WireCAD v9 User Manual



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Getting Started with WireCAD v9

by Holbrook Enterprises, Inc. dba WireCAD

WireCAD v9 User Manual

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Special thanks to:

A very special thanks to all of you WireCAD users, and you know who you are, that help to make the program better!

Christian Holbrook President

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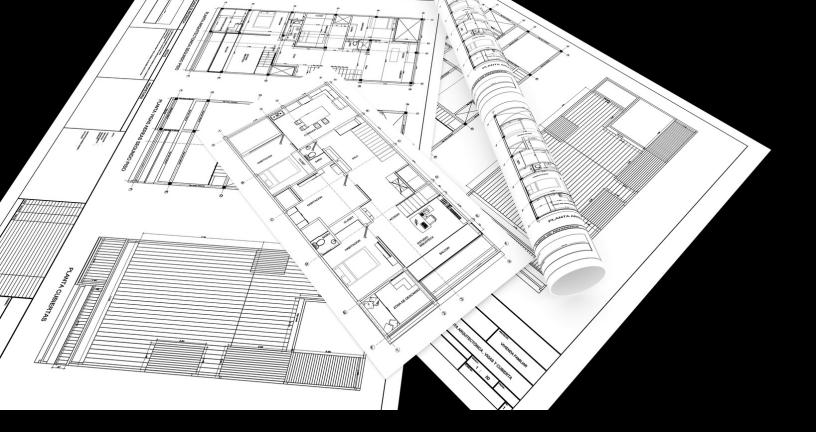
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Introduction

Welcome to WireCAD. WireCAD tools aim to decrease the frustration associated with creating accurate, detailed documentation. WireCAD produces DWG compatible drawings accompanied by either VISTADB or SQL Server databases containing all pertinent project data. WireCAD is a cable management and facility design tool that allows you to easily create AutoCADTM drawings. WireCAD maintains a database of equipment, from which you can create equipment blocks for your drawings. Equipment blocks are created dynamically from information stored in the equipment database. Rather than maintaining a large library of equipment blocks or symbols, WireCAD stores this information in a database and then creates blocks from the equipment definitions contained therein. Equipment definitions are easily added to the database. In addition to equipment tools to track:

- Projects
- Drawings
- Revisions
- Cable Types
- Signal Types
- Connectors

Things really start to fly when it is time to assign System Names (unique IDs) and Cable Numbers to the equipment in your drawing. All you do is double-click on the equipment pieces in the drawing to assign them a system name. Then double-click on the cable and assign it a cable number. All of the information regarding the selected cable is extracted from the drawing and placed in the project cables database and the drawing is updated with a new cable number.

Extensive reporting is available for the project databases including:

- · Cable run sheets
- Cable labels
- Project drawings
- Equipment lists
- Bill of Materials
- Power consumption and heat load

In addition, a powerful report designer is included with WireCAD for creating your own reports and labels, or modifying existing report definition files.

1.1 New in Version 9

The short list of feature additions and changes in the current release:

Major Changes

- Added expression engine.
- Implemented expression engine on all grids.
- Implemented OSnap Extension tracking on all OSnaps
- Added support for spare cables.
- Added support for project level signal types. There is now a Project Signal Types grid to set signal type specific properties. This will allow you to have different projects with differing signal type structures.
- Modified grids that ripple to only fill the ripple list if fields of consequence are edited.
- Added support for background indexing.
- Added support for automatic indexing on Project Open and Drawing Save.
- Added index view grids.
- Implemented natural sort on all grids and cable specific reports. No more leading zeros to get the sort right.
- Implemented quick index based ripple (if indexes exist) with option for full ripple.
- Added sync equipment insert to database function. If the equipment gets out of sync it can easily be recovered.
- Added Refresh all Pointers on Insert function. Now you can easily update all of the on sheet/off sheet pointers on a selected insert.
- Added Equipment Swap function. Now you can select a piece of equipment to replace another and decide which ports map over.
- Added Link Selected Pointers function. Now you can select a group of pointers and assign them in bulk on the same sheet or across sheets.
- Modified the Software Development Kit (SDK) with new examples. Added more samples to the SDK and a Visual Studio project templates installer. Now it's easy than ever to customize WireCAD to fit your needs!
- Modified the SDK to allow developers to modify their assemblies and recompile without relaunching WireCAD.
- Modified the SDK with 4 new events to apply rules.
- Implemented rules engine using the new expression engine. In addition to the SDK Rules events there is now a project Rules grid where you can define rules that transform data as assignment are made.
- Modified the help system to tie all dialogs and forms to context sensitive help. Created a Beginner Mode setting that initiates help to track your moves and provide context sensitive help. You can disable this in the user settings.

Minor Changes

- Added support for pinning forms in the interface.
- Added form state and position persistence. Now pop-up dialogs remember previous position.
- Modified block creation to place block body on a unique layer then set the PenColor to that layer. This will allow changes in body color after creation.
- Modified all block generated text to honor the TextStyle Height property allowing for changes in text height after block creation.
- Modified the plugin integration so the wpi files now reside in the common WireCAD folder for easier editing.
- Modified the Application Settings section to allow enable/disable plugins.
- Added Grid, Snap, Polar, Ortho, Extension Tracking to the status bar.

- Added context menu to tab items allowing different close choices: Close This, Close Others, Close All.
- Editing SysName or Terminal now automatically refreshes pointers.
- Modified report cable data selector grid to allow multi-select.
- Modified the Equipment Library dropdowns for units of measure, weight values, power units of measure etc. to inherit their data from comma separated list values in the translation manager.
- Increased load speed of Link Pointers select drawing form.
- Added setting to show reports in Project Explorer, Reports Gallery or both.
- Removed the Inserts gallery from the CAD Tools toolbar to speed up drawing switching and facilitate loading very large drawings.
- Introduced a top to bottom sort on all selection sets.
- Enhanced speed of the Reset Selected SysNames function.
- Enhanced speed of the Reset All Cables function.
- Added two new events to the SDK ActiveDrawingBeforeLinkPointer and ActiveDrawingAfterLinkPointer.
- Added Draw Text dropdowns to the Terminal to Point and Point to Terminal draw cables tool panel.
- Deassign Cable function now crosses Pointers.
- Added new Delete Handling option to delete all attached cables when deleting equipment.
- Added new Delete Handling option when deleting a cable attached to a pointer the other end cable can be reset.
- Added Expert Mode to avoid common explanatory dialogs during function execution.

1.2 Software Activation

WireCAD v9 offers 2 program levels with two licensing models:

PRO Perpetual License. This license is issued as a replacement to users of WireCAD v8 XLT/PRO with current Assurance.

PRO Subscription License. This license has an expiration date with a range of 30 days to 3 years. ENT Perpetual License. ENT fiber management tools only support the perpetual license model.

WireCAD no longer offers the XL Free mode.

An activation key is all that is required to change program levels. If you have questions about the licensing scheme <u>click here</u> 27.

Activation

Integral to WireCAD is the ability to have a single authorization key activate multiple concurrent machines if your organization has paid for more than one seat. By default, when you purchase a seat of WireCAD your license count for your key will be set to 1 (one). operational.

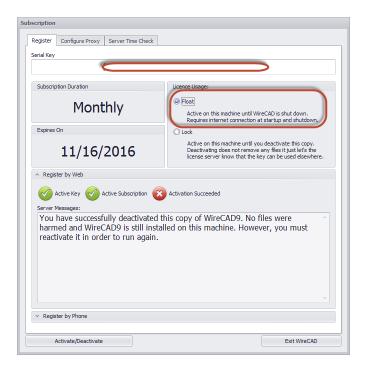
Register Configure Proxy Server Time Check	
Serial Key	
Subscription Duration	Licence Usage:
Monthly	Float Active on this machine until WireCAD is shut down. Requires internet connection at startup and shutdown.
Expires On	(a) Lock
11/16/2016	Active on this machine until you deactivate this copy. Deactivating does not remove any files it just let's the license server know that the key can be used elsewhere.
 Register by Web 	
Active Key 🕜 Active Subscription 👔	Activation Succeeded
Server Messages:	
You have successfully deactivated	this copy of WireCAD9. No files were alled on this machine. However, you must
You have successfully deactivated harmed and WireCAD9 is still inst	alled on this machine. However, you must

This will allow 1 (one) machine to be active at a time.

You may install WireCAD on any number of machines throughout your organization; However, only one (or your license count) machine will be active at any given time.

Floating License Lease

The mechanism by which we float licenses is the license lease. Leases can float or lock to a machine. During the activation of your software you will be prompted to pick a lease period.



Once activated the application until it is shut down; thus making it available to another machine. Upon application startup the license is validated and a lease is acquired automatically if web connected. If you cannot connect to the web you will need to phone WireCAD support at:

1 661.253.4370 international.

1 866.273.5298 US and Canada toll free.

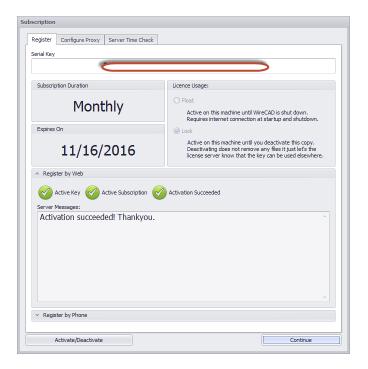
NOTE: Subscription keys must be activated via the web at least once per subscription period and cannot be activated by phone.

How To: Activate WireCAD

1. Enter your authorization key (it's the really long one that ends in 90. If you fail to enter the key correctly you will not be able to proceed.

Su	bscription					
	Register	Configure Proxy	Server Time Check			
Serial Key						
	1234-1234-1234-1234-1234-1234-1234					

- 2. If you have successfully entered a valid key and you are web connected you will be able to activate by web.
- 3. Select the Float/Lock mode and click [Activate/Deactivate]. If you are successful your screen will look like this:



If you are not web connected you will need to call us at:

1 661.253.4370 international.

1 866.273.5298 US and Canada toll free.

If no connection is available you will see the dialog configured like this:

Subscription	
Register Configure Proxy Server Time Check	
Serial Key	
Subscription Duration	Licence Usage:
Monthly	 Float Active on this machine until WireCAD is shut down. Requires internet connection at startup and shutdown.
Expires On	Lock
11/16/2016	Active on this machine until you deactivate this copy. Deactivating does not remove any files it just let's the license server know that the key can be used elsewhere.
✓ Register by Web	
Register by Phone	
	ase call 1 (866) 273-5298 or 1 (661) 253-4370 m with your Key and Unique Machine ID. We will send ne box below and click Continue.
This Machine's Unique ID (provide this to us) 0120-4695	Activation Code (provided by us)
Activate/Deactivate	Continue

Call the number above. We will need the Machine ID and will read you back an activation code that you will enter in the box.

Then click the [Continue] button.

You will receive a message box indicating the success of the activation.

Troubleshooting Activation

The following are a few reasons your activation by web will fail:

- 1. Not connected
- 2. Lease already in use by another machine
- 3. Authorization key abuse
- 4. Authorization key not found in the database
- 5. Your machine Date/Time is more than twenty four hours out of sync with our web server (UTC).
- 6. License count exceeded.
- 7. Subscription expired (Applies only to subscription keys).

The following are a few reasons your activation by **phone** will fail:

- 1. You have provided and incorrect Machine ID.
- 2. The WireCAD technician has entered and incorrect value.
- 3. You have entered and incorrect value in the activation field.

1.3 License Agreement

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1.4 Licensing FAQ

The following are some frequently asked questions about the WireCAD licensing scheme.

Q: Does WireCAD support floating licenses

A: Yes, if you choose to use the function it is built in to both PRO and ENT and for subscription keys. You may disable this feature by selecting the Lock option on the License Usage section at activation time. Choosing to do so limits that Authorization Key to that machine only.

Q: How many machines can I install WireCAD on?

A: You may install WireCAD on any number of machines. You will only be able to launch WireCAD on as many machines as your license count supports. The default license count is 1. If you wish to purchase additional licenses you may want to consult with your WireCAD sales professional who will help you decide the best course of action.

- Q: I have a laptop and a desktop WireCAD used to let me install on both. How come I have to choose?
 A: You don't. WireCAD will still install on both. It will only run on one at a time.
- Q: What happens if my machine dies?

A: If your machine dies and you are using the floating license scheme, one of two things will happen:

- 1. Install WireCAD on the new machine an wait for your lease to expire in what ever lease expiration period you selected (not optimum, but serviceable).
- 2. Call the WireCAD sales team. They can manually expire the lease for you. You will need your authorization key and company name, as well as the machine name of the machine that died.
- Q: I am not connected to the internet very often, can I still use the floating license scheme?
 A: We recommend that you use the floating license scheme only if you are regularly connected to the web

Q: I am going on-site. How to I ensure that my copy of WireCAD will stay active while I am disconnected from the web?

A:If you have already activated WireCAD in Float mode the click the [Activate/Deactivate] button and proceed to deactivate. Then set the License Usage to Lock and Activate.

Q: What are the benefits of the Assurance Subscription?

A: A current Assurance subscription gives you the following premium benefits :

- Free major and minor version upgrades and hotfixes.
- Priority technical support.
- New samples, tips and how-to topics from time-to-time.
- Discounts on training.
- Access to beta products.

- Assurance Price Lock guarantees that your annual Assurance rate will not increase year-to-year as long as you remain current.
- Q: Does the license expire if the Assurance Subscription expires?
 - A: Depends. If you have been issued a perpetual key, your license does not expire even if your Assurance expires. You can use the products indefinitely even after the Assurance subscription expires. I you have purchased a subscription key your key will expire when your subscription expires.
- Q: How long does my Assurance Subscription remain valid? A:Your subscription duration is for 1 year from date of purchase or renewal.

Q: My Assurance Subscription is about to expire. What should I do?

A:You must renew your subscription to continue to receive the latest versions for free along with all the other benefits of the subscription. To renew your Assurance, contact sales@wirecad.com.

Note that you may or may not receive notifications from Holbrook Enterprises, Inc. dba WireCAD about the pending expiration of your subscription. It is your responsibility to renew your subscription when it is about to expire. You can renew your subscription as early as you want or opt for a monthly credit card payment.

Q: When can I renew my subscription?

A:You must renew your subscription before the expiration of your current subscription You can renew your subscription anytime before your current subscription has expired; you will not lose any days as the new subscription will come into effect on the day your current subscription ends. In effect, your current subscription will be extended by 1 year.

If you do not renew your subscription before the expiry of your current subscription, your subscription is considered as lapsed and you will not be eligible for free upgrades and other benefits anymore.

Q: My Assurance subscription has lapsed. How can I get the latest version?

A:Maintaining your Assurance subscription and renewing your subscription each year to keep it current is the best and the most cost-effective way to receive all new major and minor versions as they are released. In case your subscription has lapsed and you want to upgrade to the latest version you may simply renew your Assurance subscription at the current rates.

Q: Do you offer academic discounts?

A: We do have academic discounts if WireCAD will be used for education/research purposes. Please contact sales@wirecad.com for more information.

1.5 Context Sensitive Help

WireCAD v9 is tightly coupled to the help file.

When you first start WireCAD we enable **Beginner Mode**. In this mode your moves reflected in the help system. As you launch functions the help system will display context sensitive help for forms and dialogs.

You can enable/disable Beginner Mode from: Application Menu>Settings... [User][Expert Mode]

You can get context sensitive help in the following ways from within the application:

1.5.1 Dialog Based Help

Each dialog in WireCAD 9 has a ? in the upper right-hand corner.

91 New Drawing	
New Drawing	
Select a Template Drawing	
(None) ANSI AH.dwg ANSI A.Hadxape.DWG ANSI_A.Portrait.DWG ANSI_D.WG ANSI_C.DWG ANSI_C.DWG ANSI_D.DWG BLANK.DWG BLANK.DWG ISO_A11.andscape.dwg	×
Show This Again	Next > Cancel

Clicking this will open the help file to a section specific to that dialog.

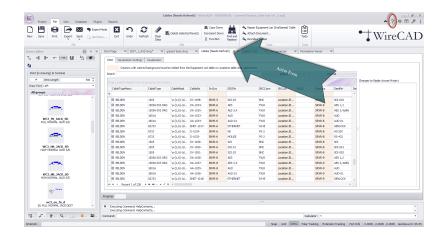
8	WireCAD – 🗖	×
Hide Back Forward Home Print Options		
Hole Back Forced Hole Prof. Quitors Content light gated favorate Content light gated favorate U Vectore U Vectore	New Drawing Wizard Image: CAD brakes Image: Carbon control of the sector of	↑ IP Nenu
Model Space Bandwise Groups Groups Macage Mac	with the second	
Advanced foot Datage Advanced foot Datage Advanced foot Datage Data Datage Data Datage Data Datage Data Datage Data Datage Datage Datage Advanced Datage For Prove Datage	Expanditurin Create a new drawing for the project somewhere in the project/drawings! folder tree. Salect a template drawing. Template drawings are drawings that are placed in the Template Drawings Support Pub. They typically contain layouts and page borders, but may also be projudied with backhoose systems. Set whether to display Model Space Boundaries. These are bounding rectangles based on a scale factor of the Model Space toxt height used and the desired output text height of the weight. Related Topics	
	How To Create a New Drawing Model Space Boundaries Dialog Options	~

31

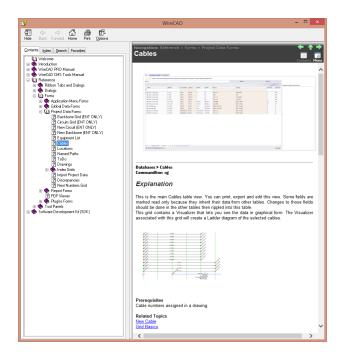
1.5.2 Form Based Help

To display context help for the active form click F1 or the Help menu item





For example clicking the **Help** menu when the **Cables** database is the active form. Displays the following help topic.



1.5.3 Tool Panel Based Help

The same follows for tool panels. Click the ? icon to show a help topic specific to that tool panel.

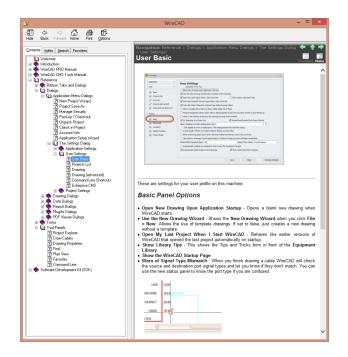
Project Explorer	0	L X
💼 🕲 2		
Item		
 Global Databases € Equipment Library E Default Signal Types Cable Types Connectors Permissions 		Î
	WerCAD	- • ×
تلا ∰ ⇔ ⇔ ∰ ∰ Hide Back Forward Home Print Options	WireCAD	
Constraint of the second	l Panel Options	you will first have to open a project. project folder in a windows folder browser.

1.5.4 Settings Panel Based Help

When the Settings dialog is shown you can get help for each panel by clicking the **[Help]** button.

Application ~	User Settings		
User ^	Customize It For You		
Basic	Open New Drawing Upon Application Startu	P	
-	🗹 Use the New Drawing Wizard When Creatin	g a New Drawing	
Projects List	Ø Open My Last Project When I Start WireCA	D Show Library Tips and Tricks	
Drawing Drawing	Show the WireCAD Startup Page When I St	art WireCAD	
Drawing (advanced)	🗹 Warn Me When I Mismatch a Signal Type W	hile Drawing Cables	
Command Line Shortcuts	When I Double-click a Many-to-Many Cable	Assign All of Them	
Enterprise CMS	Keep My Equipment Library Open After I A	d Equipment to the Drawing (Only Works on Dual Monitors)	
Project ^	When I Link Pointers Go Back to the Startin	Drawing When Finished	
Project	My Spacebar is my Enter Key	MouseWheel Double-Click Zooms Extents	
Basic	Library Multiple Port Add Leading Zero Count	0	÷
Advanced	Only applies to newly created ports. This	etting presets the Add Port Dialog.	
Eccations	I will manually refresh my Project Explorer (faster, but less info).	
② Delete Handling	U When a Drawing Opens Don't Show the Dra	w Cables Tool Panel, I Know How to Find it.	
Project Rules	Lazy load my drawings in the Project Explor	er. Faster but does not show all folders expanded.	
Enterprise CMS	Default BOM Snapshot Name {0}	Report Show Mode Gallery	-
Export Settings	Automatically validate my equipment when	I open the Equipment List grid	
Status Behaviour	Automatically Index Project and Draawings	Show Index Operation Progress	
100 Status Schullout			

Clicking the help button will show context specific help for the current settings panel. In the case below we see the help for the **[User][Basic]** panel.

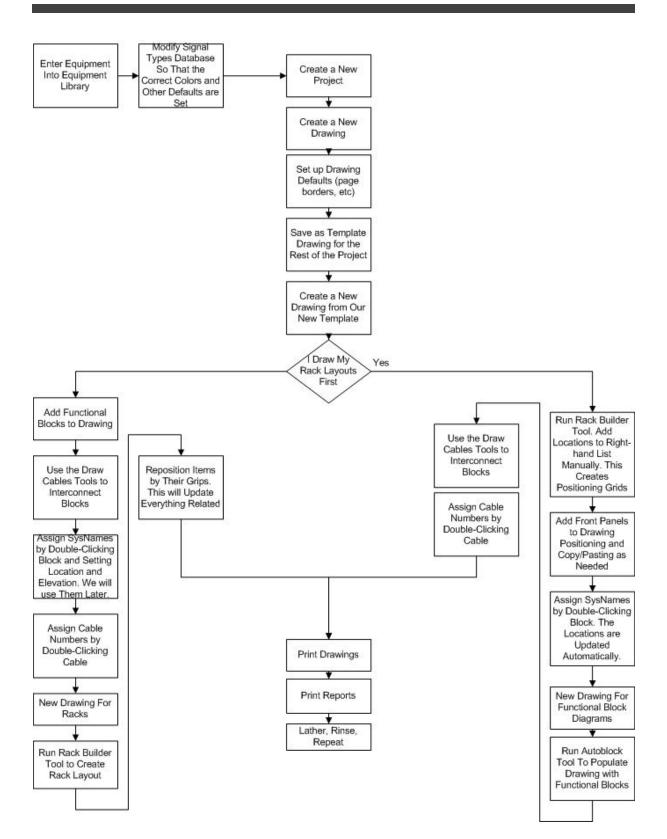


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WireCAD PRO Manual

2.1 Getting Started



2.1.1 Grid Basics

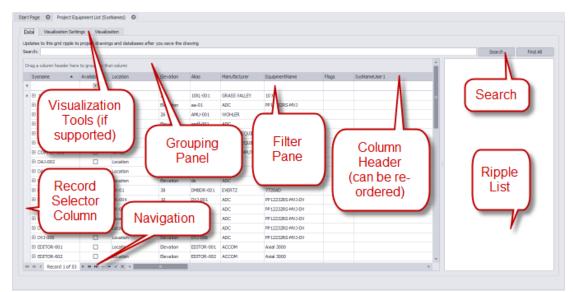
Menu: various

Default command line shortcut: various

WireCAD displays data from the various databases in grid form. WireCAD grids support the following:

- Searching
- Sorting
- Column re-ordering
- Column hiding/showing
- Column grouping
- Column resizing
- Column filtering
- Copy Selection Down
- Increment Selection Down
- Hierarchical display
- Export to PDF, EXCEL, TXT, HTML, XML and more

In addition, several grids support WireCAD Visualization Tools.



Grid Parts

2.1.1.1 How To: Grid Functions

- Grid Searching Enter your search text in the Search box and click [Search]. WireCAD will search all fields in the table for the search term. The % character is the wild card.
- Sort Clicking on a column header will cause a sort. Clicking it again will reverse the sort order.
- **Column re-ordering/resizing -** Drag a column from its center to initiate a move. Drop it where you want it to display. To resize a column, drag its edge left or right.
- Column hiding/showing To hide a column: right-click the column header and choose [Remove this Column] from the context menu.

To show a column:

- 1. Right-click any column header
- 2. Click the [Column Chooser] context menu item

Customization	×
Ag	^
AppID	
CreatedOn	
DateAdded	
DateModified	
DBRef	
EntityType	Ψ.
The Customization form	displays

hidden column headers

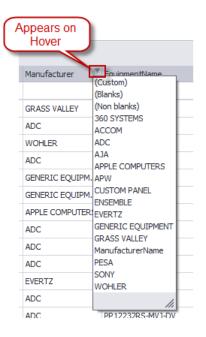
- 3. Drag the column header you wish to display and drop it on the header bar with the other column headers.
- **Column grouping** If the grid supports grouping the grid will display a GroupBy panel at the top indicating that column headers may be dropped there to group.

Sea	rch:							
Ν	1anu	ufac	turer 🔺 📃 Ed	quipmentName	*			
	Sys	nam	ne 🔺	Available	Location	Elevation	Alias	Flags
٩								
	•	Ma	nufacturer: 36	0 SYSTEMS				
►		Ŧ	EquipmentNan	ne: Image Se	rver 2K			
					Location	Elevation	SRVR-001	
					RK-003	10	SRVR-002	
	►	Ma	nufacturer: AC	сом				
	►	Ma	nufacturer: AD	с				

Grid grouped by Manufacturer and EquipmentName fields

To un-group simply drag the column header back to the header bar.

- Column filtering Columns may be filtered in one of three ways:
- 1. Click the column header filter icon on the column header. You will be presented with a list of unique values found in that column.



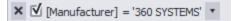
2. Click the (Custom) menu item presented in the column filter list.

Custom AutoFilter		×
Show rows where: Manufacturer		
Equals And Or	Ŧ	(Enter a value)
(Select an operator)	•	(Enter a value) 🔻
		OK Cancel

- 3. If the grid supports it a filter pane will appear as the top row of the grid. Entering filter criteria in the desired column will cause filtering.
- Clearing Filter Criteria If a filter has been applied to a grid, a filter panel will display on the grid in the lower left hand corner.

	Sysname	Available	Location	E
۴		۲		L
۲	E SRVR-001		Location	E
	E SRVR-002		RK-003	1

You may clear the filter by closing [X] the filter panel.



- Copy Selection Down If the grid supports it you will be able to copy the top item in a selection down into all of the selected cells below it. Follow these steps:
- 1. Create your selection
- 2. Click Edit>Copy Selection Down or press [Ctrl]+[D] on your keyboard.
- 3. Be sure to click File>Save to commit your changes to the database.
- Increment Selection Down If the grid supports it you will be able to increment the top item in a selection down into all of the selected cells below it. Follow these steps:

- 1. Create your selection
- 2. Click Edit>Increment Selection Down or press [Ctrl]+[I] on your keyboard.
- 3. Be sure to click **File>Save** to commit your changes to the database.
- Deleting Cell Data To delete the contents of the selected cells simply click the [Del] key on your keyboard.
- Deleting Selected Rows To remove the rows from the grid:
- 1. Select the rows to delete by click on the Record Selector (left-most column without data).
- 2. Click Edit>Delete Selected Rows or click [Ctrl]+[Del] on your keyboard.
- 3. Be sure to click **File>Save** to commit your changes to the database.
- **Display Hierarchical Detail Data** If the grid supports it and there is detail data to display you can click the [+] button in the left-most row.

