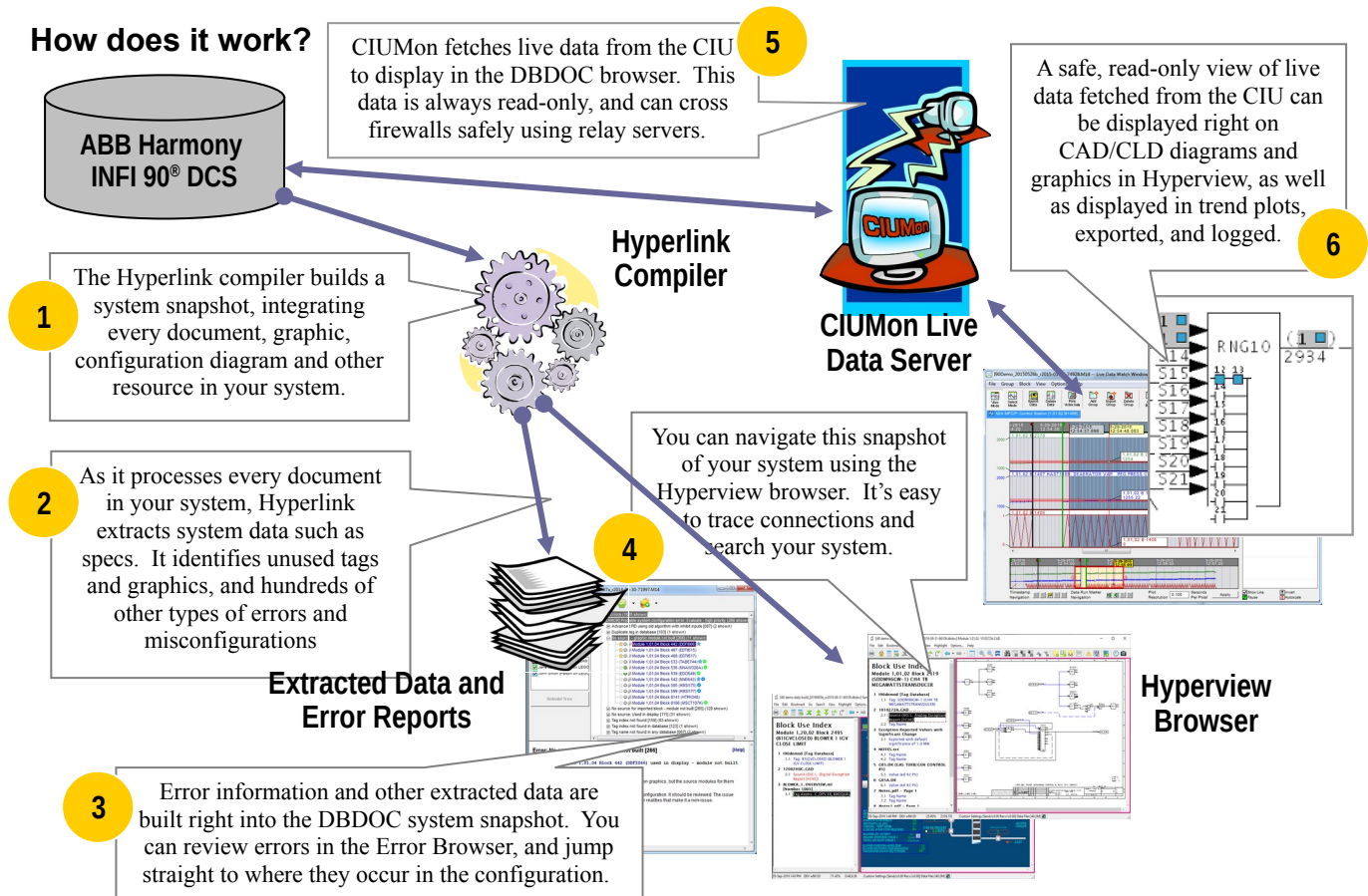
**Read on to learn more about important DBDOC features.**