Orag a column header here to g	roup by that column
ManufacturerID P SCOMM	Acc No Detail Data to Display
	SW PNL
🕀 AA	CUSTOM BTN PNL
I AA	510
Inputs Collection	Outputs Collection
۹ Name	Conr
▶ 🕂 L	R
⊕ R	R
+ Vid	R
	Attache
	Axial 2000
ACCOM ADC ADC	DV PP PP PP RG
	PPI1224N 6100 DELAY UNIT MX1000E D4-F
⊕ A1A	D10C2
⊕ AJA	KBOX
⊕ AJA	Digital I/O
AIA ①	HD 10AMA
<pre>44 4 Record 1 of 3 + ++</pre>	$H - \bullet \checkmark \times \bullet$

• Export - Click File>Export>[File Type]. WireCAD will then export the data with your current grouping, sorting, and filtering applied to the selected format.

2.1.2 Setting Up Your Global Data

Menu: Several Default command line shortcut: le

WireCAD maintains a global database with tables representing Manufacturers, Equipment, Signal Types, Connectors, Etc.

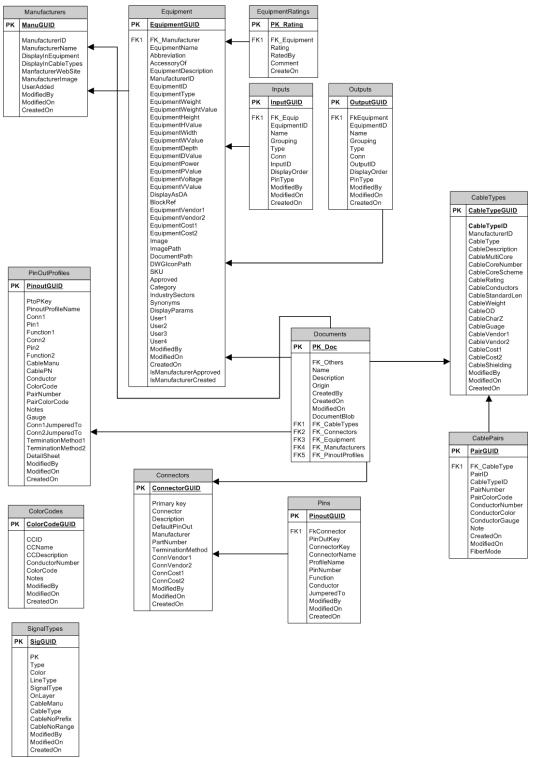
Getting started with WireCAD entails setting up the global databases to fit your needs. While the database is populated with data you may find that it suits your needs to purge the data and start fresh. If this is the case we can provide empty databases. At the very least you will want to set up the Signal Types grid with your defaults.

Next you will customize the Equipment Library with the products and IO that you use. In order to do this, you may either download existing products from the WireCAD Community Server or <u>enter your own</u> [54].

Structure:

- o Manufacturers The topmost table in the hierarchy
- **Equipment** The Equipment description
- o Inputs inputs of a device
- Outputs outputs of a device
- \circ Signal Types signal types and a bunch of defaults.
- o Connectors connector types.
- o Pinouts pin out definitions (data).
- $\circ~\textbf{Color}~\textbf{Codes}$ color code look-up. Used by Cable Types.
- o Cable Types cable type information.
- Cable Cores cores or conductor data for a cable type.

WireCAD PRO Manual



Global Equipment Library Schema (abrv)

2.1.2.1 Signal Types

Menu: Database > Default Signal Types Menu: Database > Project Signal Types Default command line shortcut: st Default command line shortcut: ShowProjectSignalTypesGrid Related Settings: None

The Signal Types grids contain many defaults:

- Pen Color
- Line Type
- Layer mapping
- Cable Type Manufacturer
- Cable Type
- Cable Number Prefix

We cannot stress the importance of this data collection. You should probably start here and define your defaults.

There are Signal Types collections:

- 1. Default Signal Types is contained in the Global Database.
- 2. The Project Signal Types grid is generated dynamically as you go.

WireCAD first looks to the Project Signal Types collection for information. If not found the Default Signal Types collection is queried. If found the Project Signal Types collection is updated with the defaults and the Project Signal Types collection is returned to the requesting function.

2.1.2.2 Cable Types

Menu: Database > Cable Types.

Default command line shortcut: ShowCableTypesGrid Related Settings: None

This look-up grid contains the global list of Cable Types. The list is hierarchical and shows the relation of a Cable Type to its Conductors Collection.

plana	ation																
Ma	nufactu	CableType	CableDescr	CableMulti	CableCore	CableCore	CableRating	CableCond	CableStand	CableWeight	CableOD	CableCharZ	CableGuage	CableVendor 1	CableVendor2	CableCost1	CableC
-	GENERIC	48 STRAND	48 STRAND	\checkmark		Numbered		48									
	Conduc	tors Collection															
	۹ Condi	uctor Color		Cor	nductor Number		F	air Number			Pair Color Co	de		Fiber Mode			
	17			17						17	17			MM			*
	15			15						15	15			MM			
	23			23						23	23			MM			
	28			28						28	28			SM			
	5			5						5	-			MM			0
	43			43						43				SM			
	13			13						13				MM			
	45			45						45				SM			
	19			19						19				MM			
	25			25						25				SM			
	31			31						31				SM			
	22			22						22				MM			
	47			47						47				SM			
	1			1						1	1			MM			-
Ŧ	GENERIC	72 STRAND	72 STRAND	\checkmark		Numbered		72									
۰	GENERIC	36 STRAND	36 STRAND			Numbered		36									
		d crm ann d 1 of 21 ▶				Numbered		A									•

2.1.2.2.1 How To: Create a New Cable Type

- 1. Click Database > Cable Types.
- 2. Click File > New.

New Cable Type	Ν	>
File	ß	
- 🛛 🔚		
Manufacturer ID	Select Manufacturer Cable Type or P/N	
Description		
Cable Char Z	Cable OD	\$
Cable Guage	Cable Rating	*
Cable Weight	Standard Length	\$
Core/Conductor	Configuration	
Shielding	Is Multi Core Count	4 7
Conductors Per Co	re 1 🗘 Conductor Count Including Shield(s) 1	\$
	Default Core/Fiber Mode	Ŧ
Color Code App	plies To:	
Conductors	O Cores None	
Color Code		Ŧ
Information:		

3. Fill in all information about this cable including **Manufacturer**, **Cable Type** or **P/N** & **Description**. If you are working in the CMS tools you will need to define multi-core core configuration.

New Cable Type								×
File		ч						Ŧ
- 🛛 🔚								
Manufacturer ID	WEST PENN WIRE		۳	Cable Type or P/N	Test		_	
Description	Test							
Cable Char Z				Cable OD				*
Cable Guage				Cable Rating				۳
Cable Weight			*	Standard Length				*
Core/Conductor	Configuration							
Shielding	*	Is Multi Core	C	Core Count		1		
Conductors Per Co	re		1	Conductor Count I	ncluding Shield(s)	1	* *	İ.
				Default Core/Fiber	Mode		Ŧ	
Color Code Ap	plies To:							
 Conductors 		O Cores			 None 			
Color Code							Ŧ	
Information:								

4. If this cable is a multi core cable, you will need to check the **Is Multi Core** checkbox and set how many cores are in this cable.

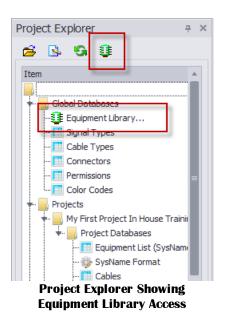
New Cable Type						×
File						Ŧ
- 🛛 🔚						
Manufacturer ID	WEST PENN WIRE	۳	Cable Type or P/N	Test		
Description	Test					
Cable Char Z			Cable OD			÷
Cable Guage			Cable Rating			Ŧ
Cable Weight		+	Standard Length			÷
Core/Conductor	Configuration					
Shielding	▼ Is Multi Core	1	Core Count	1	*	
Conductors Per Co	re	1	Conductor Count Ir	ncluding Shield(s)	÷	
			Default Core/Fiber	Mode	۳	
Color Code Ap	plies To:					
Conductors	O Cores			None		
Color Code						
Information:						

- 5. Select the Default Core\Fiber Mode. To label specific cores as SM or MM, see step 8.
- 6. Click File > Save.

2.1.2.3 How To: Open the Equipment Library

The Project Explorer

The Project Explorer allows access to some of the global data grids. You can also access all of the these grids from the **Database** menu.



Menu Commands to Access The Equipment Library

- Database>Equipment Library
- With an active drawing the Equipment Library can also be opened from: Advanced Tools>Equipment Library
- Commandline shortcut: le

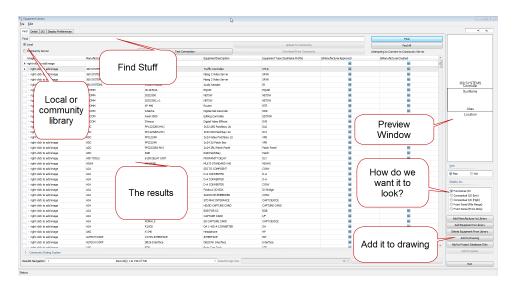
2.1.3 Equipment Library

Menu: Database>Equipment Library Menu: Advanced Tools>Equipment Library Default command line shortcut: LE

The WireCAD Equipment Library is where you will spend a fair amount of time as you get define equipment that you will use in your designs. This is also where we come to create CAD blocks in our drawings. There are many settings here that let you customize appearance. This chapter is the basics.

Find Tab

Find equipment definitions in the global database or the Community Server. Preview the block before <u>adding</u> [65] to drawing.



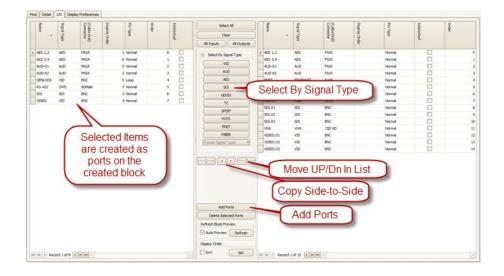
2.1.3.1 Detail Tab

Edit details. Associate with external files.

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2.1.3.2 I/O Tab

Add 433, edit, select IO to display in created block



Related Topics

How To: Add Some Inputs and Outputs 57

2.1.3.3 Display Preferences Tab

Controls the appearance of the created block.

A standard functional block appearance	A standard DA appearance	Functional Block with a torn bottom edge	Functional Block with a torn left edge
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Related Topics How To: Add Equipment to Drawings

2.1.4 Creating a New Equipment Definition

Menu: Database>Equipment Library[Add Equipment to Library]

Default command line shortcut: le

Equipment definitions are at the heart of WireCAD. They describe equipment down to the I/O. Create a new equipment definition from which to create functional blocks, rack panels, etc.

2.1.4.1 How To: Add Equipment to the Library

- 1. Click Database>Equipment Library
- 2. Click [Add Equipment to Library]

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3. Select or add a Manufacturer.

New Equipment		
Who Makes It and W	hat's it Called	
Manufacturer* EquipmentName/Model/Part Description* SysName Prefix*	Select a Manufacturer Number*	
* = Required		
	Next > Cance	1

- 4. Enter model/pn/name, description, etc.
- 5. Click [Next >]



There is always some confusion about the **SysName Prefix** (Equipment Type) field. Consider the following:

We have two types of video server -model A and model B - that use similar wiring. We may consider using the **SysName Prefix** - SRVR. Anytime we create an instance of one of these we they will be SRVR-01, SRVR-02, and SRVR-0n. Now consider that model A is not available to use and that we have to install model b instead. No problem. Because they "harness" is named SRVR-n we can interchange Make and Model as needed.

6. This page is optional, but we recommend filling in the Front Panel File field.

👬 New Equipment		
New Equipment		
Completing the wizard		
Front Panel File		
Image	No image data	
Categories Synonyms		
	Finis	h Cancel



Filling in the Front Panel File field will make the Rack Builder tool work. Leave it empty and you may be frustrated later.

7. Click [Next >] to add the new definition.

The wizard completes and you are taken to the Equipment Library to edit the newly added equipment definition.

2.1.4.2 How To: Add Some Inputs and Outputs

- 1. Open the Equipment Library
- 2. Find the equipment which we will add I/O.
- 3. Select the I/O tab.



4. Click [Add Ports]. The Add Ports dialog will appear.

Tips			
Consider naming patchbay ports A It doesn't matter which side you pl For bi-directional signals such as Ef	ulkhead panels set the input and ou -# and B-# for the top and bottom ace a port on. You can always mov hernet or RS-422 consider your do der always consider that WireCAD r	rows e it later. cument flow when determining) the list to which you will add these ports. onnection, not the chassis side.
Add to Which List:	Example:		Add Multiples:
 Inputs (Left Side) Outputs (Right Side) 	Port Name: Connector (Cable End):	select connector	Add Multiple Ports Count (Appends #): 1 + Starting @: 1 +
OBoth	Signal Type: Input Pin Style:	select signal type	Leading Zeros: 00
	Output Pin Style:	Normal	 Finally Append Characters

- 5. Enter a port name, connector, signal type.
- 6. Select Inputs, Outputs table or Both.
- 7. Click **[Add Ports and Close]** or **[Apply]** (if you want to leave the form open). Your port(s) will be added to the selected list(s):

Name	Signa	(Cabl	Displ.	Pin T	Order	IsSel		Select All			Name	Signa	(Cabl	Displ.		Pin T	IsSel	Order	
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PORT-01	AES 3,4	?		Normal		0	١.,	Select By Signal Type		• 8	PORT-01	AES 3,4	?			Normal			0
PORT-02	AES 3,4	?		Normal		1			-		PORT-02	AES 3,4	?			Normal			1
PORT-03	AES 3,4	?		Normal		2		VID			PORT-03	AES 3,4	2			Normal			2
PORT-04	AES 3,4	?		Normal		3		AUD			PORT-04	AES 3,4	?			Normal			3
PORT-05	AES 3,4	?		Normal		4		AES			PORT-05	AES 3,4	2			Normal			4
PORT-06	AES 3,4	?		Normal		5		SDI			PORT-06	AES 3,4	?			Normal			5
PORT-07	AES 3,4	?		Normal		6		HDSDI			PORT-07	AES 3,4	2			Normal			6
PORT-08	AES 3,4	?		Normal		7		TC			PORT-08	AES 3,4	?			Normal			3
								SPDIF											



Try adding multiple ports. Enter "PORT-" (leave off the quotes). Select any Connector and Signal Type. Select the **BOTH** radio button to add to both lists. Now Check the **Add Multiple Ports** box and enter a **Count** of 8. Click **[Add Ports and Close]**. See below.

2.1.5 Creating a New Project

Menu: Application Menu > New Project

Default command line shortcut: np

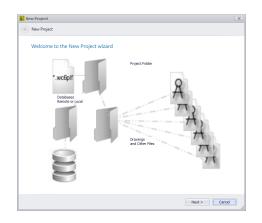
Create a new WireCAD Project structure. This involves folder structures on your operating system as well as databases and support files.

WireCAD can create projects with a number of different database formats.

You may choose to create a new project using file based databases for their zero admin capabilities, or SQL Server for an enterprise installation.

2.1.5.1 How To: Create a New Project

1. Click Application Menu > New Project



- 2. Click [Next >]
- 3. Select the type of database you wish to use and Click [Next >]

8. New Project			x
New Proje	t		
Choose	/our Database		
	e File Based Local or Network Share Database (VistaDB)		
	e Database Server (SQL Server) e SQL Azure (cloud storage)		
you v multis	using a database file you will need permission to the folder where ent to store the database and project information. If you want earns to access the database you will need to make sure that is have read/write access to the location.		
		Next > Cancel	

4. Enter the **Name** for the new project. This must follow file naming conventions because we are going to make a folder out of the name and in the Project Path that you choose.

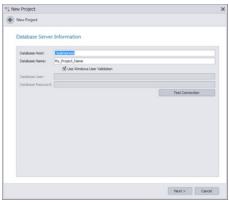


NOTE: We recommend NOT using the possessive ' ie Bob's Project. The ' character is the SQL escape character and though we rarely use it in WireCAD it can cause some queries to fail.

5. Enter a Description.

New Project		
Project Name an	d Location	
Name:		
Description:		
Project Files Path:	C:\Documents and Settings\hei\My Documents	
Database File Location:		
Project Lead Person:		
Project Path:		

- 6. Click [Next >]
- 7. If using SQL databases enter the host information. Click [Next >]



SQL names cannot begin with a number

8. Define some of your project preferences. Here you set your base Starting Cable Number for all sequences.

Project Settings (also a	vailable under P	roject>Settings)	
Project Settings Set up defaults for the	current project. Each p	roject has its own settings.	
Starting Cable Number			1001
In Leading Zero Count	teger used in conjuncti	on with the Cable Number Format tool as a starting n 3 2 Sprore Cable # Text Color	number
I Build My Radis From th	e Top Down	Default Rack Height in Rack Units	45 🕻
Default Cable Type Manu	facturer and Cable T	ype To Use When Assigning Cable Numbers	
Default Cable Manufacturer	DELDEN	Default Cable Type 1505A h a Signal Type for the cable number being assigned	*
🛃 Users (mere mortals) Can P			
Add Pinout Data to Each C	ble. Pinout Data is Def	ned in the Database>Pinouts Tool	
Use the device display sett	ngs. Not the Project Se	ettings.	

- 9. Click [Next >]
- 10. By default the Next Numbers table will suggest and test the next number. If that number is in use, the Next Numbers table is incremented and tested until an available number is found. This behavior can be overridden to force the usage of the number in the Next Numbers table without testing for existence. To do this Check the Disable Find Next Available

New Project				
rees Project				
Project Setting	gs (also available	under Project>Settings)		
More Proj	ect Settings			
Number Gene	eration			
Disable Find F	vext Available SysName (Use Next Number W/O Checking)		
Disable Find F	Vext Available Cable Numi	ber (Use Next Number W/O Checking)		
			Numbers table, then check to see if	
		to lookup the next number from the Next I ing until an available number is found. Dis		
number is in u				
number is in u Fill Gaps in Sy The default b	use - if so keep increments sName Sequences ehavior is to fill the gaps	ng until an available number is found. Dis you might create in sequences. This can c	abling this functionality will use the ause long load times if the gaps an	
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- 11. Click [Next >]
- **12. Enabling Locations Look-up** causes a subtle change in the SysName Assignment process. You will no longer be able to just type a location but rather will select your predefined locations from a drop-down list. If you wish to work as you have in previous versions of WireCAD disable Locations Look-up.

Location Sett	ings		
Location / Elevation :	String Parsing		
Location Delimeter		Elevation - Slot Delimet	ter -
	ation field into its constitu-	various elements of the location field. Ex ant part like: Campus.Building.Floor Room	
Enable v7 Locati	ons		
predefined local	tons. In addition v7 splits I	e. This allows you to predefine your loca the Cables table Source and Destination lo of the Cables table by location.	tions and enforces use of only those ocation field into a Location and Elevation
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🗹 Enable Floor		Floor Field Caption	Floor
🗹 Enable Room		Room Field Caption	Room
		Rack Field Caption	Radk
🕤 Enable Rack			
	no at 1. Uncheck to Start a	0.1	

13. Click [Next >]

14. Review and click [Finish]

WireCAD will then create files and folders on the OS and create a new database on the SQL server if you have elected to use SQL server databases. Otherwise the blank project database will be copied to your project databases folder.

2.1.6 Creating a New Drawing

Menu: File>New Drawing, Project Explorer\Current Project\New Drawing

Default command line shortcut: nd Related Settings: Show New Drawing Wizard = true

Create a new drawing based on a drawing template, with or without model space boundaries.

2.1.6.1 How To: Create a New Drawing

1. Click File>New Drawing

New Drawing	-
Select a Template Drawing	
(None)	
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WCTEMPLATE_ALL.DWG	
WICTEMPLATE_AV.DWG	1
WICTEMPLATE_AVIC.DWG	
WICTEMPLATE_B.DWG	
WICTEMPLATE_BLANK.DWG WICTEMPLATE_C.DWG	
WICTEMPLATE_D.DWG	-
-	
Show This Again	Next > Cancel

2. Select a template drawing from which to start.

Template drawings are drawings that have been saved in the template drawings folder and already have entities such as page borders, layouts and viewports added to them.

- 3. Click [Next >]
- 4. Select boundary settings. Create Model Space Boundaries. The Model Space Boundaries function takes two arguments, the Model Space Text Height and the desired Printed Output Text Height. Using these two variables in conjunction with the size of the Viewports in each Layout to create boundary rectangles in the Model space. Each boundary is accompanied by a text description that describes the Viewport and to which the boundary applies as well as the text heights and scale factor.

Note: You can add Model Space Boundaries later using the Drawing>Format>Model Space Boundaries ... function

Use Model Space Boundaries	
	Use Model Space Boundaries
[Model Space Text Height 0.25
	Printed Output Text Height 0.04
	Color ByLayer
	Notec
	If you do not create boundaries here you can use the Format>Model Space
L	can use the Format>Model Space Boundaries control

5. Click [Next >] to finish and name your drawing.

WireCAD creates the drawing in the project drawings folder tree.

2.1.7 Adding Equipment to Drawings

Menu: Database>Equipment Library [Add to Drawing] Default command line shortcut: le

Create a new equipment block from the library and add it to the current drawing.

You can create equipment in one of these modes:

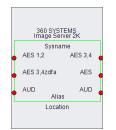
• Functional I/O



• Conceptual I/O (low detail) - Collapses to the I/O type



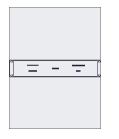
• Conceptual I/O (high detail)



• Front Panel (File Merge)



• Front Panel (From Dims)



• Plan View (File Merge)



• Plan View (From Dims) - Not Yet Implemented

2.1.7.1 How To: Add Equipment to Drawings

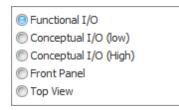
- 1. Create and open a drawing.
- 2. Find and select the equipment definition from the Equipment Library.

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Community Server	Test Correction	Devilation	Community Community is a	rine with 22532 devices
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= source			Proof Security	Power Source
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ii geff		Cariballer	-	and the second second
III Image Server 2K			Hpeg 2 vides Server	SKIAL
@ PAGEDR			SERVER.	SER-IER.
@ PARDR./1			SERVER	SER-IER.
@ Shatant Augiley			Audio Sampler	8
@ feet.lack			Jackfeld	7
0 Test#0			Pual text	Rader
@ Hanafacturer: 368 575	1195			
8 1960			Automatically added from drawing, P	
IB PRED 5			Automatically added from drawing, P	
U Panalacharen 300PBH				
CONTRACTOR OF CONTRACTOR			10.0P	EQ.IP

3. Select the IO you want to display in the drawing



4. Select the Display mode



5. Select the Display Preferences. Everything is parametric. There are settings for Body Width, Pin Spacing, Color, etc.

) •• 8 # [] @ \$ \$ \$	1 Ir		1
A standard functional block appearance	Punctional Block with a torn bottom edge	Functional Block with a torn right edge	Or Gate Appearance
sky Properties			
Basic			8
Body Color Body Pen Width		0 ByLayer	
Body Weh widen Body Wideh		5	
Creation Mode		FunctionalBlock	
Creation Mode		Sysllame:13 Hanufacturer:11 EquipmentBame:12 Alas:16 Location:17 Description:-	
Creation Mode DescriptorLocations		None	
		None	

6. If the **Auto Preview** function is not set, you may wish to click the Refresh button (either above the preview window or on the **IO** tab).

	Refresh Block Preview
	V Auto Preview
	Refresh
v to or	d

- 7. Click [Add to Drawing] (requires an active drawing).
- 8. Place the newly created block in the drawing. You will be able to place any number of copies. Just keep left-clicking to place. When you are done right-click and click done or click the **[Enter]** key.

2.1.8 Drawing Cables

WireCAD provides a series of tools to draw cables.

Normally we draw from one WireCAD device to another.

If you need to draw spare cables see the Spare Cables tool.

WireCAD provides a cable auto-routing tool that automatically routes the cable around other devices and, if selected, avoids other cables. The auto-router will always find a path for the cable, even if it means that the cable is drawn through another device or must overlay another cable.

If you do not like the way a cable is routed, you have two choices:

- 1. Manually draw the cable by selecting Manual Draw and place every point from source to destination.
- 2. Select the cable as drawn and grab a grip on the cable and move it around. You can use Ctrl+Shft+Click to add vertexes and Ctrl+Click to remove vertexes.

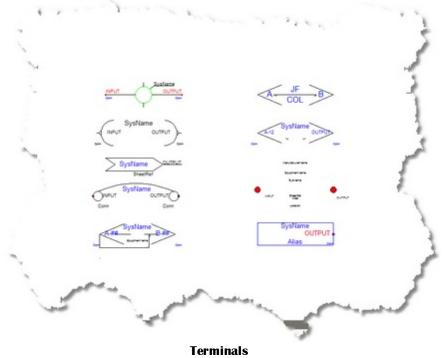


If you manually draw cables or otherwise put them where you want them and them move a device, the auto-router will be invoked and re-route all your changes.

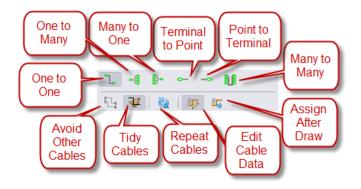
WireCAD Cable Terminology

Devices have inputs and outputs, Cables have sources and destinations.

For purposes of this manual we will refer to Jacks, Junction Boxes, Router Crosspoints, Bulkhead connectors, and On-Sheet/Off-Sheet Pointers, Adapters and Splice Points collectively as terminals **Terminals:**



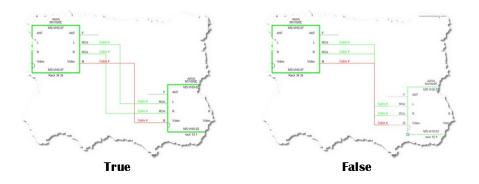
Draw Cable Toolbar



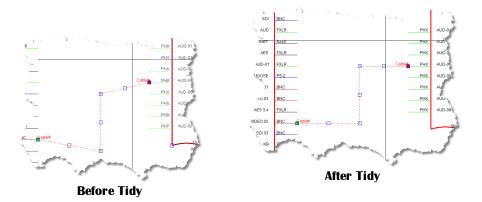
Common Controls

These controls effect the behavior of all of the available options.

- Start Cable button Starts the cable drawing function based on the current setting (one-to-one, one-to-many, etc.). The Start Cable function is disabled when you are drawing Source to Terminal or Terminal as Source.
- Avoid Other Cables Determines whether cables will avoid other cables. Toggling this button will not affect any existing cable but will from that point forward determine the behavior of cable drawing and device moving.

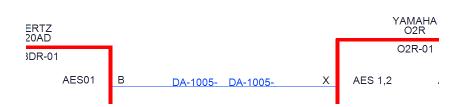


• Tidy Cables - After moving a grip on a cable the cable is forced ortho.

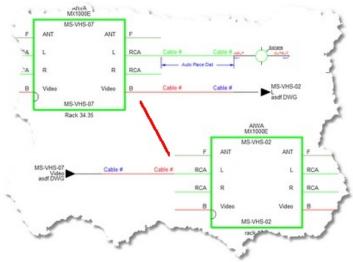


• Repeat - Repeat drawing cables until esc is pressed.

2.1.8.1 One to One Cables

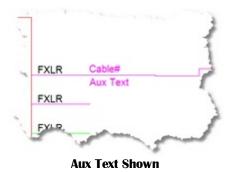


- Cable Text Height -The Cable# text entity height in 100/DU.
- **Replace Cable with Pointers** checkbox- When checked this function will place linked pointers between the source and destination ports based on the Default Pointer selection.



Automatically draw Pointers instead of cables.

- Manual Draw checkbox Draw every point in the cable.
- Aux Text Enable Enable the placement of Aux Text.



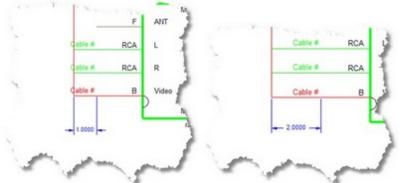
- Aux Text Height The height in 100/DU of the Aux Text.
- Location The position of the Aux Text relative to the cable polyline.
 - Over positioned over the cable polyline. Under - positioned under the cable polyline. Bubble - Not yet supported.

73

- Variable You may choose to populate the Aux Text with the following variables: CircuitNumber - The Circuit Number as entered in the Cable Edit Dialog. IPAddreess - Not yet implemented. Length - The Length field as entered in the Cable Edit Dialog. User1 - The User1 as entered in the Cable Edit Dialog. User2 - The User2 as entered in the Cable Edit Dialog.
 - **User3** The User3 as entered in the Cable Edit Dialog.
 - **User4** The User4 as entered in the Cable Edit Dialog.
- Format Used to apply string formatting to the Variable selected. **{0}** represents the data from the selected variable.

Example: the incoming data from the selected variable is 300 and you want to format it to represent meters to the reader. Your format field would be **{0}m**. The output would be formatted as 300m.

• X Offset - Horizontal auto-router offset. When drawing cables, WireCAD uses an auto-routing algorithm. The X Offset determines how far away horizontally from other equipment and cables a new cable will rout.

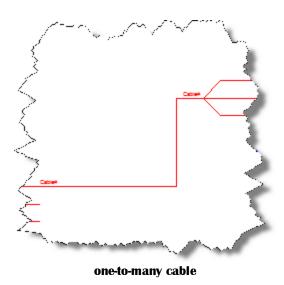


• Y Offset - Vertical auto-router offset. When drawing cables, WireCAD uses an auto-routing algorithm. The Y Offset determines how far away Vertically from other equipment and cables a new cable will rout.

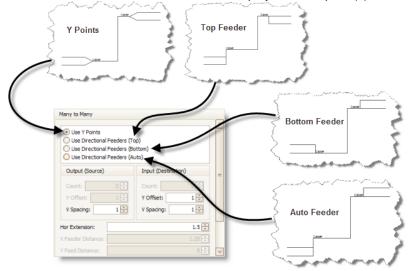


• Default Pointer - Select the pointer to use when replacing cable with pointers.

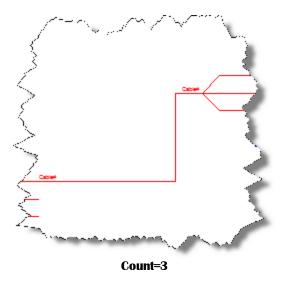
2.1.8.2 One to Many Cables



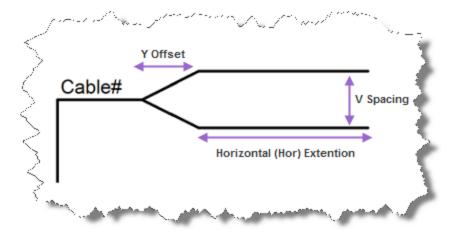
Use this set of controls to place a cable from one output to many inputs.
Feeder selection - Determines the display of the Y point(s).



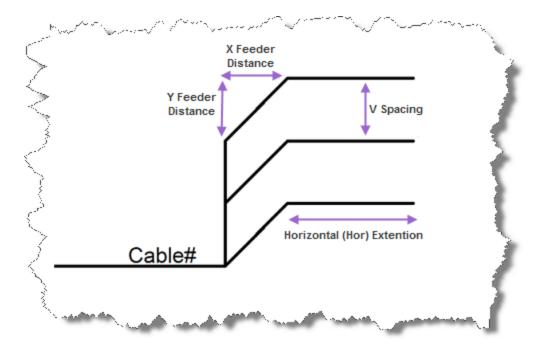
• Count - Destination count.



• Y offset, Y Spacing, Hor Extension in 100/DU



• Feeder distances in 100/DU

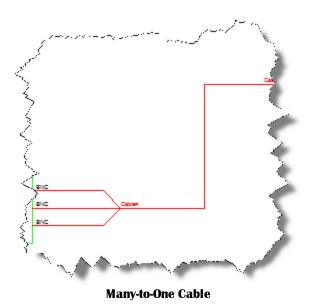


- One Cable Database Entry Adds a single entry in the cables database and one Cable# text entity at the Y point.
- Many Cable Database Entries Adds a many entries in the cables database and many Cable# text entity at the connection points.

Note: One-to-Many and Many-to-One cables set to Many Cable Database Entries will assign the connection point closest to the cursor when the cable is double-clicked. The first assignment on the cable will enter the database as expected, subsequent assignments will display the Existing Ports dialog prompting you to decide how to number the cables.

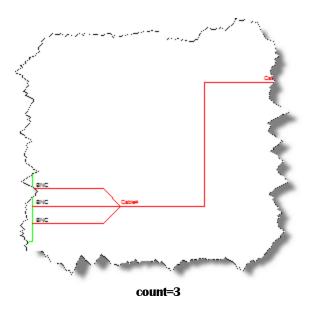
Ľ,	Cable/Ports Ale	eady Exist				×
	The source (output This could be legiter Cables that exist w			dy exists in the ould be an error.	database. . In any event it	warrants scrutiny.
	CableNo	Src SysN	SrdPort	DatSys	DstPort	CableErro
	> 2143-1234		VIDEO.01	SRVR-01	85-422	SourceExists
						New Number
				A	low Duplicate (In	New Number 💿
						Show Databases 🔿
					(ox	Cancel
-						

2.1.8.3 Many to One Cables



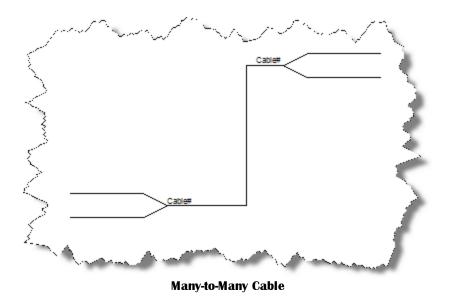
Use this set of controls to place a cable from many outputs to one input.

• Count - Source count.



The remainder of the controls have been explained above.

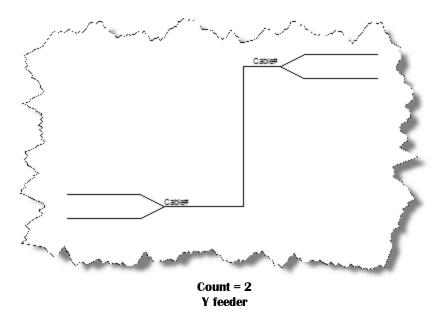
2.1.8.4 Many to Many Cables



Many-to-Many cables behave like a buss. They are a collection of one-to-one cable drawn as a single polyline. When assigning cable numbers the connection point closest to the cursor is used. See the above descriptions for more information about settings.

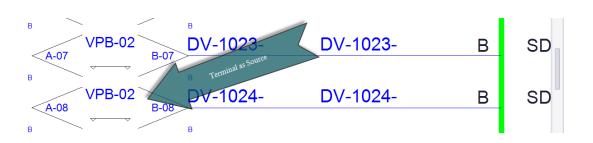
Related User Settings - When I double-click a Many-to-Many Cable Assign them All. This setting overrides the default "point-nearest" behavior.

• Count - Source and destination count.



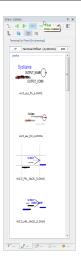
The remainder of the controls have been explained above.

2.1.8.5 Terminal as Source

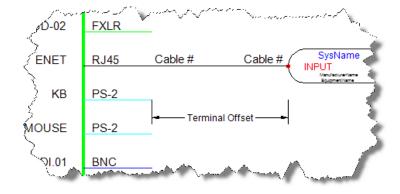


Displays the available Terminals sorted by Terminal style (Jack, Terminal, Pointer).

Note: Terminal file suffixes determine whether the file will be displayed in this window. Files stored in the %BLOCKS%\WireCAD Terminals support path having a _SD.DWG, or _S.DWG suffix will appear in this view.

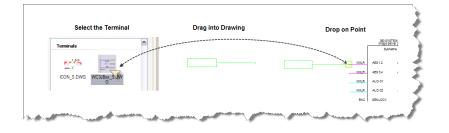


- Terminal, Pointer, Jack, Splice, Adapter Gallery Displays a gallery of items to click and place in the active drawing.
- Refresh Button Reloads the galleries.
- Wire Length in 1/100 Drawing Unit(DU). The length of the attaching cable or the terminal offset from the attached port.

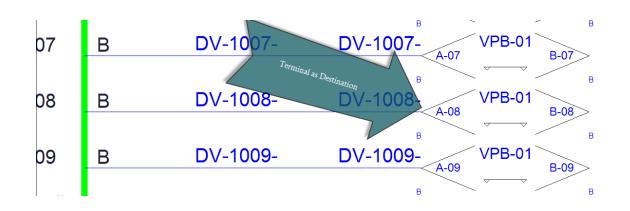


2.1.8.6 How To: Place a Terminal as a Source

- 1. Create and open a drawing.
- 2. Place a standard block with ports in the drawing.
- 3. Click the Terminal as Source Window icon.
- 4. Click the item in the gallery that you wish to place. This will add it to the drawing for placement including the attaching cable.



2.1.8.7 Terminal as a Destination



Terminal as Destination Window

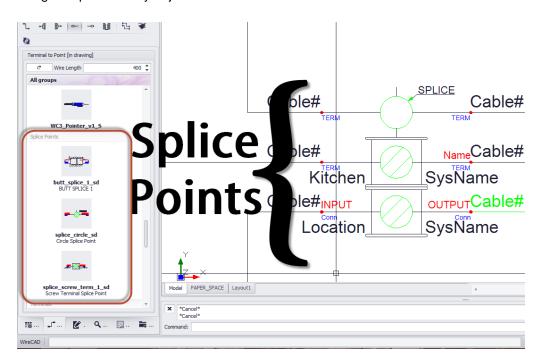
Displays the available Terminals sorted by Terminal style (Jack, Terminal, Pointer).

Note: Terminal file suffixes determine whether the file will be displayed in this window. Files stored in the %BLOCKS%\WireCAD Terminals support path a _SD.DWG, or _D.DWG suffix will appear in this view.

Iraw Cable: 1∉	₿• oo M	* × 단 ¥
0		
Point (in d	rawing] to Terminal	
e .	Wire Length	400 🗘
Draw Text	Default	•
All grou	ps	
	WC3_INN_JACK_SD	*
EUI	wc3_cu_fn_d FULL NORMAL JACK DEST	0
EUT	wc3_eu_hn_d HALF NORMAL JACK DEST	
R	WC3_FN_JACK_D	
10. J	· B. Q. D.	* 🗮

2.1.8.8 Splice Points

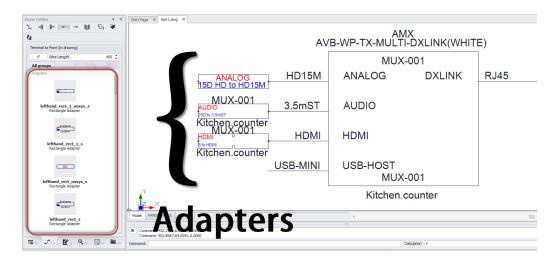
WireCAD supports splice points. If you need a junction in the cable/wire/fiber then use a Splice Point. Splice Points can be found in the Terminals tool panels and are placed like any other Terminal. To Assign a Splice Point you just double-click it and fill in the data.



NOTE: if the SysName contains the text SPLICE then the duplicate checks and other validations against the Cables and Equipment Lists are ignored. This allows you to have any number of Splice Points all with the same name

2.1.8.9 Adapters

WireCAD supports the use of Adapters. Adapters are typically used to convert from one connector to another and may also involve the conversion of signal type. Adapters are found in the Terminals tool panels and are placed similar to other terminals. The difference is that instead of a wire being placed between the port and the terminal the Adapter is placed directly on the port. Once placed, the adapter reads the block to which it is being attached and gets the SysName and Port information. It then asks you for the connector new connector type. Finally it populates the Adapter with the extracted information.



NOTE: if the functional block to which you are attaching the adapter is not yet assigned a **SysName** you will be prompted that the operation cannot complete until you have assigned a **SysName** to the device. You will then need to double-click each attached adapter to get the information into the adapter.

2.1.8.10 Working with Pointers (on-sheet/off-sheet reference)

Pointers in WireCAD are a class of Terminal that allows linking two pointers on the same sheet or across sheets.

Unlike other terminals in WireCAD, pointers must be used in pairs.

The process of relating one pointer to another is referred to as linking.

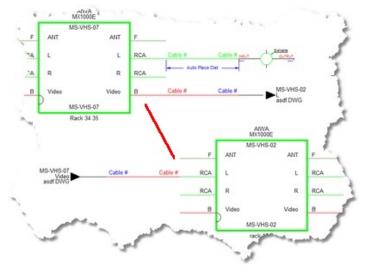
There are two pointer families:

- 1. Pointer_S.dwg and Pointer_D.dwg are the old style pointers. They are still supported but not editable.
- 2. WC3_<SOMENAME>_S.DWG and WC3_<SOMENAME>_D.dwg are the WC3 family. These are editable. You can change, rename, edit the geometry, etc.

Usage

Pointer pairs that reside on the same sheet can be created and linked automatically by invoking the [Start Cable] function

while the Replace Cable with Pointers checkbox checked.



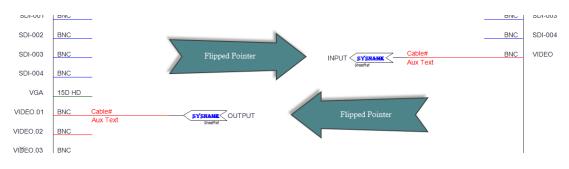
Automatically draw Pointers instead of cables.

In this case the pointer pairs are places and linked.

Pointer pairs that must be linked across sheets must follow this process:

- 1. Place the pointer on the source sheet.
- 2. Place the pointer on the destination sheet.
- 3. Double-click the pointer on the **source** sheet. You must start on the **source** side.
- 4. You will presented with a list of project drawings. Select the one where the destination pointer resides
- 5. You will be switched to the other drawing. If it is not open it will be first.
- 6. Find the destination pointer and click it.
- 7. The pointers will be updated with the complimentary end data.

Flipped Pointers



Occasionally you may find the need to point out of an Input or into an Output.

In order to do this WireCAD provides a set of pointers that have a reversed geometry.

The naming convention used is <SomePointerName>_FLIPPED_S.DWG or <SomePointerName>_FLIPPED_D.DWG.

The same process applies as a normal pointer set. Start with the pointer that represents the source side of the cable and double-click that. Then move to the other side as usual.

2.1.8.10.1 How To: Link Many Pointers at Once

Explanation

This process links multiple pointers across sheets or on the same sheet at once.

- 1. Place the pointers on the source sheet.
- 2. Place the pointers on the destination sheet.
- 3. Select the pointers on the **source** sheet. You must start on the **source** side.
- 4. You will presented with a list of project drawings. Select the one where the destination pointer resides.
- 5. You will be switched to the other drawing. If it is not open it will be first.
- 6. Select the same amount of pointers on the destination sheet.
- 7. The pointers will be updated with the complimentary end data.

The process will fail if:

- The counts do not match.
- The pointer families are found to be different.
- The process is not started on the source side.

2.1.9 Defining Locations

Menu: Project Explorer>Project Databases>Locations

Default command line shortcut: **none** Related Settings: Enable Locations Look-up Table = true

You can enable the Locations Look-up table. Here you can predefine your locations; thus maintaining referential integrity across all of your locations. In order to use this function you must set Application Menu > Settings > Project [Locations] Enable Locations Look-up = true. If this setting is false, WireCAD behaves as it did in previous versions allowing you to type any value in the Location field of the SysName Assignment dialog.

When using the **Locations Look-up** setting you will need to add locations before you can make use of them in the **SysName Assignment** dialog.

There is one other ramification of using the Locations Look-up: in the Cables table are two new fields **SRCEL** and **DESTEL** (Source Elevation, Destination Elevation). These are now populated as you assign cables. This provides an additional level of control as you create reports.

2.1.9.1 How To: Add a New Location

- 1. Click Project Explorer>Project Databases>Locations. This opens the Locations table.
- 2. Click File>New.

ी Add Lo	cation(s)					×
Campus		Ŧ	Count		1	*
Building		•	Count		1	* *
Floor		•	Count		1	*
Room		•	Count		1	*
Rack			Count		1	*
Description						
Qualified						
Qualified Lo	cation	A	Add	Cance	1	
Status						

3. Enter your data and click **[Add].** This will add a single location to the Locations table.

2.1.9.2 How To: Add Multiple Locations

- 1. Click **Project Explorer>Project Databases>Locations.** This opens the Locations table.
- 2. Click File>New.

Ħ Add Lo	cation(s)					×
Campus		•	Count	:	1 ‡	1
Building		•	Count	:	1 ‡	i
Floor		•	Count	:	1 ‡	
Room		•	Count	:	1	
Rack			Count	:	1 ‡	
Description						
Qualified	Location					
Qualified Lo	cation	A	dd	Cancel		
Status						

- 3. Increment the Count field for the location that you want to add multiple of.
- For example, let's say we have 10 racks in the location: LA.THE FACTORY.FL-01.RM-101
- 4. Enter LA in the Campus field.
- 5. Enter THE FACTORY in the Building field.
- 6. Enter FL-01 in the Floor field.
- 7. Enter RM-101 in the Room field.
- 8. Enter RK- in the Rack field
- 9. Enter 10 in the Rack Count field.
- 10. Click [Add]. This will add 10 locations to the Locations table:

LA.THE FACTORY.FL-01.RM-101.RK-01

LA.THE FACTORY.FL-01.RM-101.RK-02

LA.THE FACTORY.FL-01.RM-101.RK-10

2.1.10 Assigning Unique IDs (SysNames)

Menu: Advanced Tools>Equipment Functions>Assign SysName

Default command line shortcut: **as** Alternately: double-click the equipment block in the drawing. **Related Project Settings:** SysName Format Leading Zeros Next Numbers Database

WireCAD allows you to provide unique names for each piece of equipment in the project. We refer to this name as a SysName. SysNames must be unique by location. WireCAD can enforce a SysName format or allow free form input.

Edit SysNames Dialog Controls

▼ Ne
▼ Ne

- **Manufacturer** The manufacturer of the device. This field is usually disabled as the dialog has received the Manufacturer information from an upstream process.
- EquipmentName The model/pn/item number of the device being assigned. This field is usually disabled as the dialog has received the EquipmentName information from an upstream process.
- **SysName** This is our unique-by-location id. If you manually enter a SysName it must follow the format defined in the SysName Format tool. The SysName textbox will be masked to help you follow the format.
- Alias A functional name for the device. Think of it like the friendly name. The SysName is the unique ID the Alias can be duplicated if desired
- Location / Elevation We recommend that you enter a Location and Elevation. Take your best guess. The Rack Builder tool will use your guesses to create a preliminary rack layout that can easily be modified to suit your final design.
- User 1-4 For you. You can change these captions from the Plugins>Translation Manager. Search for the key SysNameUser1 SysNameUser4 and modify the translated field to be what you want.
- IP Address / Subnet Mask For the IP stuff if any.
- Power Consumption / Weight Prepopulated from the Global Equipment database if exists.
- Flags Various flags to help you sort the equipment in your Systems table.

2.1.10.1 How To: Assign a SysName

This function performs the following steps:

- 1. Gets the next number in the sequence (based on the <u>SysName Format</u>) from the Next Numbers table.
- 2. Prompts the user for input.
- 3. Updates the drawing
- 4. Updates the project systems database.

Note: if the project contains related projects, you will be notified of duplicate SysNames in related projects

- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add equipment to the drawing.
- 4. Set the Verbose SysName Assignment checkbox = true. Advanced Tools>Equipment Functions.
- 5. Double-click the equipment in the drawing.
- 6. The **SysName** and **Alias** field will be populated with the next **SysName** in the sequence based in the **Number Format** and the **Next Numbers** table.
- 7. Enter any additional data and take your best guess at Location and Elevation.
- 8. Click [OK].

The drawing will be updated and a new record will be added to the **Project Equipment List**.

2.1.10.2 How To: Assign Multiple SysNames

- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add equipment to the drawing.
- 4. Set the Verbose SysName Assignment checkbox = false. Advanced Tools>Equipment Functions.
- 5. Set the **Default Project Location** and **Elevation** in the **Application Menu > Settings [Project]** [Locations].
- 6. Create a selection set of devices to assign.
- 7. Click Advanced Tools > Equipment Functions > Assign SysName.
- 8. The **SysName** and **Alias** field will be populated with the next **SysName** in the sequence based in the **Number Format** and the **Next Numbers** table.
- 9. The Location and Elevation fields will be populated with the defaults in the Project Settings.

The drawing will be updated and new record(s) will be added to the Project Equipment List.

2.1.11 Assigning Terminals

Menu: Advanced Tools>Equipment Functions>Assign Terminals Default command line shortcut: ats

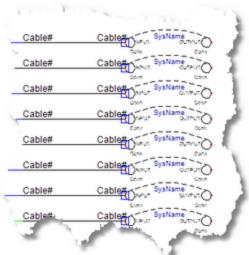
Alternately: Double-click the terminal in the drawing. Assumptions:

At least one <u>SysName</u> [91] has been assigned.

Terminals are one or two port devices. The dwg file defines the geometry.

WireCAD treats terminal assignment slightly differently from a normal SysName assignment.

During a Terminal Assignment we map the existing SysName ID AND I/O port info onto the selected terminal.



Assign Terminal(s) Dialog

		ging a SysName upment on nex	e (all existing por	rts stay th	e same		utnuts Track I	inputs (if matchi	00)		
		Inpu	and the second second					Outpu	-		
٢	Name	Туре	Conn	Sour	~	r	Name	Туре	Conn	Destin	l
+	AES	AES	MXLR			+	AES	AES	FXLR		1
Γ	AES 3,4	AES	MXLR				AES 3,4	AES	FXLR		1
Γ	AUD	AUD	MULR				AUD	AUD	FXLR		l
	AUD-01	AUD	MXLR				AUD-01	AUD	FXLR		1
	CNTL	CNTL	9DMale				DATA	DATA	PS-2		l
	HD SDI	HD SDI	RJ45				ETHERNET	ETHERNET	RJ45		l
	SDI	SDI	BNC				KB	DATA	PS-2		
	SDI-001	SDI	BNC				SDI	SDI	BNC		
	SDI-002	SDI	BNC				SDI.01	SDI	BNC		
	SDI-003	SDI	BNC				SDI.03a	SDI	BNC		
	SDI-004	SDI	BNC	1	~		SDI-001	SDI	BNC		ľ
<				>		<					j

- SysName Select the SysName or press the [+] button to add a new SysName
- I am Just Changing a SysName Leaves all port data as currently displayed on a terminal, just changes the SysName. This is useful for modifying existing terminal assignments.
- Remember this equipment Remembers the selected SysName and returns to it on the next terminal assignment.
- Outputs track inputs When you select an input that has a corresponding output of the exact same name, that output will also be selected.
- Inputs grid Active only if the selected terminal(s) have input connection points.
- Outputs grid Active only if the selected terminal(s) have output connection points.

2.1.11.1 How To: Assign Terminals

This function performs the following steps:

- 1. Opens a port selection dialog based on SysName.
- 2. Prompts the user to select the SysName and the port or ports to display(or range of ports of multiple terminals are selected).
- 3. Updates the terminal(s) in the drawing.
- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add a terminal to the drawing.
- 4. Double-click the terminal.
- 5. Select the SysName from the SysNames dropdown.
- 6. Select the **Input** port to apply to the terminal input.
- 7. Select the **Output** port to apply to the terminal output.
- 8. Click [OK].

2.1.11.2 How To: Assign Multiple Terminals

This function performs the following steps:

- 1. Opens a port selection dialog based on SysName.
- Prompts the user to select the SysName and the port or ports to display(or range of ports of multiple terminals are selected). The order the terminals are added to the selection set is the order that they will be assigned numbers.
- 3. Updates the terminal(s) in the drawing.
- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add terminals to the drawing.
- 4. Select the terminals to assign.
- 5. Click Advanced Tools > Equipment Functions > Assign Terminal(s) or enter ats in the Commandline and click [Enter].
- 6. Select the SysName from the SysNames dropdown.
- 7. Select the top Input port to apply to the terminal input.
- 8. Select the top **Output** port to apply to the terminal output.
- 9. Click [OK].

WireCAD will assign the terminals from top to bottom in the grid and based on the selection set order.

2.1.12 Assigning Cable Numbers

Menu: Advanced Tools>Cable Functions>Assign Cable Number

Default command line shortcut: **ac** Alternately: Double-click the cable in the drawing. **Related Settings:** Cable Number Format Project Settings

Provides a number for a cable in the drawing and **Cables** table of the project database.

Assumes that the devices on both sides of the cable have first been assigned SysNames.

To assign multiple cables at once, create a selection of cables.

The order the cables are added to the select set is the order that they will be assigned numbers. Once you have created a selection of cables, click: Advanced Tools>Cable Functions>Assign Cable Number, or type ac into the command line followed by the [Enter] key.

The Assign Cables function performs the following steps:

- 1. Gets the next number in the sequence (based on the Cable Number Format 124).
- 2. Prompts the user for input.
- 3. Updates the drawing.
- 4. Updates the project systems database.