## 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.

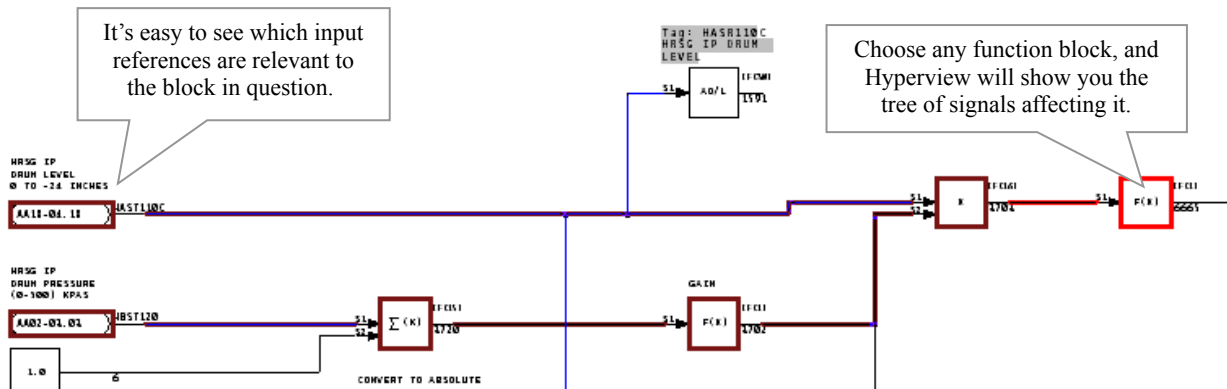
With a right-click, you can choose any of the uses of a value, and display it in the browser, all in one simple step.

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

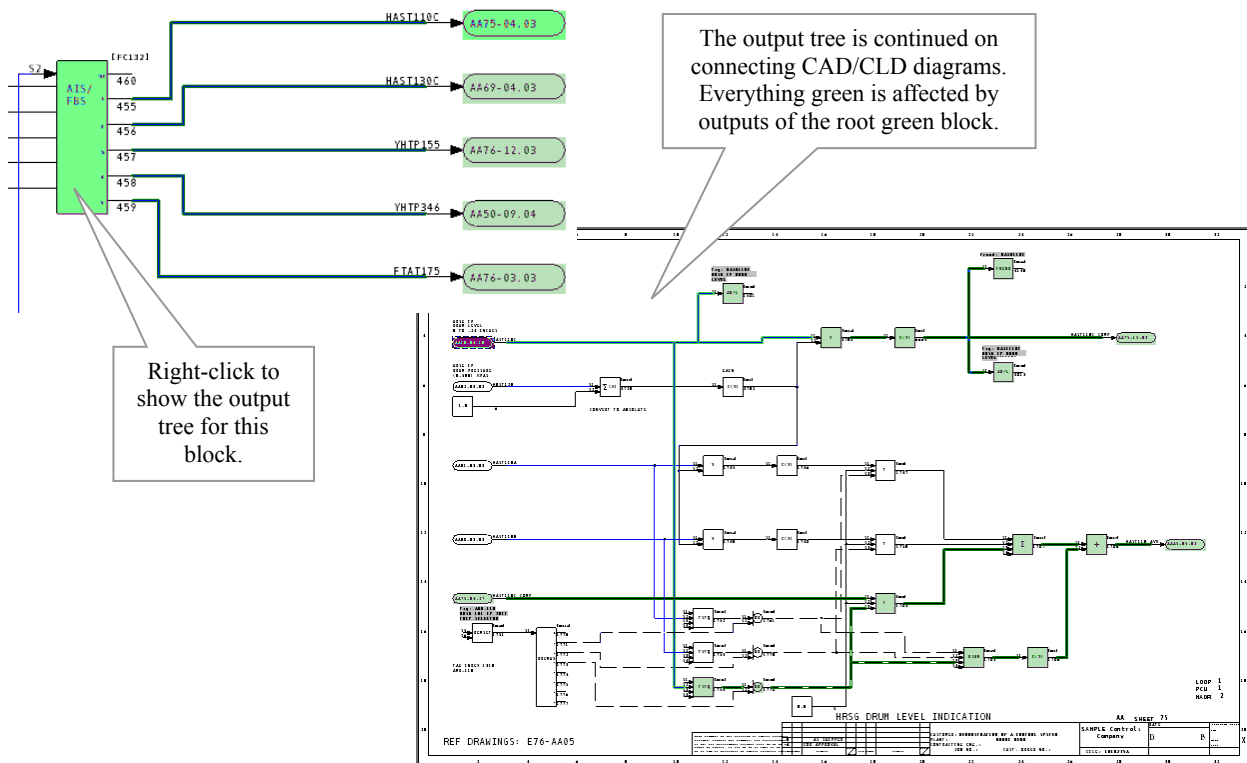
## Visual signal tracing tools let you see dependencies at a glance.