Edit Cable Numbers Dialog Controls

s	SDI BNC RVR-11 on.Elevation	DV-1	1060-	MXLR	AUD Loc	SRVR-12 SRVR-12 ration.Elevation	
CableNo	DV-1060-			•	New	Add Multi-core Cat	oles
CableTypeManu SignalType	BELDEN SDI	•	CableType	1505			•
NamedPath Integrator	Select a Named Path	·	Length			C) •
							_
User 1			User2				
User1 User3			User2 User4				

• Preview - This area displays the connection info as found in the drawing.

SRVR-11				SRVR-12
	SDI	BNC	MXLR	AUD
SRVR-11	301	DV-1060-		SRVR-12
Location.Elevation				Location.Elevation

• CableNo - CableNo is a direct entry field as well as a drop down that displays all available cables. When double-clicking an assigned cable, the form will be shown in edit mode. The [New +] button will allow the cable number to be fully edited. This field is auto populated with the next number based on the Cable Number Format and the Next Numbers table.

CableNo DV-1060-	▼ New	Add Multi-core Cables
------------------	-------	-----------------------

• CableTypeManu, CableType - Select the Cable Type Manufacturer and Cable Type. These are populated by the SignalType if found. If not, then the project default Cable Manufacturer and Cable Type.

CableTypeManu	BELDEN	CableType	15054	ā
cable ryper-land	BEEDEN	cobicitype	19094	 _

- **Signal Type** The incoming signal type. Changing this value may cause a recalculation of the **CableNo** base on the **Cable Number Format**.
- Integrator A user field for assigning the responsibility of the cable.
- Users1-4 For you.
- Sheet The drawing file name where the assignment is being made from.
- Pinout If Pinouts are used select the Pinout that matches the two connector types.

2.1.12.1 How To: Assign a Cable Number

- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add equipment to the drawing.
- 4. Add cables to the drawing.
- 5. Assign **SysNames** to the equipment in the drawing.
- 6. Set the **Verbose Cable Assignment** checkbox = true. Advanced Tools>Cable Functions. This will display the edit dialog.
- 7. Double-click a cable.
- 8. The dialog above will appear with a preformatted cable number in the CableNo field.
- 9. Add any additional data.

10. Click [OK].

The drawing will be updated and a new record will be added to the **Project Cables** table.

Prerequisites

Two SysNamed devices and one cable.

Related Topics Cable Connection Exists 460

2.1.12.2 How To: Assign Multiple Cable Numbers

- 1. Create and open a project.
- 2. Create and open a drawing.
- 3. Add equipment to the drawing.
- 4. Add cables to the drawing.
- 5. Assign **SysNames** to the equipment in the drawing.
- 6. Set the **Verbose Cable Assignment** checkbox = false. Advanced Tools>Cable Functions. This will not display the edit dialog.
- 7. Create a selection set of cables.
- 8. Click Advanced Tools > Cable Functions > Assign Cable Number.

The drawing will be updated and new record(s) will be added to the **Project Cables** table.

Prerequisites

All selected cables must be attached to devices with SysNames.

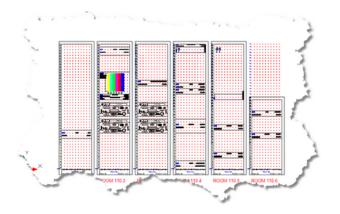
Related Topics

Cable Connection Exists 460

2.1.13 Rack Builder Tool

Menu: Advanced Tools>Rack Functions>Rack Builder Default command line shortcut: rb Related Settings: Default Rack Height Top Down Racks

The Rack Builder tool utilizes information in the Project Systems table and the global equipment library to place and populate rack elevation views. This process may be run repeatedly as the project progresses.



Rack Builder Dialog

asic Advanced	1								
Select Locations	For Which to Bui	d Rack Elevation	ns				Systems Inv	olved	
Add Location	_					•	_		
Add Location						•			
01 10 109 109 109 110 1110 1112 112.1 EDIT 2 Location RK-01 RK-00 10, ROOM 110, ROOM 10, ROOM 10,	3 4	Check Selecte	d) Uncheck	k Selected		E .			
							ОК		Cancel
Rack Builder									
Chassis Width		19 🗘 Heig	ht in RU		45	\$ Slot Cour	nt		11 🗘
Slot Delimiter					Insertion Point	0,0,0			
Attribute Height				25 🗘	View Rule	ShowDwgin	Path		-
Place Text if It	em Cannot Be Cr	eated							
				24 🗘					

- The [Basic] tab allows you to select the locations to include in the Rack Building function. As you select each location, the Systems Involved list will populate.
- Systems Involved Displays a list of all the systems that will be placed in the created drawing.
- Chassis Width Sets the width of the chassis in DU.
- Height in RU Sets the height of the locator grid in Rack Units (RU = 1.75 inches or 4.445cm).
- Slot Count Sets the number of slots per locator grid. This is used to position items that may not be located at the insertion point of the rack unit.
- Slot Delimiter WireCAD searches the Elevation field for numeric values first then for the slot delimiter if found it parses the data into two values the elevation and the slot, or in other words how far up in the rack and how far over.
- Insertion Point Where to start the whole process.
- Attribute Height If view rule is not Front Panel (file merge), sets the attribute height of the displayed text.
- Create As -

Front Panel (file merge) = use the dwg file found in the equipment definition BlockRef (Front Panel File).

Front Panel (from dims) = use the dimension data from the equipment definition to create a 3D rack block.

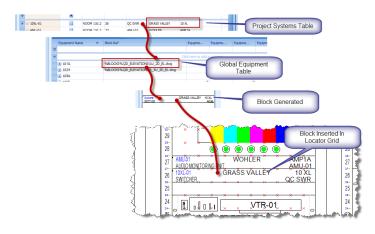
From Dims if file not found = Use dimension data if the **BlockRef** is not found.

- Place Text If Item Cannot Be Created If the item cannot be created due to lacking data, place a text marker in the drawing at the location.
- Include Grid Hash Marks This will normally be checked unless you are rebuilding a drawing that already has the locator grids.
- Spacing DU Sets the location grid spacing in Drawing Units. Measures from left edge to left edge.

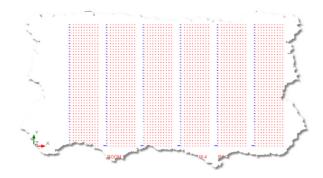
105

2.1.13.1 How It Works

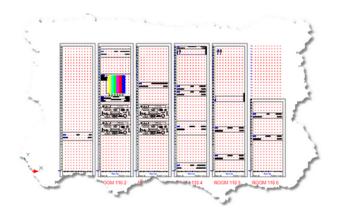
The Rack Builder tool relies on three key pieces of information. First we need the SysName of the device to add to the rack. From the SysName we retrieve the equipment manufacturer and model. Second, using the equipment manufacturer and model, we get the global equipment definition from the global equipment database. If the global equipment definition is complete it will contain either a reference to a front panel dwg file (BlockRef) or dimensional data. If either of these are missing the Rack Builder tool will flag that equipment definition as requiring more information. The Rack Builder tool will perform a pre flight check of all data and let you know what you are missing.



Assuming all of the data fiddly-bits are in the right place, the Rack Builder tool will populate the drawing with one locator grid per location selected. A locator grid is an array of point entities that are spaced horizontally and vertically based upon your selection in the preferences.



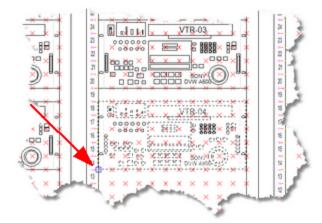
Next the Rack Builder tool, based on the Mechanical View Rule, will place either the front panel file or a block created from the dimensional data at the location point defined in the Project System entry.



The locator grids facilitate location aware movement of the devices placed on the grid.

You may manually place devices created from the equipment library in **Front Panel** mode on the locator grids.

To move a device within the rack elevations, select the device, grab it by its grip and move it to the desired location.



Note: It is desirable to turn on End Point snap and possibly Node Snap while moving devices

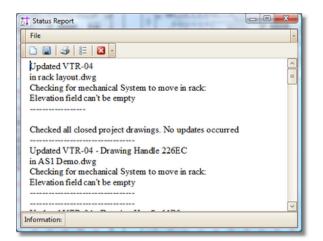
WireCAD will notify you of the location change and update the databases immediately to reflect the change.

	etected a system location change for VTR-04
To Location: RO	OM 110.4 Elevation: 16
	the Cables database and the Systems database as well as other drawings.
WireCAD will not	w update the Project Systems and Cables databases with the new information
This device mov	e is being cached and upon drawing save you will have the opportunity
to update ALL p	project drawings with the new information when you click Save.

It will not update the remainder of the drawing set until you click **File > Save**. You will then be given the opportunity to **Ripple** your changes. Though you are offered the choice you should ALWAYS select **[Yes]** when working in the Rack Builder drawings.

Ripple Type ? X
You have made changes that likely impact other drawings and databases. WireCAD can now ripple the changes across the drawing set and affected databases.
○ Full Ripple. Searches all drawings. This is the safest but takes more time.
Quick Ripple is not an option if any of the items to ripple are missing drawing indexes. To be sure that the indexes are up to date you can use the Re-index function on the Equipment and Cables grids.
Quick Ripple. Searches only the indexed drawings for each item.
You can tell if an item has indexes by looking at its row in the grid if the [+] is enabled there is an index.
Yes No Cancel

Once changes are made across the drawing set you will be notified of the changed drawings.

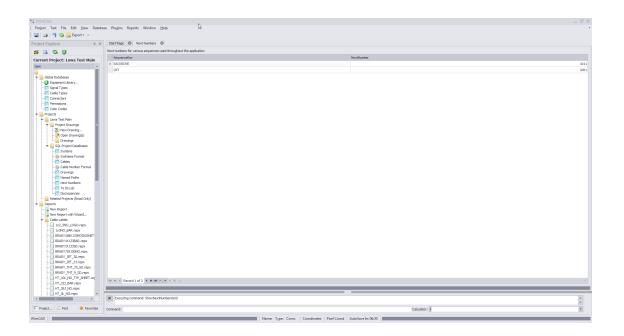


Menu: Database > Next Numbers Default command line shortcut: NN Related Project Settings: None Product Level: ALL

The **Next Numbers** Grid will show you the next available Cable number based on your <u>Cable Number</u> Format 124. To access the **Next Numbers Tool**, type NN in the command line prompt.

This grid will show you both **Backbone Cable Numbers** as well as **Standard Cable Numbers**. As you progress through your project, these numbers will change.

To edit these numbers (such as in the event of deleted Backbones) simply click in the Next Number box and fill in the desired number. Be sure that you are not entering a number that is already in use.



Note: Yours will look different as the Next Numbers grid will automatically create entries for each new sequence used by the application.

2.2 Advanced Topics

The following sections cover more advanced topics in WireCAD.

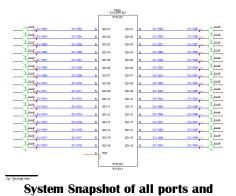
2.2.1 Equipment List Visualizer

Menu: Database>Project Systems>Equipment List (SysNames)

Default command line shortcut: **sys Related Settings:** See the Settings Tab

The **Equipment List** Visualization tool utilizes information in the Project **Systems** table and the Global **Equipment Library** and the Project **Cables** database to create a view of all cables attached to the selected item.

These details are useful for error checking and in the field as an installation aid.



connections

Controls

earch:										Search	Find All
									100	- Search	TENDA
Drag a column heade	r here to group by	that column							<u> </u>		
Sysname	 Available 	Location	Elevation	Alas	Manufacturer	EquipmentName	Flags	SysNameUser 1			
*	۲										
@ MON-001		RK-003	44	MON-001	SOMY	4K4 MONITOR					
B MONT-001		Location	Elevation	MONT-001	SONY	PVM20M4U					
@ MLX-001		RK-003	34	MUX-001	ENSEMBLE	BrightEyes 71					
@ POT-001		Location	Elevation	POT-001	ManufacturerName	EquipmentName					
@ RK-001		RK-001	01	RK-001	APVI	PIONEER - 45 RU					
⊟ RK-003		RH-003	01	RK-003	APVI	PSONEER + 45 RU					
@ RK-004		RK-004	01	RK-004	APVI	PIONEER - 45 RU					
▶		RK-004	1	RTR-001	PESA	COUGAR SDE					
@ SPA-001		EDETO1	WALLA	EDET 1	CUSTOM PANEL	85P					
⊟ SPA-002		Location	Elevation	SPA-002	CUSTOM PANEL	85P					
@ SPA-003		Location	Elevation	SPA-003	OUSTOM PANEL	85P					
@ SPA-004	0	Location	Elevation	SPA-004	CUSTOM PANEL	85P					
E SPA-005		Location	Elevation	SPA-005	CUSTOM PANEL	85P					
© SPA-006		Location	Elevation	SPA-006	CUSTOM PANEL	85P					
@ \$PA-007		Location	Elevation	\$PA-007	OUSTOM PANEL	85P					
© SPA-008		Location	Elevation	SPA-008	OUSTOM PANEL	85P					
B SPA-009		Location	Elevation	5PA-009	CUSTOM PANEL	85P					
@ SRIR-001		Location	Elevation	SRVR-001	360 SYSTEMS	Image Server 2K					

- Settings Tab Control the output of the Visualizer.
- Use Last Display Order if Set Sorts the ports of the block based on the saved display order if any.
- Terminal The terminal to display.
- Use Last Saved Appearance If there are device level setting saved, use them.
- Body Width and Pin Spacing Appearance settings in 100/DU.
- Port Data Source -

Pull the port data from the Equipment Library. This will show ALL ports associated with this device definition.

Pull the port data from the Cables table. This will show only those ports to which cables have been attached and assigned.

- Title Block Describes the visualization. Salt to taste.
- Visualization tab Does it.

2.2.1.1 How To: Use the Equipment Visualizer

- 1. Create a project.
- 2. Add equipment.
- 3. Assign SysNames.
- 4. Draw cables.
- 5. Assign Cable Numbers.
- 6. Open the project Equipment List.
- 7. Select the SysName record to visualize.
- 8. Click the **Settings** tab.
- 9. Set the **Terminal**. This is the item that will be displayed as the source and destination of each cable.
- 10. Click the Visualize tab.

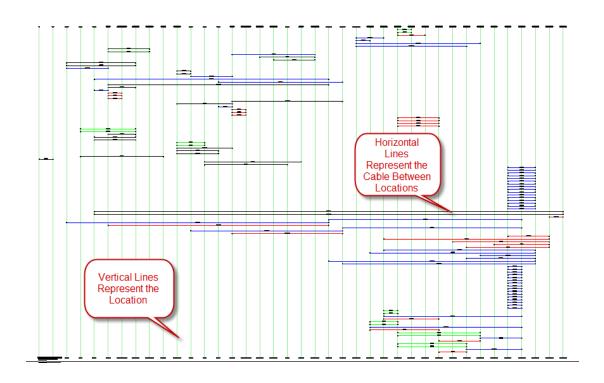
2.2.2 Cables Visualizer

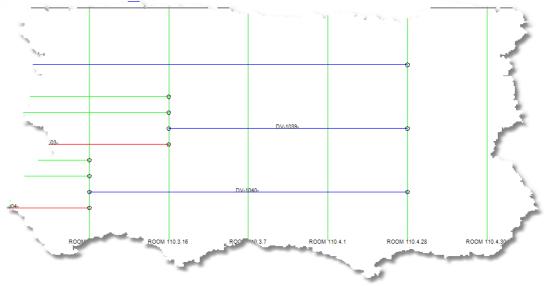
Menu: Database>Project Cables>Project Cables Grid Default command line shortcut: cg **Related Settings:**

See the Settings tab

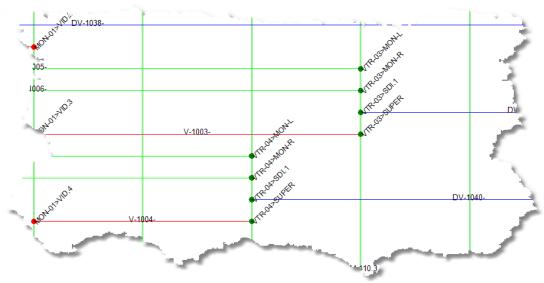
The Cables Visualization tool creates a layered digraph showing the Locations (vertically) and the cables between them (horizontally).

- Use this output for:
- Pre-wires.
- Spare inventory.General overview.
- Enlighten and amaze your friends.





Visualization without SysNames



Visualization with SysNames

2.2.2.1 How To: Use the Cables Visualizer

- 1. Create a project.
- 2. Add equipment.
- 3. Assign SysNames.
- 4. Draw cables.
- 5. Assign Cable Numbers.
- 6. Open the project Cables grid.
- 7. Select a group of records to visualize.
- 8. Click the **Settings** tab.
- 9. Adjust settings to suit.
- 10. Click the Visualize tab.

2.2.3 AutoScheme Tools

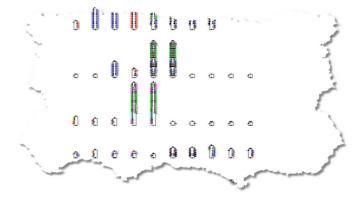
The AutoScheme tools create functional drawings or parts thereof from the data in the project systems and cables databases. This is useful to create detail or overall views.

The AutoScheme tools consist of two utilities. The Auto Block tool automatically places blocks in the drawing on a grid. The Ratsnest tool checks the project cables database against the drawing. If connections defined in the cables database can be reproduced in the drawing because the SysNames and Ports exist, a cable is placed.

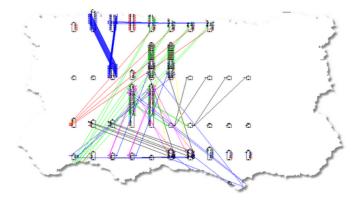
Prerequisites

SysNames and Cable Numbers in the project database.

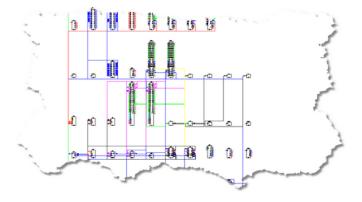
Auto Blocked drawing. Blocks have been created an placed.



After running the Ratsnest tool. This supplies the drawing with cable data and provides a positional reference to help you decide where to move block to better display the drawing.



After running the Cleanup tool from the Ratsnest utility.



Menu: Advanced Tools>AutoScheme Tools>Auto Block Default command line shortcut: ab Related Settings: None

The Auto Block tool automatically places functional blocks in the drawing. This tool requires that the Project Systems table be populated.

Controls

			the choice of using the I/O	
			orts in use in the Cables ta List. You can apply filters	
	e [Advanced] tab you c	an adjust the signal	types to display, where to	start in the
wing etc.				
asic Advanced				
Get All Data From Cables Dat	-			
ilter	abase			
X				Edit
				Luit
10XL-01 @ ROOM 110.2.26-				<u>*</u>
AMU-01 @ ROOM 110.2.27-				E
AVID-01 @ 01.28-[AVID-BOB				
CC-01 @ ROOM 110.5.11-[E		_		
Cmon-01 @ 109.DESK RIGH				
Cmon-02 @ 109.DESK RIGH				
Cmon-03 @ 112.DESK LEFT-				
Cmon-04 @ 112.DESK RIGH		puter Monitor]		
CPU-01 @ 109.DESK-[APPLE				
CPU-02 @ 112.UNDER DESK				
CTLR-01 @ Deleted.Deleted	• •			
DMBDR-01 @ 109.1.1-1-[EVI				
DMBDR-02 @ 112. 1. 1-1-[EVI				
EDMON-01 @ ROOM 110.2.2				
Embedder-01 @ 109.1.1-2-[-
Embedder-07 @ 112 1 1-2-	EVEDT7.7700AE.41			
Check All	Clear All	Check Selected	Uncheck Selected	

- The [Basic] tab allows you to determine which systems to add to the drawing.
- Filter Filters the list by your criteria.
- The [Advanced] tab allows you to refine the behavior of the utility.

		the Equipment List. You can a	
played SysNames. On the [Advand awing etc.	ced] tab you can ac	ijust the signal types to display	, where to start in the
asic Advanced			
nsertion Point 0,0			
Horizontal Spacing (DU)	24 🛟 Ma:	imum Column Count	10
Display As:		Signal Types to Display	
		aightir i ypea to biapidy	
Eunctional Block		AUD R	
Concept (Low Detail)		✓ Out	E
Concept (con beau)		₹?	
Concept (High Detail)		✓ _null	
		📝 1394b	
Front Panel		310	
		4fSC	
Display Preferences (1/100 DU)		✓ AC-3	
		ADAT AFS	
Body Width	500 💲	AES 1.2	
Pin Spacing	100 💲	AES 1,2	
		ALS 3,4	_
Pin Width	200 💲		· · · · · · · · · · · · · · · · · · ·
Sort by Display Order		Clear Selection	Select All

- Insertion Point The point we start from.
- Horizontal Spacing DU How far apart horizontally. The vertical spacing is defined by the height of the highest block in the row.
- Maximum Column Count How many columns horizontally.
- Get Port Data From Cables Database Select this option to search the cables database for port info instead of the global equipment database. This will effectively show only those ports to which we have attached cables.
- **Display As -** How to display the blocks.
- **Display Preferences** If Functional Block or Concept block is selected then set basic display parameters.
- Signal Types to Display Filter ports by the selected signal types.

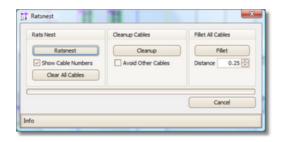
2.2.3.2 RatsNest

Menu: Advanced Tools>AutoScheme Tools>RatsNest Default command line shortcut: rn Related Settings: None

The RatsNest tool checks the project cables database against the drawing. If connections defined in the cables database can be reproduced in the drawing because the SysNames and Ports exist, a cable is placed.

This tool requires that the Project Cables table be populated.

Controls



- This tool has three sections. The Rats Nest section does the work of placing the cables in the drawing as defined in the Cables database.
- [Ratsnest] Run the utility to place the cables.
- Show Cable Numbers With or without cable numbers.
- [Clear All Cables] Removes ALL cables from the drawing. Not just ratsnested cables. This will remove ALL.
- [Cleanup] Applies the auto-router to all cables in the drawing.
- Avoid Other Cables Auto-router avoids other cables on cleanup.
- [Fillet] Applies fillets to ALL cables in the drawing.
- **Distance -** Fillet distance in 100/DU.

2.2.4 SysName Formatting

Menu: Project Explorer>Project Databases>Project SysName Format Default command line shortcut: fsys Related Settings: None

Allows control of the **SysName** numbering scheme. Using the **SysName Format** dialog you can select any field that is associated with the **SysName** and concatenate it into your own numbering scheme. Each of the fields selected can be formatted and the numbers can be set to sequence off of another field.

How it Works

The **SysName Format Tool** is used to generate regular expressions that are then used to parse **SysName** info as well as provide formatting information to masked text boxes.

A note on regular expressions: WireCAD makes extensive use of regular expressions (Regex). Regular expressions are a well documented string parsing tool. Much has been written on them. It is not within the scope of this quick start guide to fully explain regular expressions; however, a Google search will tell you more than you ever wanted to know.

Two forms of regular expression are generated: a simplified form that is used as a mask in both the Systems database and in textboxes, and a complex form that aids in the generation of queries to determine the next number in a sequence. The following are both the simplified and complex Regex for the default format:

```
\w{1,6}-\d{1,5}
(?<EQUIPMENTTYPE>\w{1,6})-(?<NUMERICSEQUENCE>\d{1,5})
```



NOTE: WireCAD supports multiple formats in the same database. In order to accomplish this we use the simplified Regex as a mask. If you have any data in the Project Systems table and you change ANYTHING in ANY Format field you will change the mask and therefore the sequence. You must decide if the change is such that it warrants copying the new simplified Regex to all records in the Project Systems table in order to keep your sequence.

Controls

• Selected Format - Selected the current SysName format. Allows addition and deletion of formats as well.

File Edit Tools V	ïew			
elected Format: Default				
nput String: Equip Typ .ooks Like: Equip-000				
Advanced Regular Exp	pression Info (Geek Stu	ff)		
Simplified Regex: 1,6]				
Complex Regex: (? <equ< th=""><th>IPMENTTYPE>\w{1,6})</th><th>-(?<numericsequence>\d</numericsequence></th><th>[1,5])</th><th></th></equ<>	IPMENTTYPE>\w{1,6})	-(? <numericsequence>\d</numericsequence>	[1,5])	
Complex Regex: (? <equ< th=""><th>IPMENTTYPE>\w{1,6})</th><th>-(?<numericsequence>\d</numericsequence></th><th>(1,5})</th><th>Up</th></equ<>	IPMENTTYPE>\w{1,6})	-(? <numericsequence>\d</numericsequence>	(1,5})	Up
	IPMENTTYPE>\w{1,6}) Seq On	-(? <numericsequence>\d</numericsequence>	(1,5)) Order	Up
Regex Examples	Seq On			
Regex Examples	Seq On	Format		
Regex Examples Field EQUIPMENTTYPE STRING	Seq On	Format k here to add a new row (w(1,6)		
Regex Examples Field EQUIPMENTTYPE	Seq On	Format k here to add a new row		
Regex Examples Field EQUIPMENTTYPE STRING	Seq On	Format k here to add a new row (w(1,6)		Down 0

• Variable List - Displays the sequence of variables in grid view that will be concatenated into the final SysName.

	rmat Details Tools View				<u> </u>
Selected Forma				Me	
	Equip Type-00	00000			
Looks Like:		sion Info (Geek Stu	iff)		
	gex: \w{1,6}-				
Complex Reg	ex: (? <equipme< td=""><td>ENTTYPE>\w{1,6}]</td><td>)-(?<numericsequence>1</numericsequence></td><td>1,5})</td><td></td></equipme<>	ENTTYPE>\w{1,6}])-(? <numericsequence>1</numericsequence>	1,5})	
Regex Ex	molec				
	ampies				Up
Field	ampies	Seq On	Format	Order	Up Down
_	ampies		Format k here to add a new row	Order	
_				Order	
Field			k here to add a new row	Order 0 1	
Field Field	ттуре		k here to add a new row	Order 0 1 2	
Field * EQUIPMEN STRING	TTYPE		k here to add a new row \w{1,6} -	0	

- SeqOn This variable should sequence on another variable's value.
- Order The order in the list of the variable.
- Available Variables -

Variable	Description	Can Sequence On	Default Format (Regex)
MANUFACTURER	Manufacturer Name	Х	\w{1,6}
EQUIPMENTNAME	Equipment Name/PN/Model Number	Х	\w{1,6}
DESCRIPTION	The device description as contained in the global equipment library		\w{1,6}
EQUIPMENTTYPE	The Equipment Type as contained in the global equipment library		\w{1,6}
LOCATION	The location typed in the SysName edit dialog		\w{1,6}
ELEVATION	The location typed in the SysName edit dialog		\w{1,6}
STRING	any string (usually used for delimiters like dashes (-))		-
NUMERICSEQUENCE	a numeric sequence that starts with the project starting number		\d{1,5}
ALPHASEQUENCE	an alpha sequence that starts at the letter 'a'		\w{4}
USER1	the global equipment library device definition user1 field		\w{1,6}
USER2	"		\w{1,6}
USER3	Ш		\w{1,6}
USER4	"		\w{1,6}

More About Regex

The Format field uses	s regular expressions. The following are some simple examples:
\w{1,6}	Any non number, non punctuation string from 1 to 6 characters
\w*	Any non number, non punctuation string any length
[a-zA-Z0-9]{5}	Lower / Upper case and 0 thru 9 exactly 5 characters
\d{1,5}	Digits 1 to 5 digits in length
\d*	Digits any length
//	a slash "\". The \ is the escape character so you need two
-	a dash except when in [] or {} then a range.
[a-zA-Z0-9_\-]{1,4}	Lower / Upper case, 0-9, underscore, dash, and comma.

2.2.5 Cable Number Formatting

Menu: Project Explorer>Project Databases>Project Cable Number Format Default command line shortcut: fcab Related Settings: None

Allows control of the Cable numbering scheme. Using the Cable Number Format dialog you can select any field that is associated with the Cable Number and concatenate it into your own numbering scheme. Each of the fields selected can be formatted and the numbers can be set to sequence off of another field.

How it Works

The Cable Number format tool is used to generate regular expressions that are then used to parse Cable Number info as well as provide formatting information to masked text boxes.

A note on regular expressions: WireCAD makes extensive use of regular expressions (Regex). Regular expressions are a well documented string parsing tool. Much has been written on them. It is not within the scope of this quick start guide to fully explain regular expressions; however, a Google search will tell you more than you ever wanted to know.

Two forms of regular expression are generated: a simplified form that is used as a mask in both the Cables database and in text boxes, and a complex form that aids in the generation of queries to determine the next number in a sequence. The following are both the simplified and complex Regex for the default cable number format:

```
w{1,6}-d{1,5}-w*
```

```
(?< \texttt{SIGNALTYPEPREFIX} \ (1,6\}) - (?< \texttt{NUMERICSEQUENCE} \ (d\{1,5\}) - (?< \texttt{MULTICOREDATA} \ w^*)) = ((1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1) + (1,1)
```



NOTE: WireCAD supports multiple formats in the same database. In order to accomplish this we use the simplified Regex as a mask. If you have any data in the Project Cables table and you change ANYTHING in ANY Format field you will change the mask and therefore the sequence. You must decide if the change is such that it warrants copying the new simplified Regex to all records in the Project Cables table in order to keep your sequence.

Controls

• Selected Format - Selected the current Cable Number format. Allows addition and deletion of formats as well.

nput String: Prefix-000000-MC DATA polks Like: Prefix-00000-MC Advanced Regular Expression Info (Geek Stuff) Image: Regex Examples	
Advanced Regular Expression Info (Geek Stuff)	
-	
Regex Examples	
Field SeqOn Format Order	
Click here to add a new row	Up
SIGNALTYPEPREFIX W{1,6} 0	
STRING - 1	Down
NUMERICSEQUENCE (d{1,5} 2	
STRING - 3	
MULTICOREDATA	

• Variable List - Displays the sequence of variables in grid view that will be concatenated into the final Cable Number.

Input String: Prefix-00000-MC DATA Looks Like: Prefix-00000-MC Advanced Regular Expression Info (Geek Stuff) Image: Control of Content in the state of the stuff) Regex Examples Click here to add a new row Up STRING - 1 NUMERICSEQUENCE Vp(1,6) 0 STRING - 3 MultiCoreBDATA Vw* 4	Sele	ected Format: WireCAD De	fault		M.+]-	l
Regex Examples Field SeqOn Format Order ● Click here to add a new row Up Up > Stoluk_TYPEPREFIX Vv(1.6) 0 Down STRING - 1 Down NLMERICSEQUENCE Vp(1.5) 2 STRING - 3		-				
Field SeqOn Format Order Image: Click here to add a new row Up StGMALTYPEPREFIX W(1.6) 00 STRING - 1 NUMERICSEQUENCE Vp(1.5) 2 STRING - 3	2	Advanced Regular Expres	sion Info (Geek Stuff)		
Click here to add a new row Up \$IGMALTYPEPREFIX [w(1.6) 0 \$IRING - 1 Dow NUMERICSEQUENCE [v(1.5) 2 1 STRING - 3 1	2	Regex Examples				
SIGNALTYPEREFIX W(1.6) Up STRING - 1 Dow NUMERICSEQUENCE Vp(1.5) 2 2 STRING - 3 3		Field	SeqOn	Format	Order	1
STRING - 1 Dow NUMERICSEQUENCE \dots\1,5\ 2 STRING - 3	٠		Click	here to add a new row		Up
INMERICEQUENCE 1/2 STRING - 3	×	SIGNALTYPEPREFIX		\w{1,6}	0	
STRING - 3						
				\d{1,5}		
MULTICOREDATA (w* 4				-		
		MULTICOREDATA		/w=	4	
		cord 1 of 5 🛨 🖂 🔍				
Providents (1973)	R	cord 1 of 5				

- SeqOn This variable should sequence on another variable's value.
- Order The order in the list of the variable.
- Test Sequence Performs a basic syntax test on the regular expressions.

• Available Variables -

Variable	Description	Can Sequence On	Default Format (Regex)
SIGNALTYPE	The signal type associated with the cable	Х	\w{1,4}
SIGNALTYPEPREFIX	the signal type prefix associated with the signal type of the cable	Х	\w{1,4}
SOURCESYSTEM	The source SysName	Х	\w{1,6}
SOURCEPIN	The source port or pin name	Х	\w{1,6}
SOURCEALIAS	The source Alias	Х	\w{1,6}
SOURCELOCATION	The source location	Х	\w{1,6}
DESTSYSTEM	The destination SysName		\w{1,6}
DESTPIN	The destination port or pin name		\w{1,6}
DESTALIAS	The destination alias		\w{1,6}
DESTLOCATION	The destination alias		\w{1,6}
SOURCE_OR_DEST_PIN _IF_JACKFIELD	Not Yet Implemented		\w{1,6}
MULTICOREDATA	Core data as defined in the associated cable type if any		\w*
STRING	any string (usually used for delimiters like dashes (-))		-
NUMERICSEQUENCE	a numeric sequence that starts with the project starting number		\d{1,5}
ALPHASEQUENCE	an alpha sequence that starts at the letter 'a'		\w{4}
USER1	the global equipment library device definition user1 field		\w{1,6}
USER2	II		\w{1,6}
USER3	"		\w{1,6}
USER4	н		\w{1,6}

More About Regex

The Format field uses	s regular expressions. The following are some simple examples:
\w{1,6}	Any non number, non punctuation string from 1 to 6 characters
\w*	Any non number, non punctuation string any length
[a-zA-Z0-9]{5}	Lower / Upper case and 0 thru 9 exactly 5 characters
\d{1,5}	Digits 1 to 5 digits in length
\d*	Digits any length
//	a slash "\". The \ is the escape character so you need two
-	a dash except when in [] or {} then a range.
[a-zA-Z0-9_\-]{1,4}	Lower / Upper case, 0-9, underscore, dash, and comma.

2.2.6 Using Your CAD Drawings With WireCAD

With WireCAD you can now WireCADify your existing non-WireCAD CAD blocks to include WireCAD intelligence; thus making them work with WireCAD. Pretty cool huh?

The process requires at least two steps:

- 1. WireCADify the block.
- 2. Add ports to the block.

2.2.6.1 How To: Customize Your CAD Blocks to Work with WireCAD

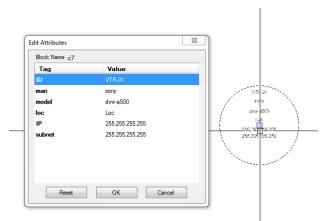
Menu: Advanced Tools>WireCADify>WireCADify Block

Default command line shortcut: wc

Requires an active drawing with a CAD block.

Adds the base WireCAD attribute set to the selected block, mapping your attribute data into our attributes if you choose.

- 1. Open a drawing with a non-WireCAD CAD block that you want to make work with WireCAD.
- 2. Click Advanced Tools>WireCADify>WireCADify Block.
- 3. You will be prompted to select a CAD block.



Here we have a CAD block with the displayed attributes (Yours).

4. Select your CAD block. It must be a block and not raw entities.

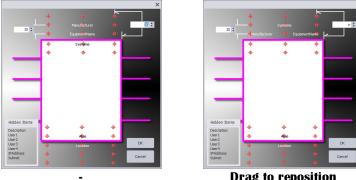


5. Map your attribute to our attributes.

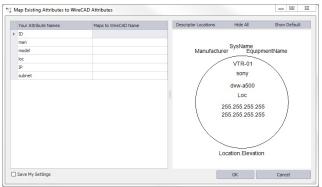
Your Attribute Names	Maps to WireCAD Name	Descriptor Locations	Hide All	Show Default
ID	_			
man	(Show	Manufacturer	Descripto
model		Descriptor	EquipmentName	Attribute
loc		ocation Map	Systeme	
IP			sony	
subnet	1	_ /		
Ν		/	dvw-a500	
	$\left(- \right)$	1	Loc	X
Your	Our Attributes		255.255.255.255	
Attributes			255.255.255.255	
				V
	(Devis	\leq	< /	1
	Previ of Out		ocation. Elevation	/
	Coroa	pur		

	Your Attribute Names	Maps to WireCAD Name	Descriptor Locations	Hide All	Show Default
	ID	SysName			
	man	Manufacturer		Ounblane	
	model	EquipmentName	Manufactur	SysName er Equipn	nentName
	loc	Location	/	\sim	
	IP	IPAddress		VTR-01	
Þ	subnet	SubnetMask	•	sony	
				Loc 255.255.255.255 255.255.255.255	5

6. Select the [Descriptor Locations] button.



Drag to reposition

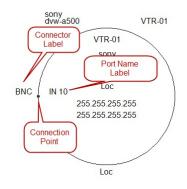


Preview after repositioning

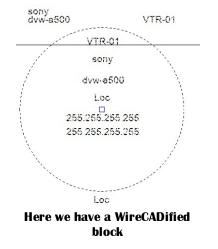
7. Click [OK] to do it.

Menu: Advanced Tools>WireCADify>Add Connection Point Default command line shortcut: none Related Settings: None

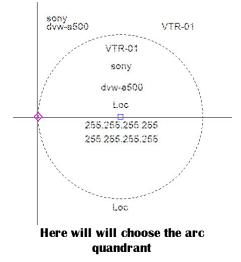
Adds a connection point to the selected block.



- 1. Open a drawing with a WireCAD block.
- 2. Click Advanced Tools>WireCADify>Add Connection Point
- 3. You will be prompted to select a WireCAD block.



4. You will be prompted for the point at which to add the Connection Point.

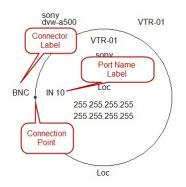


5. Enter your port info the in the dialog that is presented.

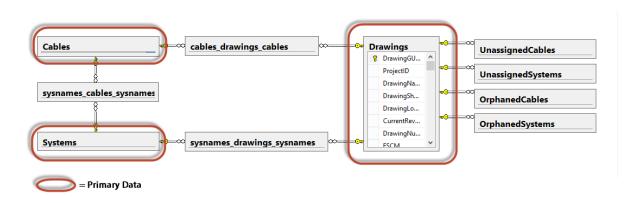
Port Name	IN 10		
Signal Type	VID		•
Connector (Cable End)	BNC		•
Port Is Input	Label Text Height (1/100 DU))	0
🗹 Include Geometry			
L'ancière oconice y	○ Triangle ○ X		
Circle O Square			

Here will will say that the port is an input called IN 10. We will show the labels and include a small circle to snap to.

6. Click [OK] to finish.



2.2.7 Understanding Indexes



Related Topics

See the reference section related to the Index Grids.

WireCAD keeps track of two classes of data.

1. **Primary** - examples of primary data include: SysNames, Cable Numbers, Locations, Drawings. This data is of cardinal importance. We always want this data to accurately portray what goes on in the drawing/database.

2. Secondary - Indexes are secondary or transient data.

The indexes are link data relating the primary data bits to each other.

Index data is transient in nature.

WireCAD consists of a drawing interface with undo/redo and a database which does not. With that as our framework let's discuss a scenario which will put the indexes out of sync quickly.

- 1. You add a cable to a drawing. A record is added to the Unassigned Cables index.
- 2. You undo. The cable is removed from the drawing but the database does not have an undo function (nor should it but that's a discussion for another day).
- 3. We now have a record in the Unassigned Cables index that is in error. It only to two steps to create an inconsistency in the index table.

So rather than try unsuccessfully to keep every move in sync we routinely scan the drawing and rebuild the index tables as a background process.

The indexes can be destroyed, rebuilt, and at any given time - out of sync. Deleting all indexes has no effect on primary data.

To insure the most current indexes run the Rebuild Indexes command.

You can view the indexed data in the primary data grids as sub grids with the [+] button. You can also view the indexed data in individual grids.

There are seven indexes:

1. **Unassigned Cables by Drawing**. We search the drawing and add any cable that does not yet have a number to this index.

2. **Unassigned SysNames** (equipment) by drawing. We search the drawing for any equipment that does not yet have a SysName and add it to this index.

3. **Equipment by Drawing**. Any equipment that has a SysName and corresponding entry in the Equipment List is added to this index by drawing.

4. **Cables by Drawing**. Any cable that has a number and corresponding entry in the Cables database is added to this index by drawing.

5. **Cables by Equipment**. Any cable that has a number and corresponding entry in the cables database and where both ends of the cable have valid entries in the Equipment list will be added to this index.

6. **Orphaned Cables**. Any cable with a number but no corresponding entry in the Cables database will be added to this index by drawing.

7. **Orphaned SysNames**. Any equipment with a SysName but no corresponding entry in the Equipment list will be added to this index by drawing.

Settings that affect Indexing

The Auto Index setting will scan the project in the background upon project open and any drawing save. The Show Index Progress setting turns on the main progress bar in the status bar to indicate progress.

2.2.8 Sync Equipment with Database

Menu: Context Menu with Equipment Insert Selected>Equipment Functions>Sync Equipment with Database

Default command line shortcut: SynclnsertWithDatabase

Occasionally you will make a decision that puts the data on an insert out of sync with the corresponding record in the **Equipment List**.

This will be manifest by an **Orphaned SysName** record. To remedy the error use the following steps:

- 1. Select the insert in the drawing that is orphaned. If you are unsure you can always start this function and if the insert matches the database you will be informed so.
- 2. Right-click to show the context menu.
- 3. Click Equipment>Sync Insert with Database.

These are the possible outcomes:

- 1. The insert matches the database. At which point you will be informed as such.
- 2. The insert partially matches the database. The SysName and Location match but other fields do not. You will be given a choice as to which record to use as the update source.
- 3. The insert cannot be matched with a record in the database. This results in two other options:
 - a. You will be given the choice to add a new record, or:

b. The database is queried for like **Manufacturer** and **EquipmentName** records from which you can select to apply to the insert. Note: only **SysNames** of the same **Manufacturer** and **EquipmentName** will be shown for selection.

Outcome	Update Insert in Drawing	Update Database Data	Update Cable Data	Add New Record	Update Attached Pointers
ltem Matches Database	-	-	-	-	-
Item Matches SysName and Location Choice to use Insert Data		x			
Item Matches SysName and Location Choice to use Database Data			x		x
Item not found in Database Choice is Add				x	
Item not found in database choice is select other existing	x		x		x

Depending on your selection the following will happen:

2.2.9 Swap Equipment

Menu: Context Menu with Equipment Insert Selected>Equipment Functions>Swap Equipment Default command line shortcut: none

The Swap Equipment function allows you to swap Manufacturer, Model, and port data on an existing functional block or concept block.

Applies To:

Functional Blocks Concept (High Detail) Blocks.

Used For:

Switching from one make/model to another.

Controls

nufacturer 3COMM		▼ Eq	uipment Name 2928-SFP	
Incoming Inputs	Outgoing Inputs		Outgoing Outputs	Incoming Outputs
	AUD - MXLR - AUD)	SDI - BNC - SDI	
	AES 1,2 - MXLR - AES 1,2		AUD - FXLR - AUD	
	GENLOCK - BNC - VID		ETHERNET - RJ45 - ETHERNET	
	AUD-01 - MXLR - AUD		AES - FXLR - AES	
	RS-422 - 9DMale - CNTL		AUD-01 - FXLR - AUD	
	VIDEO - BNC - VID		MOUSE - PS-2 - DATA	
	AES 3,4zdfa - MXLR - AES		VIDEO.01 - BNC - VID	
	SDI - BNC - SDI	1	VIDEO.03 - BNC - VID	
	SDI-001 - BNC - SDI		AES 3,4 - FXLR - AES	
	SDI-002 - BNC - SDI		VIDEO.02 - BNC - VID	
	SDI-003 - BNC - SDI		SDI.03 - BNC - SDI	
	SDI-004 - BNC - SDI		KB - PS-2 - DATA	
	HD SDI - RJ45 - HD SDI		VGA - 15D HD - VGA	
			SDI.01 - BNC - SDI	
			SDI-001 - BNC - SDI	
			SDI-002 - BNC - SDI	

- Manufacturer Select the Manufacturer to replace the outgoing device with.
- Equipment Name Select the Equipment Name / Model / PN to replace the outgoing device with.
- Inputs grid, Outputs grid Select the ports to replace.
- Find Matches Matches incoming ports to outgoing ports.
- OK Do it!

- 1. Open a drawing.
- 2. Select one of the block types in the Applies To section.
- 3. Right-click to show the context menu.
- 4. Click Equipment Functions > Swap Equipment.
- 5. Fill in the Equipment Switcher form data.
- 6. Click **OK**.

2.2.10 Edit Block in Place

Menu: Context Menu with Equipment Insert Selected>Equipment Functions>Edit Block in Place Menu: Context Menu with Equipment Insert Selected>Equipment Functions>Edit Block in Place Ignore Attached Cables Default command line shortcut: ebip, EditBlockinPlaceIgnoreAttachedCables Related Settings: None

Edit Block in Place allows you to modify an existing insert that was created from the Equipment Library. There are two variants of the function. One that attempts to keep all cables attached to the ports from which they started. The other does not.

Because blocks in the CAD file are immutable the function actually creates a replacement block and inserts it into the drawing in place of the other.

Prerequisites

A WireCAD created functional block

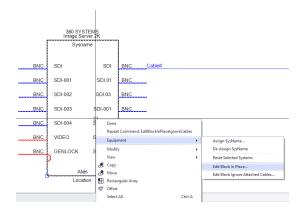
Overview

- 1. The port information is read from the block.
- 2. The display information is read from the block.
- 3. Cable information is read from the block.
- 4. The **Equipment Library** is queried for the incoming device and the Library is placed in Edit Mode.
- 5. The drawing information is used to create a matching block in the Equipment Library.
- 6. Edit to suit.
- 7. Update the insert in the drawing.
- 8. Re-route all cables to find their starting ports or not depending on the variant.
- 9. Cables that cannot find their starting ports are modified to show a dashed LineType.
- 10. Show a dialog indicating cables that cannot find home.

NOTE: While the port information is being read into the Equipment Library if a port exists on the drawing that does not exist in the Equipment Library it will be added.

2.2.10.1 How To: Edit a Block In Place

- 1. Open a drawing with a WireCAD created functional block.
- 2. Select the block. It must be the only thing in the selection.
- 3. Right-click and select Equipment>Edit Block in Place.



4. The block is loaded into the Equipment Library for edit.

Detail	I/O Dupi	lay Preference																Edit	Mode	•	¢,
1	8	88	2	3	0de	15		Select All		Name	8	80	2	3	15		Orde			and a	
5	92	(Cable End) Corrector	Display	PinTyp	4	8		Clear		6	Sond Type	(Cable End) Corrector	Display	FinType	8		a		10		
	Type	ter ()	Order	1		8.	Al Inpi	us Al	Outputs) pe	and D	Order	°	ă.				40 40 M	90 80-04	890 850
500	501	ENC		11 Normal		v v	Select 8	Signal Type		500	SDI	INC		4 Normal		×.		0 4	AC 80-000	80.10	840
501-001	501	BNC		0 Normal		1 🗹				SOL.01	501	BNC		17 Normal		1		1		82-611	-
501-012	501	SNC		1 Normal		2 🗹				505.03	500	SNC .		14 Normal		×.		2 1	10404	10,000	100
501-003	501	BNC		2 Normal		3 🗹				SOE-001	501	BNC		0 Normal		1		3	007 1000	10-000	100
503-034	501	SNC		3 Normal		4 🗹				505-002	500	SNC .		1 Normal		×.		4 4	AC GENLOOK	80-004	840
VIDEO	VED	ENC		9 Normal		s 🗹				901-003	501	BNC		2 Normal		2		5		vin.	T
274.00	ND	5NC		6 Loop		5 🗹				505-004	SDI	CNC .		3 Normal		82		6	50	Cabon	
AUD .	AUD	MOLR		4 Normal		7 🗆				E AUD	AUD	FAR		5 Normal				7 -			
Atts 1,2	Atts 1,2	MOLR		5 Normal		s 🗋				Е стнеялет	ETHERNET	R345		6 Normal				8 86	lan	OW	
AUD-01	AUD	MOLR		7 Normal		9 🗆				E AES	AES	FAR		7 Normal				9 Dis	play Asi		
RS-422	om.	SCIMale		8 Normal	1	•				E ALID-01	AUD	PAR		8 Normal				33	Punctional 1		
HARS 3,	AES	MOLR.		t0 Normal	1	1				E MOUSE	DATA	PS-2		9 Normal							
HD SDE	HD SDE	RNS		12 Normal	1	2				E VIDED.01	V1D	ONC		33 Normal							
							Reorder	Copy	Reorder	VIDEO.03	MD	BNC		11 Normal					Front Panel		
							:	4.1	:	E A25 3,4	ALS	PAR		12 Normal					Pront Panel		
									<u> </u>	E VIDEO.02	VID	BNC		s3 Normal					Plan View (Fi		
										E 105	DATA	PS-2		15 Normal				26 0	Plan Vew (h	rom Dints)	
										e vga	VGA	150 HD		55 Normal				17			
							Add/Dele	te Ports											Update Inse	ert in Draw	ing
								Add Ports													
							Del	lete Selected P	wts .									1	idd to Project (Assign 1	Database SysName)	anly
							Refresht	Slock Preview													
							Auto P	review s	tefresh												
							Display O	rder											Attach (Decument (
		> ++ ++ <					Sort		Set		10718 + 10										

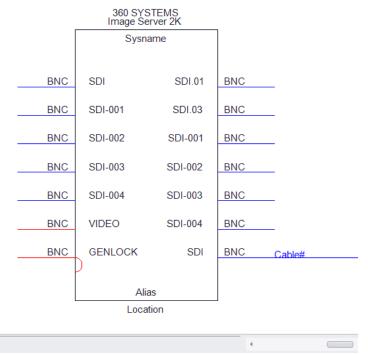
Edit initiated

5. Make changes. Here will move the top SDI port to the bottom.

nd Detail	I/O Dup	lay Preference																	Edit Mo	de 🔹	đ
Name	8	80	8	2	0d e	K.		Select All			Name	a de la compañía de la	80	245	3	1	(Orde		an evening	
8	g	the last	Display	Pin Typ		Sd ed		Clear			6	2	0.00		3		i i	la.		Species	1
	Type	(Cable End) Connector	Order	·		<u>8</u> .	Al Inp	AS A	I Outputs			Type	(Cable End) Connector	Order	0	1	L			10 10 10-00 100	110
► 501	501	SNC	1	1 Normal		0 🗸	Select 8	Signal Type			506.01	500	and a		17 Norma		×.		0 84G	80-000 80-30	840
8 501-001	501	BNC		0 Normal		1 🗹					E SOL.03	501	BNC		24 Norma		1		1 200	10-00 10-00	110
E \$51-012	500	ENC		1 Normal		2 🗹					8 505-001	501	evic .		0 Norma		×		2 800	10-03 10-03	125
B 501-003	501	ENC		2 Normal		3 🗹					S00-002	501	BNC		1 Norma		1		3 100	1080 80-008	275
E \$514014	500	ENC		3 Normal		4 🗹					500-003	501	evic .		2 Norma		×		4 840	OBALOOK BOHON	840
CODIN C	MD	ENC		9 Normal		s 🗹					S00-004	501	BNC		3 Norma		1		5	Alm	1
B 274.00	C VID	ENC		6 Loop		5 🗹					500	501	evic .		4 Norma		×		۰ ۲	Coolition	~
E AUD	AUD	MALR		4 Normal		7 🗆					E AUD	AUD	FAR		5 Norma				7		-
E AES 1,2	AES 1,2	MUR		5 Normal		a 🗆					E ETHERNET	ETHERNET	R345		6 Norma				a 🛛 🖗 Plan	O NW	
B AUD-01	AUD	MALR		7 Normal		9					H AES	AES	FAR		7 Norma				9 Display J	lsi	
E RS-422	own.	SCIMale		5 Normal		0					ALID-01	AUD	PLR		8 Norma				20	tional 1/0	
E 465 3,	AES	MOLR	1	0 Normal	1	1					E NOUSE	DATA	PS-2		9 Norma						
E HD SOL	HD SDE	R345	1	2 Normal		2					E VIDED.01	ND	evic .		30 Norma					aptual I/O (High)	
							Reorder	Copy	Reorde		E VIDEO.03	VID	BNC		11 Norma					t Panel (File Mero	
							•	4.2	•		E A25 3,4	ABS	PLR		12 Norma				14 O from	t Panel (Prom Dim	
							-		•		UDE0.02	VID	BNC		13 Norma				15 O Plan	View (File Merge)	
										How	e Itens				15 Norma				25 O Plan	Vew (Prom Dires)	
										Nov	es the selected i	terns up or down	n the let		55 Norma				17		
																				terrufacturer to Li Equipment to Libr	
																				Equipment From I	
							Add,Dele	te Porte											Upd	ate linsert in Drav	ing
								Add Ports													
							Del	ete Selected	Ports										Add to	Project Database (Assign SysName)	anty
							Refresht	fock Preview													
							Auto P	review	Refresh												
							Display O	rder												Attach Document	
		ь н н к					Sort		Set			1 of 18 + 14									

List re-ordered

6. Click [Update Insert in Drawing].



Port moved and cable reattached

7. Done.

2.2.11 Rereference Pointers

Explanation

Occasionally you will save pointers to another sheet. This can be because you have done a SaveAs or Copy / Paste.

At that point you will want to change the sheet reference on the pointers. Those pointers that point to the new sheet from other drawings

as well as the pointers on this sheet that point to the old drawing will need to be renamed to the new sheet.