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.

Sample Conductor NT Graphics: GAS\_STORAGE\_AND\_COMPRESSION\_OVERVIEW.m1 (Number 1050)

File Edit Bookmark Go Search View Highlight Options... Help

**Sample Conductor NT Graphics**

Live data is displayed right on MicroStation® and AutoCAD® drawings.

DBDOC live data graphics mimic operator graphics for intuitive browsing.

Logic state labels are conveniently displayed on graphics.

Live values are even shown on internal rung block logic!

Live analog and digital values are displayed right at block inputs as you trace values through the configuration.

## 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 in the table, 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.

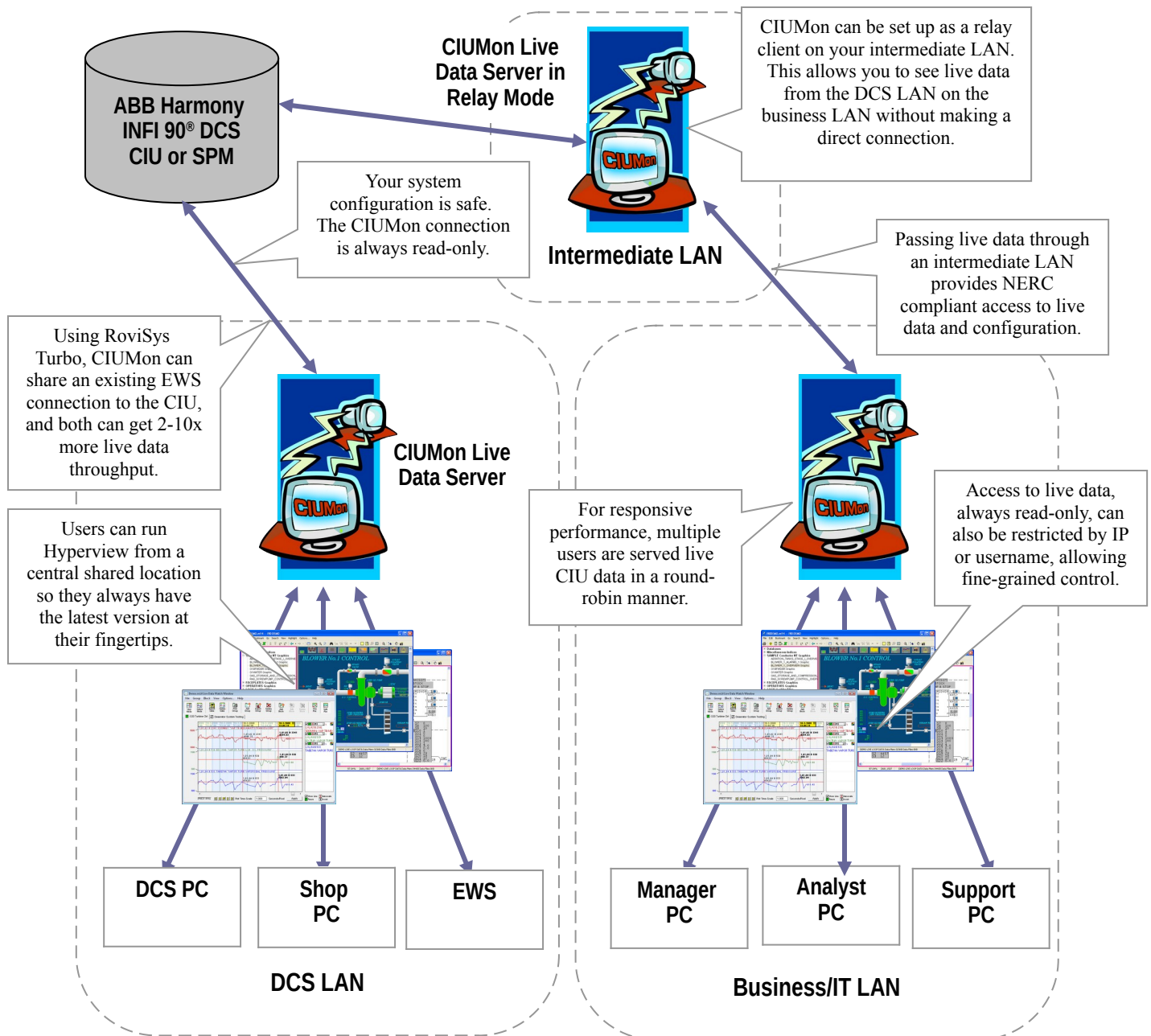
- **Database search** makes it easy to find particular blocks by number, tagname, or description text.
- **Topic title search** lets you find topics of interest interactively and incredibly quickly.