Usage

- 1. Click Advanced Tools > Rereference Drawing Pointers (Change SheetRef Names).
- 2. Fill in the dialog Set the rename from to names and where you want to search.

2.2.12 Save and Ripple

Occasionally throughout normal program execution you will be presented with the <u>Ripple Choice</u> dialog.

9 Ripple Type
You have made changes that likely impact other drawings and databases. WireCAD can now ripple the changes across the drawing set and affected databases.
\bigcirc Full Ripple. Searches all drawings. This is the safest but takes more time.
Quick Ripple is not an option if any of the items to ripple are missing drawing indexes. To be sure that the indexes are up to date you can use the Re-index function on the Equipment and Cables grids.
Quick Ripple. Searches only the indexed drawings for each item.
You can tell if an item has indexes by looking at its row in the grid if the [+] is enabled there is an index.
Yes No Cancel

Something has changed that potentially effects data in other drawings and databases. This is your chance to update those other entities in other places.

Applies To: <u>Equipment List</u> [532] <u>Cables</u> [535] database <u>Locations</u> [538] database <u>Rack Builder</u> [438] drawings

Related Topics: <u>Understanding Indexes</u>

2.2.13 Spare Cables

Menu: Advanced Tools > Add Spare Cable(s) Default command line shortcut: AddSpareCables Related Settings: None

Place geometry in the drawing and cable(s) in the **Cables** database that represent spare cables.

The following images represent the above settings in both drawing and the **Cables** database.

This function adds **Count** number of cable records to the **Cables** database. The number is automatically formatted in accordance with the <u>Cable Number Format</u> tool and the <u>Next Numbers</u> [553] table.

Applies To:

Used For:

Adding geometry and cable entries in the project Cables database.

Controls

able Type: B	ELDEN-1800B	* +	Signal Type: 1	.394b	•
Left Side			Right Side		
Location:	1	- +	Location:	1	+ +
Connector:	1/4"	+ +	Connector:	1/4"	- +
ount:					5
Geometry					5
	cation		Show Conn	ector	5
Geometry			Show Conn		5
Geometry	ble Type				5

- Cable Type Select the CableType.
- Left Side, Right Side set the location and the connector.
- Count how many cable records to enter.
- Geometry What to include in the drawing.

2.2.13.1 How To: Add a Spare Cable

- 1. Open a project.
- 2. Open a drawing.
- 3. Click Advanced Tools > Add Spare Cable(s).
- 4. Fill in the dialog.

	(s)			? X
able Type: E	BELDEN-1800B	- +	Signal Type: 1394b	* +
Left Side			Right Side	
Location:	1	+ +	Location: 1	* +
Connector:	1/4"	+ +	Connector: 1/4"	+ +
ount:				5 💲
Geometry				5 🗘
	cation		Show Connector	5 🜲
Geometry			☑ Show Connector ☑ Show Cable Number(s)	5 \$
Geometry				5 \$

- 5. Click [Draw Polyline].
- 6. The dialog will be dismissed. You are prompted to draw a polyline.
- 7. Click the points to enter in the polyline.
- 8. Right-click to finish.

2.2.14 Understanding Terminals

Terminals in WireCAD represent a one or two port device and are used draw compact inline signal flow.

The terminal is a standard CAD block with specific WireCAD attributes. The geometry of the terminal is defined in the CAD drawing file.

In order to be a WireCAD Terminal the following criteria must be met:

- WireCAD Attribute set which includes:
 - SysName EquipmentName ManufacturerName Location Alias SheetRef Created With: EquipmentID WC_TYPE EquipmentDescription

In addition a Terminal must have at least one invisible Connection Point attribute with the Tag: **CP_IN** or **CP_OUT**.

The **CP_IN** should be placed on geometry that represents the input connection point. Or the point to which we will connect our cable destination.

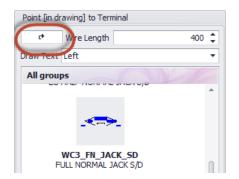
The **CP_OUT** should be placed on geometry that represents the output connection point. Or the point to which we will connect our cable source.

If a **CP_IN** is defined. The follow display attributes may also be used: **INPUT_CONN** - optional input connector display name. **INPUT_NAME** - optional input display name. **INPUT_TYPE** - optional input signal type display name.

If a **CP_OUT** is defined. The follow display attributes may also be used: **OUTPUT_CONN** - optional output connector display name. **OUTPUT_NAME** - optional output display name. **OUTPUT_TYPE** - optional output signal type display name.

2.2.14.1 How To: Customize a Terminal

- 1. Open the base CAD file. The terminals are in the %BLOCKS%\WireCAD Terminals path.
- 2. Modify the geometry and or attributes to suit.
- 3. Click File > Save As. Remember to keep the _S.DWG and the _D.DWG naming convention intact.
- 4. Open a drawing that you want to use your shiny new terminal in.
- 5. Refresh the Terminals tool panel. This will display your new terminal in the place terminals galleries.



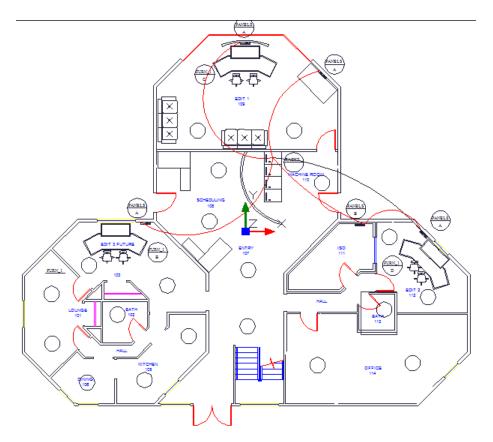
6. Click to use as any other terminal.

If the terminal needs changes you will have to do the following:

- 1. Delete all instances of the offending terminal insert from the drawing.
- 2. Click File > Purge.
- 3. Verify that your file name is in the purge blocks list.
- 4. Purge the drawing of unused entities.
- 5. Open the base CAD file again and edit and save.
- 6. Repeat steps 4 6 above.

2.3 Plan View and Layout Tools Dialogs

The following set of tools is targeted at the plan view space.



2.3.1 Take Offs

Menu: Drawing > Plan View and Layout Tools > Take Offs Default Commandline shortcut: showtakeoffs

Related Settings:

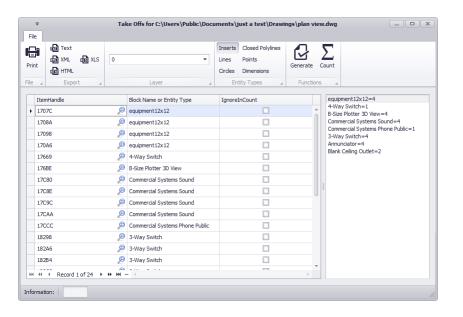
None

Often we need to count items in the plan view space for quoting or other purposes. The Take Offs tool facilitates this process by filtering the drawing for specific entity types on specific layers then counting those instances.

Possible Uses

- Quote preparation.
- Trouble-shooting.

Dialog Options



- Print Print the grid.
- Export Export the grid.
- Layer What layer are we searching for the selected entity type(s).
- Entity Types What entity type(s) are we searching for.
- Generate Do It! The results will be displayed in the grid.
- Count Count the items in the list. The results will be displayed in the right-hand list.
- Grid Columns

ItemHandle ShowMe - Zooms to show the item in the drawing. **Block Name or Entity Type -** obvious.

IgnoreInCount - Ignore me when counting.

2.3.1.1 How To: Pull a Take-Off from a Drawing

- 1. Open a plan view drawing.
- 2. Click Plan View Tools > Take-Offs.
- 3. Select the **Insert** check-button.
- 4. Then click [Generate]. This generates a list of all Inserts in the drawing.
- 5. Click [Count]. This counts the different inserts in the drawing. The results appear in the list on the right.

= rin	EDE XML EES XLS	0	,	Inserts Closed Polylines tines Points Circles Dimensions Entity Types		Jount
	ItemHandle		Block Name or Entity Type	IgnoreInCount		equipment12x12=4
Þ	1707C	ø	equipment12x12		1	4-Way Switch=1 B-Size Plotter 3D View=4
	1708A	ø	equipment12x12			Commercial Systems Sound=4
	17098	ø	equipment12x12			Commercial Systems Phone Public=1 3-Way Switch=4
	170A6	ø	equipment12x12			Annunciator =4
	17669	ø	4-Way Switch			Blank Ceiling Outlet=2
	176BE	ø	B-Size Plotter 3D View			
	17C80	ø	Commercial Systems Sound			-
	17C8E	ø	Commercial Systems Sound			
	17C9C	ø	Commercial Systems Sound			
	17CAA	ø	Commercial Systems Sound			
	17CCC	ø	Commercial Systems Phone Public			
	18298	ø	3-Way Switch			
	182A6	ø	3-Way Switch			
	182B4	ø	3-Way Switch			
144	44 4 Record 1 of 24 +	- 44 44			1	

Now let's say we want to count all circles on the CEIL_SPKR layer.

- 1. Open a plan view drawing.
- 2. Click Plan View Tools > Take-Offs.
- 3. Select the **Circles** check-button, and select the **Layer** on which to search.

▼ Take Offs for C:\Users\Public\Documents\just a test\Drawings\FP3.dwg	
File 1	
Image: Second	
+++ ++ Record 0 of 0 → →→ +++	
Information:	

- 4. Click [Generate]. This produces a list of all the circle entities found on the selected layer.
- 5. Click [Count]. This counts them and outputs the result in the right-hand list.

t Text	CEIL_S	SPKER -	Circles Dimensions Genera	te Count
ItemHandle		Block Name or Entity Type	IgnoreInCount	vdCircle=20
A8E1	ø	vdCircle		-
A8E2	ø	vdCircle		
A8E3	<u>,</u>	vdCircle		
A8E4	<u>,</u>	vdCircle		
A8E5	<u>,</u>	vdCircle		
A8E6	¢	vdCircle		
A8E7	¢	vdCircle		
A8E8	¢	vdCircle		
A8E9	¢	vdCircle		
A8EA	¢	vdCircle		
A8EB	ø	vdCircle		
A8EC	ø	vdCircle		
A8ED	ø	vdCircle		
A8EE	ø	vdCircle		-
++ + Record 1 of 20 ►	- 44 44		_	

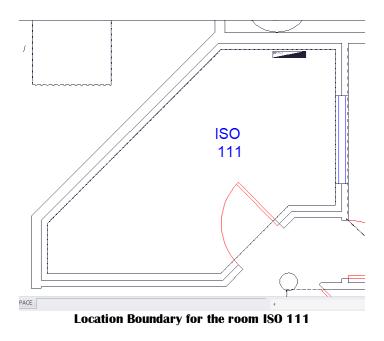
6. As you can see we have 20 circles that appear on the CEIL_SPKR layer.

Menu: **Plan View and Layout Tools > Location Boundaries from Text** Default Commandline shortcut: **DrawLocationBoundaryRectangle** Related Settings:

None

Define geometric boundaries for locations important to the design. For example we would want to know where on the drawing the Machine Room is but not necessarily the kitchen (unless part of our cable ends up in the kitchen).

Boundaries can be nested in other boundaries. It is common practice to create the Campus boundary and then nest the Building boundary then the Floor boundary then the Room and Racks boundaries.



Prerequisites

A plan view drawing.

Dialog Options

_	0		not Dana 36 fo 2m locations due	Y		1
-	8. Location I	Boundary Proper	ties			
	Name:	MACHINE ROOM			•	
	Location Kind		Advanced			
t (Misc		^	
	O None		Automatically Nest Locations	True		
	Campus		Boundary Entity	Rectangle		
DL	Campus		Show Name In LineType	True		
nt	O Building					
1	O Floor	1				
	Room					RACKS
-	O Rack					
	C Elevation	1				
-	🔘 Slot					MACHINE ROOM
				ОК	Cancel	110

- Name The location name.
- Location Kind You will need to tell us the kind.
- Automatically Nest Locations Default is true.
- Boundary Entity Rectangle, Closed Polyline, Circle.
- Show Name in LineType Renders the entity with the location name as the linetype.

Method 1

Use the selected text entity to populate the dialog.

- 1. Open a plan view drawing.
- 2. Select a text entity that represents the location name of the location for which we will create the boundary. This text will populate the dialog **Name** field.
- 3. Click Plan View and Layout Tools > Location Boundaries from Text.
- 4. Set the Location Kind.
- 5. Set the **Boundary Entity**.
- 6. Click [OK]. The dialog is dismissed and you are prompted to draw the boundary entity.
- 7. Draw the boundary.

Method 2

Manually populate the Name field.

- 1. Open a plan view drawing.
- 2. Click Plan View and Layout Tools > Location Boundaries from Text.
- 3. Enter the Name.
- 4. Set the Location Kind.
- 5. Set the Boundary Entity.
- 6. Click **[OK]**. The dialog is dismissed and you are prompted to draw the boundary entity.
- 7. Draw the boundary.

2.3.3 Draw Backbone

Menu: Drawing > PlanView and Layout Tools > Draw Backbone

Default Commandline shortcut: Related Settings: None Product Level: ENT

Backbones are collections of cable/fiber that are contained in a single jacket that run from one location to another and are typically sized for growth. An example might be a fiber optic cable that contains 288 fiber cores that runs from building A to building B. We know that initially we will not use all 288 fibers and have planned for growth. As the facility needs change the usage of the backbone's fibers change.

WireCAD maintains backbones just like any multi-core cable with the exception that the **Cables** table record is flagged **IsBackBone** = true.

WireCAD will create a cable record for every core in the Cable Type used.

Prerequisites

- 1. SysNames assigned to the panels/equipment to which you will attach the ends of the Backbone.
- 2. Multi-core Cable Type representative of the Backbone.

Operation

This tool allows you to draw geometry in the Plan View space that represents the path of the **Backbone**. The process requires the following steps:

- 1. Draw the polyline that represents the backbone.
- 2. If locations boundaries are found in the drawing the source and destination locations will be used. Otherwise you will be prompted to define a location for each end.
- 3. Next you will be presented with the **New Backbone** tool where you will select the source and destination panels/ports and the cable type.
- 4. Clicking **[OK]** will build a record in the **Cables** table for each core in the multi-core cable type.
- 5. The polyline length populate the cable record **Length** field.

Dialog Options

Interconnect	Geometry									
Mode										
New Backbor	ne Backbone	ID 1001	B01001	🔘 Use Existi	n g Available Se	lect	Existing Back	bone Star	ting Number	Select 🔻
From				Cable Type	• +	T	ō			
ocation Filter			•	Cable Type Info Lab	el	Lo	cation Filter			-
atch Panel ID			* + 0			Pa	tch Panel ID			* + ¢
Available Ports						Aν	ailable Ports			
Name	Туре	Conn	From/To				Name	Туре	Conn	From/To
				ОК	Cancel	11				

- New Backbone Select whether we are creating a new number or assigning existing unused core.
- Backbone ID The number.
- Use Existing Available -
- Location Filter Filter the list by location.
- From Panel Info Select the panel. The ports will be shown in the list.
- To Panel Info Select the panel. The ports will be shown in the list.
- Cable Type Select the Cable Type.

2.3.3.1 How To: Draw a Backbone in Planview

- 1. Open a plan view drawing. Where you want to drawing a plan view polyline.
- 2. Place source and destination Plan View Equipment or source and destination Plan View Location Boundaries.
- 3. Click Plan View and Layout Tools > Draw Backbone.
- 4. As prompted select the source equipment or location boundary.
- 5. Draw the points in the polyline.
- 6. The New Backbone tool is shown.

						_) © (×
Interconnect Geometry						
Mode						
New Backbone Backbone ID 1002 B01002	O Use Existing Availabl	e Se	lect Existing Back	bone Star	ting Number	Select 🔻
From		- +	То			
ocation Filter	 Cable Type Info Label 		Location Filter			•
atch Panel ID 🔹 🛨	•		Patch Panel ID			→ + ↔
vailable Ports			Available Ports			
Name Type Conn From/To			Name	Туре	Conn	From/To
	1	1				
	ОК Са	ncel				
atus			e			

- 7. Select the source, destination, cable type and ports.
- 8. Click [OK] to finish.

2.3.4 Draw Cable

Menu: Drawing > PlanView and Layout Tools > Draw Cable Default Commandline shortcut: pwdc Related Settings: None Product Level: ALL

This tool allows you to draw a cable in Plan View space that is assigned to the Cables table.

Related Topics

Draw Cables 69

Dialog Options

8 New Cable			_ – ×
Cable Type Manu	-	Cable Type	
Source Informa	tion	Destination Info	rmation
SRC Sys SRC Pin SRC Loc SRC Conn SRC Alias	DAJ-001	Dest Sys Dest Pin Dest Loc Dest Conn DST Alias	DAJ-002
Integrator		Sheet	
Signal Type	-	Length	
User 1		User2	
User3		User4	
Cable No			
			OK Cancel

- Cable Type Select the Cable Type.
- Source Information The source SysName is pulled from the drawing. You will need to selection the Src Pin and such.
- **Destination Information** The destination **SysName** is pulled from the drawing. You will need to selection the **Dest Pin** and such.
- Other Stuff Enter user information.
- Cable No Click the [...] button to generate a cable number.

2.3.4.1 How To: Draw a Cable in Planview

This tool allows you to draw geometry in the Plan View space that represents the path of the cable. **Prerequisites**

- 1. SysNamed source and destination equipment placed in the Plan View space or:
- 2. Source and destination Location Boundaries placed in the Plan View space.
- 1. Open a plan view drawing.
- 2. Click Plan View and Layout Tools>Draw Cable
- 3. Select the source SysNamed equipment.
- 4. Select the destination SysNamed equipment.
- 5. Place the points in the polyline to finalize the appearance.

2.3.5 Populate Cables

Menu: Drawing > PlanView and Layout Tools > Populate Cables Default Commandline shortcut: popc Related Settings: None Product Level: ALL

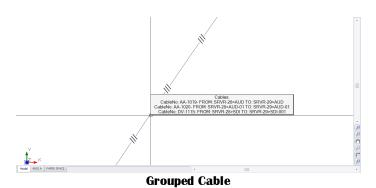
This tool pulls the cables from the Cables table into the drawing. The assumption with this tool is that you will use it after you have done your functional drawings and assigned **Cable Numbers** and **SysNames**.

Related Topics

Dialog Options

Populate Cables	x
Group cables from	/to same location into a single line
Must connect to e	visting equipment in the drawing
Ignore cables that	come and go to the same location
Flag if other end is	not found
Polyline Bulge Factor	0.2 🗘
	OK Cancel

 Group Cables - Place a single polyline with hash marks to indicate count. All cables that come and go from a single Location or SysName will be grouped. Otherwise a single polyline for each cable will be added.



- Must connect to equipment in the drawing The population will fail if the connected equipment SysName is not found. Otherwise the cable will be populated to the drawing based on Location Boundary.
- Ignore cables that come and go to the same location Keeps the drawing cleaner.

- Flag if other is not found If both Locations or SysNames are not found in the drawing a flag will be places pointing to the other end.
- Polyline Bulge Factor The bulge factor to create an arc instead of a straight line.

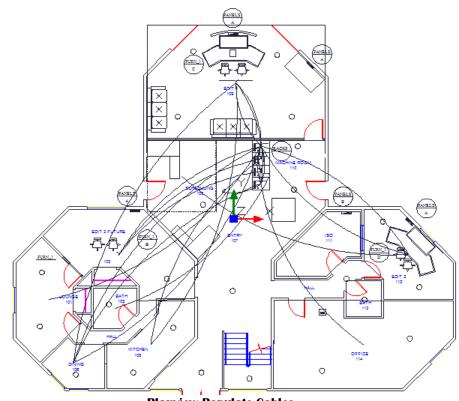
2.3.5.1 How To: Populate Cables in Planveiw

Prerequisites

- 1. SysNamed source and destination equipment placed in the Plan View space or:
- 2. Source and destination Location Boundaries placed in the Plan View space.
- 3. Cable data in the Cables table that matches the placed equipment or locations.

Operation

- 1. Open a plan view drawing.
- 2. Place Location Boundaries.
- 3. Place plan view equipment and SysName Optional.
- 4. Click Plan View and Layout Tools > Populate Cables.
- 5. Click **[OK]**.



Planview Populate Cables

Menu: PlanView and Layout Tools > Draw Prewire Cable Default Commandline shortcut: pw Related Project Settings: Automatically Consume Prewire Cables Product Level: ALL

This tool allows you to draw geometry in the drawing that represents cables that have not yet had their functions assigned. The only thing we know about these cables is the locations from which they start and end and the Cable Type. A record will be added to the Cables table based on the count defined. The record is marked Available and PreWIRE. Prewire cables can be automatically consumed later if the

Prerequisites

1. Source and destination Location Boundaries placed in the Plan View space.

Related Topics

Draw Cables 69

Dialog Options

		x
Cable Type:	Select a Cable Type	•
Signal Type:	Select a Signal Type	•
How Many?		× • 1 *
Count:	1 🛔	
Group count	as one	
Length Divisor:	12	\$
Add Path to Nan	ned Paths Table	
Make Named	d Path	
Named Path Nar	ne:	
	OK Cancel	
	Signal Type: How Many? Count: Group count Length Divisor: Add Path to Nar	Signal Type: Select a Signal Type How Many? Count: 1 ↓ Group count as one Length Divisor: 12 Add Path to Named Paths Table Make Named Path Named Path Name:

- Cable Type, Signal Type
- How Many How many wires of this type take this path. A record will be created for each.
- Length Divisor We will divide the length of the polyline by this value and place that info in the Length field of the record. For example, say your Drawing Unit = 1 inch and you want the length in the Length field to be displayed in feet. Your Length Divisor would be 12.
- Create Named Path Create an entry in the Named Paths table with the name provided and length of the polyline.

2.3.6.1 How To: Draw a Prewire Cable in Planview

Operation

- 1. Open a plan view drawing.
- 2. Click PlanView and Layout Tools > Draw Prewire Cable.

Prewire cables works only if you have added location boundaries to your plan view drawing. If you have added SysNames you can use them as well but the locations are not optional.	Cable Type:	Select a Cable Type	•
	Signal Type:	Select a Signal Type	-
	How Many?		
	Count:		1 *
	Group cour	it as one	- •
	Length Divisor:		12 💲
	Add Path to Na	med Paths Table	
	Make Name	d Path	
	Named Path Na	ame:	

- 3. Fill in the form.
- 4. Click **[OK]**. This will dismiss the dialog and prompt you to draw a polyline.
- 5. Draw the cable path.
- 6. n **Cables** will be added to the project **Cables** table with a formatted number based on the project **Cable Number Format** and the **Next Numbers** table.
- 7. The polyline length will be divided by the **Length Divisor** field and added to the cable record **Length** field.

2.3.7 Populate Equipment

Menu: PlanView and Layout Tools > Populate Equipment

Default Commandline shortcut: pope Related Project Settings: None

Product Level: ALL

There is no UI for this tool.

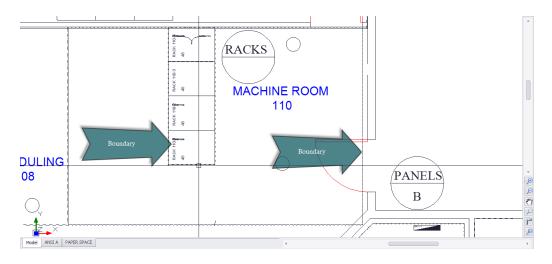
This tool pulls the Plan View version of the equipment from the Equipment List.

The assumption with this tool is that you will use it after you have done your functional drawings and assigned cable numbers and SysNames.

This tool relies on the Plan View File in the device definition to know what to place.

EquipmentName	Image Server 2K	
Abbreviation	anage deriver all	
Font Panel File	%BLOCKS%(2D_ELEVATIONS(2D_ELE)DWG	
Plan View File	%BLOCKS%/plan view/av lv/pushbutton station.dwg	
Accessory Of	(EditValue is null)	
Equipment Description	Mpeg 2 Video Server	
Manufacturer ID	360 SYST	
Equipment Type (SysName Prefix)	SRVR	
Equipment Weight	2.25	
Equipment Weight Unit of Measure (UOM)	Pounds	•
Equipment Height	2	
Equipment Height UOM	Rack Units(RU)	•
Equipment Width	19	
Equipment Width UOM	Inches	•
Equipment Depth	12	

It relies on Location Boundaries in the drawing to know where to place it.



If the Plan View File is blank the Project Default Plan View File will be placed if the Location Boundary is found:

Application Menu > Settings [Project][Basic][Default Plan View Block File]

Default Plan View Block File:	%BLOCKS%\Plan View\equipment12x12.dwg	

2.3.7.1 How To: Populate Equipment in Planview

Prerequisites

- 1. SysNamed equipment preferably with an associated **Plan View File** in the global **Equipment** Library.
- 2. Location Boundaries placed in the drawing.

Operation

- 1. Open a plan view drawing.
- 2. Place Location Boundaries.
- 3. Click PlanView and Layout Tools > Populate Equipment.
- 4. A message box will explain the operation of the function. Click [OK]. The tool will run.
- 5. At completion the tool will report the number of placed items.

2.4 Reporting

Menu: double-click the report in the **Project Explorer** or Click the report in the **Reports > Reports** gallery

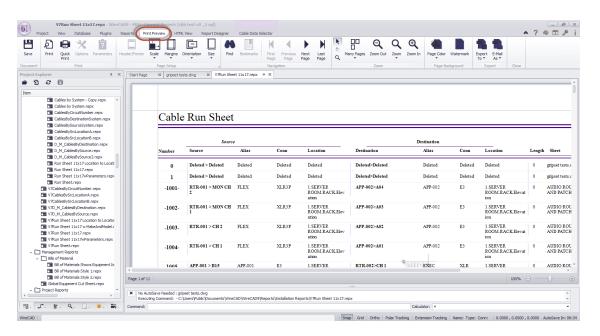
Default command line shortcut: **none Related User Settings**: **Report Show Mode** - Determines where the reports will be shown: *Project Explorer Ribbon Menu Gallery Both*

Opens a report for preview, printing or export. Reports are designed to connect to the WireCAD DataAccess object that provides access to the entire data model both Global and Project data. There are four tabs presented when a report is loaded:

- 1. **Preview** Shows the print preview that will be output to the selected system printer.
- 2. HTML Shows the report rendered to HTML for use in web pages.
- 3. **Design** Shows the report designer.
- 4. **Cable Data Selector** Shows a selector grid for use with the ProjectCables collection. This grid is not implemented for any other data collection.

Print Preview	HTML View	Report Designer	Cable Data Selector

- 1. Double-click the report in the Project Explorer or Click the report in the **Reports > Reports** gallery.
- 2. The report will load in **Preview** Mode.



3. Click **File > Print** and select a printer.

2.4.2 How To: Print Reports with Parameters

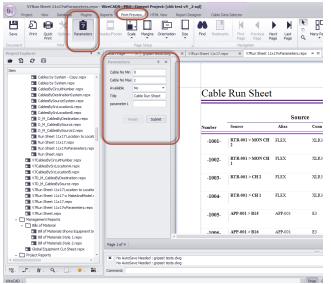
Parameters allow the report designer a way to collect input from the user before the report is rendered. Parameters may be used in the report for several purposes:

- Replace title and descriptive text.
- Provide data to filters.
- Provide data to scripts.

The report designer may force the user to submit parameter data or allow the report to render with default data.

If the report has no parameters defined the **Parameters** menu item will be disabled.

- 1. Open a report Double-click the report in the **Project Explorer** or Click the report in the **Reports** > **Reports** gallery.
- 2. The report will load in **Preview** Mode.
- 3. If the report has parameters the Parameters menu item will be enabled. If the report designer determined the report must gather parameters first, the report will not render until you click the **[Submit]** button on the Parameters tool panel.



Report preview with Parameters tool panel shown

- 4. Enter parameter data.
- 5. Click [Submit]. The report will render with the submitted data.
- 6. Click **File > Print** and select a printer.

2.4.3 How To: Filter Reports

By default a report will query the database for all records in the selected collection. For example if the report displays the project CablesCollection, all records will be displayed. This may or may not be desirable. If you wish to filter the record set to show a specific set of records you have two choices:

- 1. If the collection being displayed is the CablesCollection you may use the **Cable Data Selector** tab and make a manual selection there.
- 2. Otherwise you must create a filter.

How To:

- 1. Open a report.
- 2. Switch to the Report Designer tab.
- 3. Locate the Property window. Make sure that the Property window is displayed. If not click: **Report Designer>Windows>Property Grid**
- 4. From the Property grid object selector, select XRReport1

xtraReport1 Report	-
--------------------	---

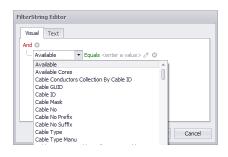
5. From the Property grid select the Filter String [...] ellipsis button.

🗄 Padding	0, 0, 0, 0	2
Page Color	White	
Style Sheet	(Collection)	
Style Sheet's Path		
Text Alignment	Top Left	
Watermark	(Picture)	
Behavior	*	
Export Options	(Export Options)	1
Measure Units	Hundredths of an Inch	
Script Language	C#	
🕀 Script References	String[] Array	L
Scripts	(Report Scripts)	
Show Margin Lines in P	Yes	
Vertical Content Splitti	Exact	
Visible	Yes	
Data	*	
Calculated Fields	(Collection)	
Data Member	CablesCollection	
Filter String	[CableNo] >= ?Ca 😶	
Tay		
XML Data Path		1

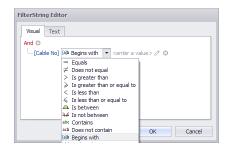
6. This opens the filter dialog from which you may select a number of different filters.

FilterString Editor	Co	mmector /
And O		
[Manufacturer]	Begins with <enter a="" value=""> 🧷 😳</enter>	
	= Equals	
	✓ Does not equal	
	> Is greater than	
	Is greater than or equal to	
	< Is less than	
	🔬 Is less than or equal to	
	A Is between	
	斗 Is not between	[
	abc Contains	Cancel
	acb Does not contain	JIMA TCINS
_	[a]b Begins with	
	b[c] Ends with	Description
	a%c Is like	YC
	a*c Is not like	
	 Is blank 	
🧏 Designer	Is not blank	
	🚥 Is any of	
	🚥 Is none of	

7. Select a field to filter on.



8. Select a filter operator.



9. Enter a value.

FilterString Editor	
Visual Text	
And O	
[Cable No] Begins with V-	08
	OK Cancel

- 10. Click **[OK]** to commit the filter. This filter with show only cables where the CableNo field begins with V-.
- 11. Select the **Print Preview** tab to render the report with the filter.

2.4.4 How To: Filter a Report Using Parameters

Filters may also contain parameters that the user must enter before the report is generated. In order to make use of this function you must follow these steps:

1. Add a parameter to the report while in Design view. Click the **Parameters** (...) ellipsis button to view the Parameters collection.

 Using Settings a Barameters	(Using Printe	r 5
Parameters	(Collection)	
Request Parame	Yes	
Printing		
Show Print Marc	Yes	
Show Print Stat	Yes	
Structure		
Bands	(Collection)	
		1

2. Click the **[Add]** button to add a parameter to the collection.

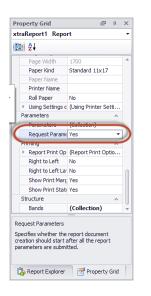


- 3. Enter description and default value information.
- 4. Open the filter editor (see above)
- 5. Add a Field and Operator, then click on the icon to the right of the field to select parameters.

FilterString Editor	Click here twice
And O	parameters
[Manufacturer] Begins with <enter a="" value=""></enter>	
OK	

FilterString Editor
And O [Manufacturer] Begins with Pparameter 1] @ O
OK Cancel

- 6. Select your parameter from the parameters list. Above we are selecting parameter1.
- 7. Click [OK] to submit the filter.
- 8. Now let's make sure that the parameters are submitted before the report renders. Set the **Request Parameters** property = Yes.



- 9. Click the **[Print Preview]** tab to preview the report. You will see a **Parameters** pane on the left hand side with a submit button.
- 10. Enter a value and click [Submit].

Start Page testing dwg Connector Abbreviation Table.repx*		Red List 🔁 👅
araneter Steel		DetaAccess
_	The document does not contain any pages.	Report Deplorer Pred List Property Ord
		Sorpt Reference String[] Array Sorpts (Report Scripts) Show Margin Lir Yes Vertical Content Exact Visible Yes Data
		 Calculated Field (Collection) Data Member GlobalConnectors Fiber String Tag
4		Filter String

11. Your report will be rendered with **parameter1** applied to the filter.

2.4.5 Report Design

Menu: Report>New Report with Wizard Default command line shortcut: rw Related User Settings: Report Show Mode - Determines where the reports will be shown: Project Explorer Ribbon Menu Gallery Both

2.4.5.1 How To: Create a Standard Report

- 1. Click Reports>New Report with Wizard.
- 2. Select the Standard Report option.



- 3. Click [Next>].
- 4. Select a data collection. Data collections access both the global and project databases. For example: say you wanted to show a list of all manufacturers. You would select the GlobalManufacturersCollection.

WireCAD organizes data Collections are beirarchi		or project data col	ections.	
GlobalManufacturersCollect	on			~
GlobalPinOutProfilesCollection	n			
GlobalPinsCollection				
GlobalPreferencesCollection				
GlobalSignalTypesCollection				
GroupsCollection				
LockCables				
LockSys				-
NamedPathsCollection				
PermissionsFunctions				
PermsCollection				
ProjectInfoCollection				
ProjectPrefsCollection				
Droiant0 avisionsCollactions				
				5

Note: collections are hierarchical to aid in the creation of sub-reports. All collections are populated with data when the report is previewed.

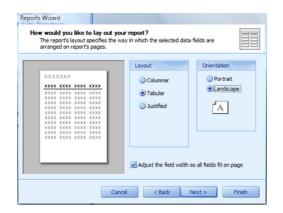
5. Select the fields (columns) you wish to display in the report.

Choose columns to display in you Your report can display any of the		ble in the dataset.	
Which columns do you want to disp Available fields: Manu/GUD Manu/facturerID Display/in/Equipment Display/in/Equipment	lay in your r	ManufacturerName ManfacturerWebSite ManufacturerImage	
UserAdded ModfiedDy ModfiedOn CreatedOn	< «		
Canc	xel •	Back Next >	Finish

6. Apply any grouping. Each set of records with the same value will become a "group" with its own header.

	rouping levels? roups based on identical fields values. You can fields at the same level to perform multiple groupi	ng.
ManufacturerName ManfacturerWebSite ManufacturerImage	ManufacturerName, ManfacturerNebSite, Manufacturerimage	
	Cancel < Back Next >	Finish

7. Select a Layout and Orientation for your report. The Adjust field width to fit function will force all selected fields on to a single page possibly rendering some of the data unreadable. If you have lots of fields to display, consider using a Justified report.



8. Select a **Report Style**. There are several predefine report styles. You can always modify the look and feel later.

What style would you like? The report's style specifies the appearan	nce of your report.	ŨĿ.
Title Caption at data	Itold Casual Compact Corporate Formal	
Cancel	<back next=""></back>	Finish

9. Title your report.



10. Click [Finish] to create your shiny new report.

of Box		Supprised with a set of personset My Cool Manufacturers Report Supervised in the set of personset			Report Explorer
andard Controls					PageHeader Detail
A Label	Man	wfacturer Name	Manfacturer Web Site	M	🖨 🚍 PageFooter
Check Box	-				
Aich Text		E Detail nufacturerName]	@[ManfacturerWebSite]	0	
Picture Box	2 3 3	PageFooter (one band per pag	*1	1	
Panel	Thu	rsday, January 21, 2010			
Table					🕼 Report Explorer 👌 Field Lis
Line					Property Grid
Shape					blankReport1 Report
•					Appearance
III Bar Code					Background Transpa
30 Zp Code					Border Colo ControlT Border Widt 1
Chart					Borders None
E Pivot Grid					Font Times New Ro
Page Info					Foreground ControlT

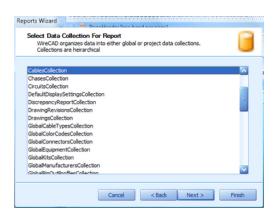
11. Click File>Save and save your work to your reports support path. It can be saved anywhere in the % REPORTS% support path folder tree.

2.4.5.2 How To: Create a Label Report

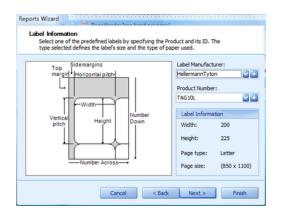
- 1. Click Reports>New Report with Wizard.
- 2. Select the Label Report option.



- 3. Click [Next >].
- 4. Select a data collection. Data collections access both the global and project databases. Note: In the case of labels we probably want to use the **CablesCollection**.



5. Select a label format. WireCAD comes stock with over 1000 label formats from 15 manufacturers including Panduit, Hellerman Tyton and Brady.



6. Modify and of the nudge factors and select the sheet size.

Side margins margint Horizontal p	HundredthsOfAnInd Label Width:	200. 😂
Vertical pitch -Number Across-	Label Height: Vertical Pitch: Horizontal Pitch: Top Margin: Side Margin: Printable Height	225 c 225 c 200 c 100 c 25 c 75 c
Page Size: Letter (850 x 1100)		

7. Click [Finish] to create your shiny new report.

ool Box		Image: A second seco	Report Explorer	J.J.
A A A	nd Controls Exiter Label Check Box Rich Text Picture Box Panel	Preprinted por band por pop) Detal Reccentre band por pop) Space for mpasing column. Space for mpasing column. Controls placed bere still be placed bere	Pageriesder	
	Table Line Shape	a 🔄 🖻 PopeFoote (over band per pope)	Report Explorer	eld List
	Bar Code Zp Code		Background Trans Border Colo Cont	
. Σ	Chart Pivot Grid		Border Widt 1 Borders None Font Times New Foreground Cont	
	Page Info Page Break	Gesigner: @ Preview blankReport1 (PaperKindLetter) Zoom Factor: 100%		

8. Select the **Field List** and drag any fields that you wish to display on to the report design surface. Avoid placing field on the light and dark gray areas. The light gray area will not print and the dark gray is indicative of the clear laminating portion of a cable label.



9. Here we have three fields that we have dragged and positioned on the design surface. We then edited the Src and Dest fields to concatenate the Pin data as well. Then we edited the font property of the CableNo entity to bold it.

📄 📃 PageHeader [one band per pa	age]
😑 🗉 Detail 🔉	
[CableNo]	2
[SRCSys]>[SRCPin]	
[DestSys]>[DestPin]	•
	Space for
	Controis placed he
	.
📄 🚊 PageFooter [one band per page	gej

10. Final output looks like this:

DV-1030-	DAT-10030-	DA-1001-	V-1005-
DV3-01>B-05	\$R/VR-185>KB	SRVR-01>AES 1,2	DV3-01>
DV3-02>A-05	SERVER-01>CH2-422	SRVR-01>VIDEO	DV3-02>/
D-1002-	V-10066-	V-10065-	DV-1001
D-1002- SRVR-181>ENET	V-10066. SERVER-01>COMP1	V-10065- DV7-01>B-12	DV-1001 SRVR-01

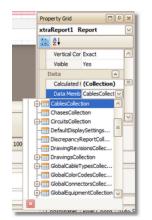
11. Click File>Save and save your work to your reports support path. It can be saved anywhere in the % REPORTS% support path folder tree.

The following topic assumes that you have either opened a new blank report or that you have run the **New Report Wizard**.

D I I I I I I I I I I	Field List
	DataAccess
Field List displays all available data collections hierarchically	AccountInfoCollection AccountInfoCollection CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste CableVoFormatVaste
Destination Destination Destination repeats once per record GSRCCorm GSRCLoc GSRC	GrautsCollection DefaultDisplaySetting DiscrepancyReportC DrawingRevisionsCol DrawingScollection GlobalCableTypesCol
 Wednesday, March 31, 2010 	Property Grid Report
Click Here to load General Document Properties into the property grid	Visible Yes A Calculated I (Collection) Data Memb CablesCollection
<ا الله الله الله الله الله الله الله ال	Tag XML Data P
Designer Ø Preview xtraReport1 { PaperKind:Standard11x17 } Zoom Factor: 100% Scripts Errors Group and Sort Scripts Errors Group and Sort	

If you open a new report without running the wizard you will need to set the report **Data Member** variable.

Click in the dark gray area to load the general properties. Select the **Data Member** from the drop down.



You can drag fields from the Field List directly to the report designer.

If you want to concatenate multiple fields in a single label you can drag multiple fields onto the same label or edit it directly.

To edit a label double-click it to enter edit mode.



Type directly into the label. Field names must be enclosed in [] brackets.

2.5 Frequently Asked Questions

2.5.1 How To: Place Custom Titleblocks (Page Borders)

Menu: Basic CAD Tools>Blocks>Insert Block Into Drawing Default command line shortcut: insert Related Settings: None

This tutorials assumes you have a custom titleblock in dwg format and that it occupies the Model Space of the dwg file. Further that you know the path to the file containing the titleblock file.

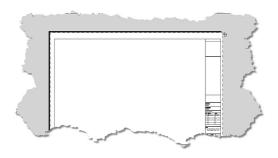
- 1. Open the drawing where you want to place a custom titleblock.
- 2. Switch to the Layout in which you intend to place your custom page border.



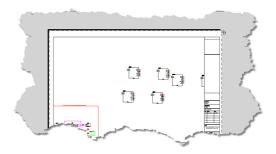
3. Click CAD Tools>Blocks and Inserts>Insert Block into Drawing.

Insert Block			
ocks 360 SYST	-Controllv0	▼ Browse	
Redefine Exis	ting?		
Insertion Point		Scale	Rotation
Specify Lat	er	Specify Later	Specify Later
X pos	0 🌲	X 1	🗘 Angle 0 🌲
Y pos	0 🌲	у 1	\$
Z Pos	0 🌲	Z 1	\$
			Insert It Cancel
			Insert It Cancel

- 4. Select [Browse].
- 5. Browse to the dwg that contains your custom title block in the Model Space.
- 6. Check Insertion Point Specify Later. This will let us manually place the inserted block in the layout space.
- 7. Uncheck Scale Specify Later and set the X,Y,Z scale to 1.
- 8. Uncheck Rotation Specify Later and set the Angle to 0.
- 9. Click [Insert It].



- 10. The dialog will be dismissed so you can drop the insert in the drawing space.
- 11. Now you will need to place a **Viewport** so you can see the model space.
- 12. Click **View>New Viewport** and select the logical boundaries of the viewport within the titleblock you placed earlier.



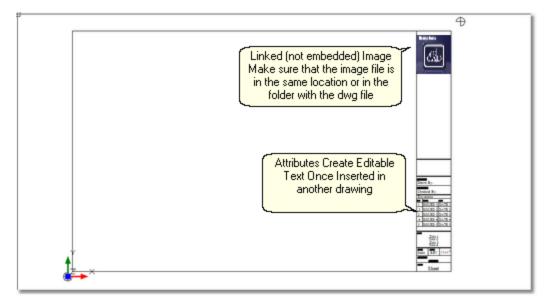
13. Double-click the viewport to activate it for zooming and panning and use the mouse wheel or zoom commands to position the viewport over the model space.

2.5.2 How To: Create Custom Titleblocks

Menu: CAD Tools>Blocks>Insert Block Into Drawing Default command line shortcut: insert Related Settings:

None

- 1. Create a new drawing with no template.
- 2. Draw your titleblock in Model space scaling it 1:1 with your printed page size, ie an 11x17 page border would be 11x17 minus your margins.
- 3. Place any images and attribute definitions.
- 4. Save the drawing.
- 5. Follow the steps <u>here</u> for placing your title block drawing in any other drawing.



2.5.3 Moving Projects (Pack Up/Check-Out)

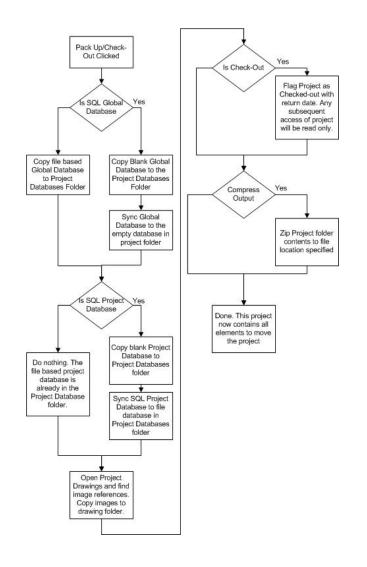
Menu: Application Menu > Project Utilities>Packup / Check-out Menu: Application Menu > Project Utilities>Unpack Menu: Application Menu > Project Utilities>Check In Default command line shortcut: packup

Default command line shortcut: **checkinproject**

When moving projects from machine to machine there are external items upon which the project depends. These are referred to as project and drawing dependencies. The main project dependency is the global equipment database. Drawings may have image, Xref, and font dependencies. When we **Pack Up** a project we are grabbing all of those dependencies (fonts are and exception and are not included) and placing them in the Project folder. We may choose to **Check Out** the project at the same time. This flags the project as read only until such time as the project is **Checked In**.

Once **Packed Up** and/or zipped up you are ready to move the project to another machine. Simply copy the Project folder or the zipped file and move it to the new machine. Then use the **Unpack** function.

WireCAD PRO Manual

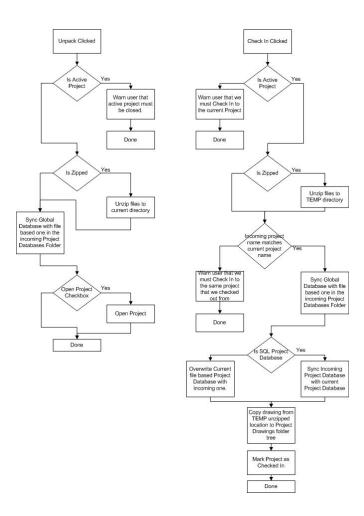


To Unpack or Check In - That is the Question

The two functions are practically identical with the exception that the **Check In** function won't launch without an active project and once unpacked will mark the active project as **Checked In**. Whether you **Unpack** or **Check In** a project depends on whether you are moving a project to a machine

on which that project already resides and whether you have **Checked Out** the Project.

If you have not **Checked Out** the project then there is no need to **Check In** the project. If you are moving a project to another machine, use the **Unpack** function.



2.5.3.1 How To: Packup/Check-out

Decide whether you are going to **Check Out** the project before starting.

- 1. Open the project to Pack Up/Check Out.
- 2. Click Application Menu > Check In/Out > Pack Up/Check Out.
- 3. Click **[Next]** after reading the explanatory text.
- 4. If you opt to Check Out the project you will be prompted to enter an Expected Return Date. This will let anyone opening the project subsequent to its Check Out who checked it out and approximately when it will be back. In the mean time it will be opened READ ONLY.
- 5. If you opt to **Compress Output** the final operation will be to create a zipped file of the project folder and place it in the **FileName and Path** location.
- 6. Click [Next]. You will be presented with the progress page.
- 7. Click [Finish].

To **Check In** a project you must first have the project that we are checking into open. The incoming project should be in a file location that is not the current project path.

- 1. Open the project into which we will check in the incoming project.
- 2. Click Application Menu > Check In/Out > Check In Project.
- 3. Click [Next] after reading the explanatory text.
- 4. Browse to the incoming project's .wpi file by clicking the [...] ellipsis button.
- 5. Click **[Next]**. This presents the progress page.
- 6. Click [Finish]. Wait for the process to finish.

2.5.3.3 How To: Unpack a Project

To **Unpack** a project you must not have an open project. The incoming project should be in a file location WILL BECOME the current project path.

- 1. Close the current project if any.
- 2. Click Application Menu > Check In/Out > Unpack Project ...
- 3. Click [Next] after reading the explanatory text.
- 4. Browse to the incoming project's .wpi file by clicking the [...] ellipsis button.
- 5. Click **[Next]**. This presents the progress page.
- 6. Click [Finish]. Wait for the process to finish.

2.5.4 Synchronizing with Another Equipment Database

Menu: Database>Synchronize Global Database ... Default command line shortcut: sync Related Settings: None

Occasionally you may experience the need to sync with another user's global database. This will copy all of their equipment to your Global Equipment Database. The sync includes manufacturers, equipment, inputs, outputs, signal types, connectors, cable types, cable core data, relational tables, etc. You may choose within the tool to perform an **import**, **export** or **bidirectional** sync.

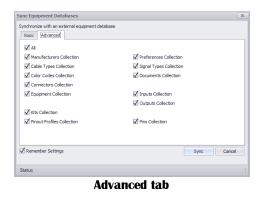
Demystifying Synchronization

Synchronizing data in two tables of the same structure is really very simple. In its most basic form, records that do not exist in one table are added. Records that exist in both tables receive the most current data based on a time stamp. In order that records deleted from one table do not get added back in, a special table is employed to track deleted keys. If the delete is the most current action then the record will likewise be deleted from the other table. In the unlikely event that the records have the exact same time stamp, yet the data is different, those records are flagged as conflict records from which you must pick the most correct.

Controls

🗌 Databa	ase is server based	
Host:		Authentication
File Name	C:\Users\Public\Documents\WireCAD\V ···	☑ Use Windows Authentication
	Test Connection	User Name:
		Password:
Import	C Export	Bidirectional

Basic tab

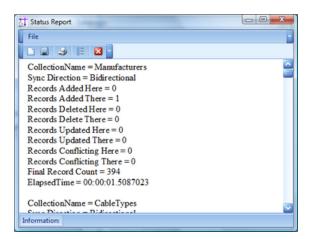


- Database Location Select either a VistaDB file based database or a SQL Server host. If server based you will need to provide host and credentials. If you do not know them contact your SQL Server database administrator.
- Import, Export, Bidirectional Sync direction. Our current global database is the reference. An Import will import records into our current global database.
- Remember Settings Remember database location information.
- **Sync** Initiates the synchronization with the top progress bar showing the overall progress and the bottom showing detail progress.
- Status Bar Displays status of the sync.
- Advanced Tab Select the collections to be synchronized.

2.5.4.1 How To: Sync Equipment Databases

Remember that the Sync Direction is with respect to the current Global Database.

- 1. Click Database > Sync Global Databases ...
- 2. Browse to the remote WireCADGlobalEquipment.vdb3 file or enter the SQL host and login for the other SQL server.
- 3. Set the Sync Direction.
- 4. Click [Sync].
- 5. Wait for the process to finish.
- 6. When done you will be presented with a status report. Examine it to make sure that all collections synchronized properly.



2.5.5 Setting Up On a Network

What follows is a discussion of several different network topologies and work flows that WireCAD can employ. Regardless of topology or work flow the following steps should be taken for each WireCAD machine. For purposes of this discussion we will distinguish between and Windows user operating under group policy and WireCAD user. The Windows user will be referred to as a OS user. WireCAD users will be referred to as WC users.

- 1. Install WireCAD
- 2. Create a network share that is visible to all WireCAD users. Group policy for the OS user of WireCAD should allow the user to read and write the registry (restriction of the registry editor is acceptable), as well as, read and write files on the selected shares, the WireCAD9 folder on the client machine, the OS user's temp directory, the OS user's All Users documents and settings folder trees.
- 3. Pick one WireCAD client machine from which to copy the global databases and copy from ... \WireCAD9\WireCADGlobalEquipment.vdb3 to \ \YourNetworkShare\FolderForWireCADGlobalDatabases\WireCADGlobalEquipment.vdb3
- 4. Launch WireCAD on the client machine.
- 5. Click Application Menu > Settings{Support Paths}
- 6. Modify the support paths for the **Global Equipment** database, and any blocks or reports that you wish to share among all users.
- 7. Click [Done] and relaunch WireCAD.

8. Click **Application Menu > Security>View Permissions.** If you are an administrator or rather if your WireCAD identity is that of Administrator, you will have edit ability on this grid.

9. WireCAD uses your Windows groups. You assign permissions to the group. The current user Identity is set to the group thus determining their access level.

2.5.6 Upgrading from v8

If you are upgrading from v8 you will need to take the following steps:

- 1. Install WireCAD v9
- 2. Setup your global databases (file based or SQL Server)
- 3. Click Database > Sync Equipment Libraries
- 4. Click the ellipsis (...) and enter the path to the v8 WireCADGlobalEquipment.vdb3 file or set the SQL Server Host info.
- 5. Click the Import radio button.
- 6. Click [Sync] to sync the two databases.
- 7. Next convert any projects that you want to work with in v9
- 8. Click **Application Menu > Open Project** and browse to your v8 <YOURPROJECTNAME>.wc6plf file. WireCAD will open and convert the project. When WireCAD converts projects no drawings are touched. The database schema is modified.

Note: this may take some time

WireCAD can no longer upgrade a v5 or earlier project. Key data access components needed to open and import data from the Microsoft Access databases are no longer available for modern 64bit operating systems.



If you need to bring a v5 or earlier project forward we recommend using a 32bit XP virtual machine with WireCAD v6 installed. Convert the project to v6. Then open it in v9 once converted.

We offer this service if you get in trouble. Call us.

2.6 Choosing a Database Format

WireCAD v9 PRO and ENT allows the use of file based and server based databases for the project and global databases. The choice of which to use requires some forethought. Listed here are some basic considerations:

	SQL Azure	SQL Server	VistaDB (File Based)
Zero Administration			Х
Portable			X
ACID Compliant (atomicity, consistency, isolation, durability)	Х	X	X
Database Size	2 Gig	Theoretically unlimited	Theoretical limit is 16 Exabytes (uint64). Practical limit is based upon machine resources. Files are not limited by the database engine, but loading very large databases will require large system resources.
In Process Processing			X
Cloud Based	Х		

At first glance that the table above it would seem that the proper choice would be the file based solution. However, take note of the item - In Process Processing means that the WireCAD processes must read and write all data to and from the file based database. Using SQL Server allows us to hand those processes off to the database server creating, in many instances, a significant (read 10X) increase in speed.