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 in the table, 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 'With topic title search, just start typing. Topic titles instantly appear!'. Another red circle highlights a specific result in the 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 with "megawatt" in the description text.

## 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.
- Error **documentation** is built right into the error browser.

The image shows a screenshot of the DBDOC error browser interface. The interface is divided into several sections:

- Filter, group, and sort errors:** A panel on the left allows users to filter errors by severity and sort them by error name. It also includes a section for including stars/checks from other users.
- Tree view:** A central tree view displays a list of errors, such as "No source: Used in display" and "TSTQ tests a block which does not have quality".
- Details panel:** A panel on the right shows the details of the selected error, including the error description and documentation.
- Diagram view:** A diagram view on the right shows the location of the error in the system configuration, with a red circle highlighting the specific block.

Callouts provide additional information:

- "Errors can be marked with checks and stars, or hidden entirely if they are not a concern."
- "Errors are displayed in a tree that can be organized in various ways to give you a good overview of the errors in your system."
- "Click on an error in the error tree to display the associated location on a CAD or graphic in the main Hyperview browser."
- "Click on an error marker to display the error details in the error browser."
- "Stars and checks from other users can be displayed and used in filtering errors. This helps multiple users share the task of error review."
- "Clicking on an error displays error information and documentation right in the error browser."
- "Integrated error documentation provides convenient information about the underlying system misconfiguration."
- "Multiple users can share help review errors, and have their updates interactively displayed in the error browser."
- "Filter, group, and sort errors in a variety of ways, to identify those of most concern."



## 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.

The screenshot displays the DBDOC software interface. On the left, a vertical pane shows a document structure with pages labeled 'Page 1' through 'Page 4'. The main area is divided into several sections:

- Top Left:** A document viewer showing a PDF document titled 'S+ Engineer'.
- Top Center:** A list of DWG files including '6415000801.DWG', '65MI020001.DWG', and '20701.DWG'.
- Top Right:** A large, detailed AutoCAD-style drawing of a complex piping or electrical system.
- Bottom Left:** A 'Navigation' pane showing thumbnails for various graphics types, such as 'Aeration TA', 'Blower\_1\_ALARMS', 'Blower\_1\_OVERVIEW.m1', and 'g1bfwdar.m1'.
- Bottom Center:** A 'RAS 1 BUILDING' overview graphic showing four tanks (Tank 1 to Tank 4) with associated control elements.
- Bottom Right:** A detailed AutoCAD drawing titled 'HIGH PRESSURE DRAIN LEVEL CONTROL'.
- Bottom Center (List):** A scrollable list of CAD files, including '1010214A.CAD' through '1010252A.CAD'.

Four callout boxes provide additional information:

- Top Center:** 'PDF documents can be built into the dbdoc project, making them searchable and cross-linked with your system documentation.'
- Top Right:** 'Include all your AutoCAD and MicroStation drawings too!'
- Bottom Left:** 'Thumbnails for all graphics types are built into the dbdoc file, to make it even easier to navigate.'
- Bottom Right:** '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.'



## Browser Hyperview

DBDOC Browser Hyperview, which supports Hyperview’s basic functionality in a touch-screen friendly browser framework, suitable for tablets over wifi, and in most browsers on any networked machine. User accounts 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.

## DBDOC Login

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.

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 a 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.