Before selecting a database format consider the following questions:

- Will I be moving the project from machine to machine? If yes, consider staying file based on the project.
- Do I have the chops to manage a SQL Server? If no, stay file based. SQL Server requires care and feeding.
- Am I away from my network when I work on WireCAD projects? If you lose connection, WireCAD will become hampered.
- Do I really need the speed enhancements? If you are working on projects with hundreds of thousands of cables, SQL Server is a must.

When you move a project using the **Application Menu > Utilities>Pack Up/Check Out** function and you are using SQL Server databases the database in converted to a file based version and will remain file based from that point forward.

To set up SQL Server see here 201

Need help with SQL Azure? Contact us we can help.

2.6.1 How To: Setup a SQL Server

It is not within the scope of this manual to provide an in depth discussion of SQL Server. We will touch on the basics required for use with WireCAD.

The WireCAD distribution includes SQL Server database files for the Global Equipment database. You will need to attach these to the running server. You will then configure WireCAD to look at the SQL Server for the Global Equipment database. WireCAD projects will create a new database (catalog) for every new project.

You will need to set up permissions for each user to allow them dbcreator privileges. This is the default for localhosts but not remote servers.

SQL Server can be set up on a server or on a local machine. WireCAD requires the 2005 version or newer and can use the Express versions.

SQL Server does not provide a graphical user interface so you will want to download the SQL Server Management Studio Express as well. Both are free.

The following assumes that you are installing WireCAD on a local machine. If you are installing on a server you will want to copy the global database files in Step 6 below to the server before you attach them to the server.

1. Install SQL Server. You can download from the following links:

https://www.microsoft.com/en-us/download/details.aspx?id=21844

Be sure to download SQL Server Management Studio Express as well. Both are free. <u>http://www.microsoft.com/downloads/details.aspx?FamilyID=c243a5ae-4bd1-4e3d-</u> 94b8-5a0f62bf7796&DisplayLang=en

- You will be prompted for an instance name. Instance names allow you to have multiple SQL Servers running on the same machine. In addition you will be prompted for a security mode (Windows or SQL), Windows uses your Windows users and groups, SQL ignores these and allows you to manages different users and groups from within SQL Server.
- 3. Install SQL Server Management Studio(SQLSMS).
- 4. Launch **SQLSMS** and log in to the server. If the server is on your local machine you can use the shorthand .\INSTANCENAME for the host.
- 5. Setup a proper login for WireCAD. You may elect to use Windows logins or not. It is beyond the scope of this manual to describe the pros and cons of each authentication method.
- 6. Attach the WireCADGlobalDatabase.mdf file to the server.
- 7. You will now need to configure each WireCAD client to look at the SQL Server
- 8. Launch WireCAD.
- 9. Click Application Menu > Application Setup and follow the steps for SQL Server.

See Also <u>www.wirecad.com/wiki</u> search SQL Server msdn.microsoft.com search SQL Server

2.7 Included Plugins

WireCAD includes a number of Plugins that provide additional functionality.

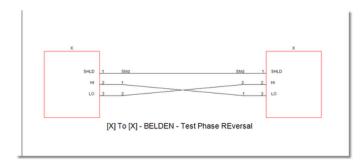
Each plugin will load and register its own command line commands if the plugin provides command functionality.

For information on customizing WireCAD with your own Plugins see the <u>SDK</u> book documentation and the SDK samples.

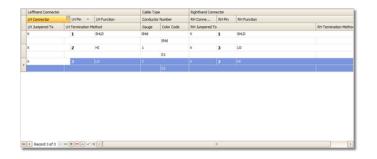
2.7.1 Pinouts

Menu: Database>Pinouts Default command line shortcut: po Related Settings: None

The Pinout utility serves two functions. The first is to generate pinout detail drawings.



The second is to generate data that can be used in the conductors table under any cable that we wish to attach the data to.



Menu: View>Tool Panels - Find Default command line shortcut: none Related Settings: None

The Find and Replace tool window allows you to search all of the data collections and drawing. You may then replace found text with that of your choosing.

The Find and Replace tool shows you the context in which the text was found. You can select from the results list which items to replace.

Find: SDI Search When Active Drawi All Project Data	ing rawings		× Find
Active Drawi All Project Dr	ing rawings		
All Project Dr	rawings		
Project Data			
 Search Opt 	tions		
Show File			
Show Item T	vpe		
 Replace SE 	DI WVIEN:		
Replace With			
Cables Database Cables Database	DQV-1001- Column: DQV-1002- Column: DQV-1002- Column: DQV-1003- Column: DQV-1003- Column: DV-1001- Column: S DV-1001- Column: S DV-1002- Column: S DV-1002- Column: S DV-1003- Column: D DV-1003- Column: S DV-1003- Column: S DV-1003- Column: S DV-1004- Column: S DV-1005- Column: S DV-1005- Column: S DV-1005- Column: S DV-1005- Column: S DV-1006- Column: S	ignalType Context: SDI RCPin Context: SDI OUT estPin Context: SDI OUT ignalType Context: SDI O estPin Context: SDI O ignalType Context: SDI estPin Context: SDI O ignalType Context: SDI ignalType Context: SDI ignalType Context: SDI	I IR I (Audio ut
	DU 4007 C 1 C	estPin Context: SDI-05	Y
Select All	Clear Selection	Results Count = 1003	
Replace Sele	cted	Cancel	Find
Project Expl	orer 🔂 Find		

- Find The text to search for.
- [X] Clear the Find text.
- Search Active Drawing Only look in the active drawing.
- Search All Project Drawings Search every project drawing.
- Show File Show file name if any of the context in which the item is found.
- Show Item Type Is it a text entity in a drawing or a field in a database.
- [Select All] Selects all items in the results window.
- [Clear Selection] De-selects all items in the results window.
- Replace With The text to replace the found text with.
- [Replace Selected] Initiate the replacement.
- [Cancel] Cancels the current search.
- [Find] Initiate the search.

2.7.2.1 How To: Find and Replace a Port Name

In this section we will discuss the finer points of finding and replacing text in WireCAD blocks.

Before You Start

When you see a WireCAD block in a drawing it is referred to as an Insert. WireCAD blocks employ Attributes to display the text values you see. These Attributes are editable. For every port you see in a WireCAD block there is at least one invisible attribute at the connection point. This attribute contains a pipe | delimited string formatted as:

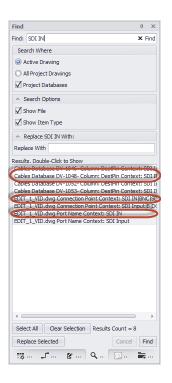
PORTNAME|SIGNALTYPE|CONNECTOR

In addition to the connection point attribute there may be a Port Name display attribute.

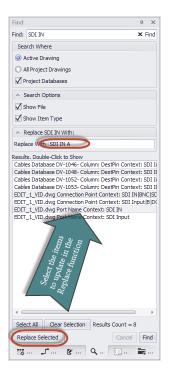


If you change the display attribute WITHOUT changing the connection point attribute you WILL have grief later. So ALWAYS changed both the display attribute and the connection point attribute concurrently.

- 1. Let's say we want to replace SDI IN on our device with SDI IN A. Further that we have assigned cable numbers to the port in question. We will only look in the active drawing so click the appropriate radio button.
- 2. Enter SDI IN in the Find field and click [Find]. Wait for it....



3. Notice that we have two attributes and a cable all associated with the port SDI IN. If we don't change all of these we will have data integrity issues later.



- 4. Click [Replace Selected].
- 5. Done.

2.7.3 Translation Manager

Menu: Plugins>Translation Manager Default command line shortcut: Related Settings: None

All strings in the application are stored in a dictionary with a key and current culture translation. The translation utility provides a means by which all strings, captions, and messages may be translated to a different language.

You can right-click a column header and select the KeyString column to see the base English string that the program searches from.

Controls

					Total String Count = 3399
DY	ag a column header here to group by that column				Not Translated to en = 0 Foreign Language en = en count: 335
	en	6			Translated = 0
9					
	WreCAD				
	UserSettings.xml			-	
	SupportPaths				
	Group				
	Label				
	Checked				
	Unchecked				
	Loaded Plugins:				
	PRO				
	Copyright 2000-2009 Holbrook Enterprises, Inc.				
	Version:				
	Serial Number: - Trial				
	Info				
	0				
	Lubing up the engine room				
	Lubing up the engine room				
	AutoSave In: (0)				
	(Unassigned Items)				
	(All Items)				

Here we see the Translation manager with the English version on the left and the French version on the right. The pane on the right-hand side shows statistics.

- Current Culture is: The culture of your machine. If no translation exists, WireCAD defaults to the en (English) language.
- Select Language To Translate Selects the language to edit in the right-hand column.
- Show Context Select to display a column showing the primary context in which the string or message appears.

2.7.3.1 How To: Translate a Form Caption

Here we will use the Translation Manager to change the User1 field on the SysName Assignment dialog to display Serial Number. We are starting with:

Editing SysName For EVERTZ-7720AD Equipment Name Sysnam DMBDR-01 ▼ New Alias SDI-AES DE-EMBEDDER 109.1 • + Elevation -Location User2 User 1 User4 User3 IP Address Subnet Mask Power Consumption Power Consumption Unit Weight Unit Weight t Flags ▼ BTU Show Me Update Cancel Status

- 1. Click Plugins > Translation Manager.
- 2. Enter sysnameuser1 in the KeyString filter field.

Start Page	х	EDIT_1_VID.dwg	х	Translation Utility 😑 🗶
Current Cultu	re is: e	n - English (United Sta	ates)	Select Language to T
Drag a colur	nn hea	der here to group by t	hat col	umn
KeyString	,			Ύ ει
💡 sysname	user 1			¢.
SysName	User 1			User 1
SysName	User 10)		SysNameUser 1
SysName	User 1	1		SysNameUser 1
SysName	User 1	2		SysNameUser 1

3. Change User1 to Serial Number in the en field.

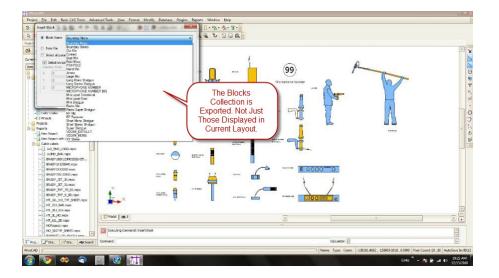
Sta	art Page	×	EDIT_1_VID.dwg	х	Translation	Utility	/ # X		
Cur	rrent Culture is	: en	- English (United Sta	ites)		Selec	t Language to Translate	e: en - English - English	•
	rag a column h								_
	KeyString					(*	en		CalledBy
۴	sysnameuser	1							
	SysNameUse	r1					Serial Number		Wire CAD. frmProj
		- 10				1	SysNameUser 10		WireCAD.frmProj
Ø.	SysNameUse	110							
Ø.	SysNameUse SysNameUse						SysNameUser11		WireCAD.frmProj

- 4. Click File > Save.
- 5. Now let's check the result by showing the form.
- 6. Open a drawing with a functional block.
- 7. Double-click a block.

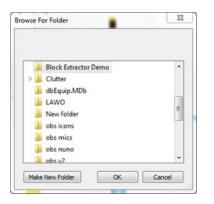
Editing SysName For E	/ERTZ-7720AD			
Manufacturer	EVERTZ	- Equipment Name	7720AD	~
Sysname	DMBDR-01			▼ New
Alias	SDI-AES DE-EMBEDDER			
Location	109.1 •	Elevation	1-1	•
Serial Number		User2		
User3		User4		
IP Address		Subnet Mask		
Power Consumption		Power Consumption Unit		
Weight		Weight Unit		
Flags		r BTU		\$
	Show Me		Update Can	cel
Status				

Menu: Plugins>Extract All Blocks Default command line shortcut: exall Related Settings: None

Requires an active drawing.



• Extracts all blocks in the current drawing to the folder of your choosing.



• Files are written out of the drawing as individual dwg files with the name of the block.

Name	 Date modified 	Туре	Size	^
Boundary Mono.dwg	12/13/2010 10:32	WireCAD6 DWG D	61 KB	
Boundary Stereo.dwg	12/13/2010 10:32	WireCAD6 DWG D	62 KB	
Clip Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	63 KB	
To Contact.dwg	12/13/2010 10:32	WireCAD6 DWG D	60 KB	
Dual Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	63 KB	
Field Mixer.dwg	12/13/2010 10:32	WireCAD6 DWG D	81 KB	
FISHPOLE.dwg	12/13/2010 10:32	WireCAD6 DWG D	70 KB	
Hand Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	65 KB	
James.dwg	12/13/2010 10:32	WireCAD6 DWG D	83 KB	
1 Large Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	67 KB	
🚯 Long Mono Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	65 KB	
Long Stereo Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	66 KB	1
MICROPHONE NUMBER BIG.dwg	12/13/2010 10:32	WireCAD6 DWG D	60 KB	
MICROPHONE NUMBER.dwg	12/13/2010 10:32	WireCAD6 DWG D	60 KB	
Thini Lapel Directional.dwg	12/13/2010 10:32	WireCAD6 DWG D	63 KB	
Mini Lapel Omni.dwg	12/13/2010 10:32	WireCAD6 DWG D	62 KB	
T Mini Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	64 KB	
T Radio Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	61 KB	
B Radio Super Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	83 KB	
T RF Mic.dwg	12/13/2010 10:32	WireCAD6 DWG D	61 KB	
B RF Receiver.dwg	12/13/2010 10:32	WireCAD6 DWG D	90 KB	
bort Mono Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	62 KB	
The Short Stereo Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	62 KB	ш
b Super Shotgun.dwg	12/13/2010 10:32	WireCAD6 DWG D	74 KB	
T: VDDIM DEFAULT.dwg	12/13/2010 10:32	WireCAD6 DWG D	60 KB	-

• The basepoint of the drawing (origin) is the insertion point of the block.

2.7.5 Bulk Block Fixer

Menu: Plugins>Bulk Block Fixer

Default command line shortcut: blkf

The **Bulk Block Fixer** utility provides a means by which dwg files may be easily converted for use with WireCAD. The fixer will convert a single drawing or all drawings in a folder.

Bulk Block Fixer Dialog

Bulk Convert All F	Files in Folder						
Bulk Convert Path							
ingle File Path							
Basepoint Position			Scaling				
Don't Move			On't Scale	O Scale mm to cm			
O Move All Entities	to Lower Left Basepoint (For Rack Front P	O Scale Inches to mm	Scale mm to Inches				
O Move All Entities	Move All Entities to Center Basepoint (For Shape Files)						
Intelligence/Appear	rance						
Add WireCAD At	ttributes (makes block double-clickable) Do	n't Do This For Shape Files	Only Rack Panels				
Create Bounding	g Box (good for shape files)	Bounding Box Color					
Copy Fixed Blocks	to WireCAD Directories						
Don't Copy							
O Copy to 2D_Elev	vations Folder in the %BLOCKS% Support	Path Sub Folder \		Prepend to filename			
Copy to Shape F	Files folder in the %BLOCKS% Support Pat	h					

- Bulk Convert All Files In Folder Checked performs selected options on all files in selected folder.
- Basepoint Position -
 - Don't Move Do nothing. Move All Entities To Lower Left Basepoint.



Move All Entities To Center Basepoint.



• Scaling - Scales all drawing objects based on the selection.

• Intelligence/Appearance

Add WireCAD Attributes. - Use this function to add the standard WireCAD attribute set to the dwg file. This makes inserted items double-click-able. This is not required, and should not be used, if you are using the dwg file as a DWGIcon or Custom Shape file.

Create Bounding Box - Creates a rectangle around the entities in the dwg file of the color selected. This is useful for DWGlcons or Custom Shape files

• **Copy** - Copies fixed block files to the selected directories. \Subfolder and Prepend allow you to modify the location and filename upon copy.

2.7.5.1 How To: Use a Manufacturer Front Panel

- 1. Obtain the manufacturer's front panel dwg file.
- 2. Open the file in WireCAD and delete anything that is not related to the front panel view.
- 3. Close the drawing.
- 4. Click Plugins > Bulk Block Fixer ...
- 5. Uncheck Bulk Convert All Files in Folder.
- 6. Click the Single File Path [...] and browse to the manufacturer's front panel file.

Bulk Convert A	Files in Folder			
ak Convert Path				
ngle File Path	C: Users /Public/Documents/WireCAD/WireCAD9/Blocks/2D_ELEV	ATIONS\Sony\DVWA500.DWG		
Basepoint Positio	n	Scaling		
O Don't Move		On't Scale	Scale mm to cm	
Move All Entiti Move All Entiti	es to Lower Left Basepoint (For Rack Front Panels)	Scale Inches to mm	Scale mm to Inches	
O Move All Entiti	es to Center Basepoint (For Shape Files)	Scale Inches to cm	Scale on to Inches	
Intelligence/App	earance			
Add WireCAD	Attributes (makes block double-clickable) Don't Do This For Shape F	les Only Rack Panels		
Create Bound	ing Box (good for shape files) Bounding Box Co	lor 🗖		
Copy Fixed Blod	is to WireCAD Directories			
Don't Conv				
Copy to 20_E	evations Folder in the %BLOCKS% Support Path Sub Folder \ 2	d elevtions	Prepend to filename	
	e Files folder in the %BLOOKS% Support Path			

- 7. Select Move All Entities to Lower Left Basepoint.
- 8. Select Add WireCAD Attributes.
- 9. Click [OK].
- 10. Open the Equipment Library.
- 11. Find the equipment that we want to use our shiny new front panel
- 12. Set the **Front Panel File** to point to our file.
- 13. Click File > Save.
- 14. Now you can use it.

2.7.6 Batch Plot

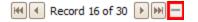
Menu: Plugins>Batch Plotter Default command line shortcut: bp Related Settings: None

The **Batch Plot** plugin allows you to select any number of layouts to print from project drawings. The first step is to click the **[Rescan]** button. This populates the list with all drawings and layouts. The **Plot This** checkbox determines which layouts to send to the printer.

The **[Plot/Print]** button is the same as the **File>Plot/Print** menu command and sends all selected layouts to their respective printers.

The **[UP]** and **[Down]** buttons move the selected layout up or down in the list thereby reordering their output order.

If you want to delete a layout. Select the layout in the list and click the minus [-] button in the navigation window in the lower left hand corner of the grid



Clicking the **[Preview]** button will preview the selected layout in the **Preview Pane** regardless of whether it is selected to in the **Plot This** column

ew BatchPlot Open BatchPlot Save BatchPlot File File File File File File File File		Print Preview			emove ayout			•	•WireCAI
roject Explorer 🔹 🛪 🗙	Sta	rt Page	× EDIT_1_VID.dwg × Translation	Utility × B	atch Plot/Print	x # x			
• 1 2 0		Plot This	Drawing Path	Layout	Copies	Full Preview Dn Plot	Prin	int Preview	
Item						Use Layout Settings			
				Layout2	1	Include MODEL Space			
Global Databases Equipment Library				PAPER SPACE	1	Settings	1 6		
Equipment Library Default Signal Types			C:\Users\Public\Docuble Of Contents).dwg	ANSI A	ANSI A 1				
Cable Types				11X17	1	Paper		WireCAD Demonstration Project Small Edit Facility	
E Connectors				Lavout1	1	•		Small Edit Facility	
Permissions				Lavout2	1	Custom Paper Size		DRAWING DESCRIPTION PD/T 1 AU ASSESSMENT OF AULED T 1 SYSTEMS	
Color Codes			C:\Users\Public\Docuoprojectemplate.dwg	ANSI A		Height 0 🗘		EDIT 1 AUD EDIT 1 AUD SIGNALS	
Projects				11X17		Width 0 🗘		EDIT 1 CTL EDIT 1 CONTROL SIGNALS	
+ 🗋 WireCAD Edit Suite Project				ANSI_AH	1	O MM O Hundredths/Inch		EDIT 2 ALL ADDRESATE OF ALLEDIT 2 SYSTEMS	
A New Drawing				ANSI AHC		Left 0 1 Top 0 1		EDIT 2 AUD EDIT 2 AUDIO SIGNALS	
Open Drawing(s)				-	PER_SPACE 1 ISI_AV 1 ISI_AVC 1 ISI_B 1 ISI_C 1			FOIT 2 VID FOIT 2 VIDEO SIGNALS	
Project Drawings Floor Plan				-		Bottom 0 C Right 0 C	•	FISS FLOOR PLANS MACHINE ROOM MACHINES MACHINE ROOM MACHINES	
A FP3.dwg				ANSI_AV		Black and White		RACKS RACK ELEVATIONS	
Project Base Template Drawing			C:\Users\Public\Docunes\EDIT_1_ALL.dwg	-		Scale To Fit		REF DIST REF DISTRIBUTION	
& demoprojectemplate.dwg				ANSI_B		Z Extents		VIS SYS SYSTEM VISUALIZATION	
- 🗖 Sales			A	ANSI_C				APORTS WRECAD CUSTON REPORTS	
A Sales_Demo.dwg				ANSI_D	1	N. canacape		SALES DEMO HIGHLISTS FEATURES IN WIRECAD PATCH PANELS PATCH BAYS OBSATED IN PATCH VERK	
+ 🗋 Single Lines				ANSI_E	1			PATCH PANELS PATCH BATE CHEATED IN PATCH YERK	
A EDIT_1_ALL.dwg			C:\Users\Public\Docues\EDIT 1 AUD.dwg	11X17	1			WINGAD	
A EDIT_1_AUD.dwg			C: Users (Public (pocues (EDLI _1_AUD.dwg	ANSI A	1 -			File of Conterns	
R EDIT_1_CTL.dwg	144	 Record 	d 3 of 85 🔸 🛏 🚽				111	man paul file (Lease Called Street)	
A EDIT_2_ALL.dwg		Select All	I 💷 DeSelect All 🕈 Move Row Up	L Move Row Dr	own				
A EDIT 2 AUD.dwg				•					
R EDIT 2 CTL.dwg									
& EDIT_2 VID.dwg							Prin	inter Name: Foxit PhantomPDF Printer Width: 826 Height: 1169	
A MACHINE_ROOM.dwg	Print	Status							Selected Printe
A RACKS.dwg									
A REF_DIST.dwg ~	x	No AutoSa	ave Needed : EDIT 1 VID.dwg						
· ·			Command: Batch Plotter, bp,						
😨 Proje 🔍 Find 🔄 Plan 📷 Favo	Com	mand:						Calculator: 4	

What it Does

- Batch Plot lets you select the drawings and layouts that you want to send to the printer and print them as a batch.
- You may print any layout in any drawing in the current WireCAD project.
- You may also specify how many copies and in what order to print.
- Batch Plot allows you to save Batch Plot files for reuse at a future time.

What it Doesn't Do

- Batch Plot does not output to pdf. Unless you choose a pdf printer you have already installed on your machine.
- Batch Plot does not print project reports.
- Batch Plot does not collate layouts with multiple copies set.

Controls

- Full Preview Render actual output. Otherwise show margin box.
- Preview On Plot Render the full preview (full or not) on output to the printer/plotter.
- Use Layout Settings Ignore the Batch Plotter settings and use those stored with the drawing layout. Selecting this disables printer, paper, and margin settings in favor of those in the layout.
- Paper Printer paper size. If this dropdown is empty, select a printer first.
- Margins Set your margin unit of measure first, then the left, right, top and bottom.
- Black and White Output in black and white.
- Scale to Fit Force all entities in the selected layout onto the page.
- Extents Print the extents of the layout.
- Landscape Landscape output.
- Select Printer Choose the printer that all selected layouts will be sent to.
- New Batch Plot File Creates a new file scanning the project drawing set and adding all drawing and all layouts.
- Open Batch Plot File Opens a saved Batch Plot file.
- Save Saves your settings to a Batch Plot File. This is helpful if you change the default order of the list or the number of copies, etc.
- Save As Save your setting as a new file name.
- Print/Plot Selected Prints the selected (Plot This) layouts to the printer settings determined in the layout. So be sure to Print Preview (from the drawing layout) your layouts first and set up all of your output settings.
- Cancel Queue Stops the function. Does not purge any print jobs already in the windows print queue.
- Exit Done.
- **Rescan** Clears the list and re-scans the project drawings for all layouts. This function is like the File>New function but differs in the it does not create a new file name.
- Add Drawing It may be desirable to keep all of your setting and add an additional drawing to the list.
- Remove Layout Removes the selected layout.

2.7.7 Brother P-Touch!



ELECTRONIC LABELING SOLUTIONS

Welcome to the WireCAD plugin for Brother P-touch Electronic Label printers. This plugin supports any of the P-touch printer drivers for Windows, and works in conjunction with the stock P-touch .lbl template formats.

For best results this plugin should be installed in conjunction with at least one P-touch printer driver (follow the instructions with the printer) and the P-touch editor v4.1 or better. For the latest drivers and software, visit the Brother website at <u>www.brother.com</u>

In order to work properly the Brother_PTouch.Plugin.dll file and support folders must be installed in the WireCAD6\bin folder. Place the BrotherPTouch.wpi file in C: \users\public\documents\WireCAD\WireCAD9\Plugins\Active Plugins folder.

The minimum WireCAD build version to work with this plugin is 6.0.1400

This plugin assumes that you have data in your Project Cables or Project Systems database.

2.7.7.1 Data Page

This plugin has the ability to pull from either the Project Systems database or the Project Cables database. Upon selection of the desired database, you have the ability to apply filters to narrow the selection set. These filters work like the other filters in WireCAD. Click the **<Edit Filter>** button and the filter dialog will be displayed; then select the field, conditional operator and value. Next click the **<Apply Filter>** button.

ble Labels and F								
ble Cable Num	bers 💽	<u>د</u>						
CableTy	CableType	CableNo	Src SysN	DestSys	SRCPin	DestPin	SRCLoc	Des ^
BELDEN	1694A - Black	DV-1025-	VP8-02	RTR-01	B-09	SDI-09	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1026-	VPB-02	RTR-01	B-10	SDI-10	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1027-	VPB-02	RTR-01	B-11	SDI-11	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1028-	VPB-02	RTR-01	B-12	SDI-12	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1029-	VP8-02	RTR-01	B-13	SDI-13	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1030-	VPB-02	RTR-01	B-14	SDI-14	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1031-	VPB-02	RTR-01	B-15	SDI-15	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1032-	VPB-02	RTR-01	B-16	SDI-16	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1033-	VP8-02	RTR-01	B-01	SDI-01	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1034-	RTR-01	VPB-01	SDI-01	A-01	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1035-	RTR-01	VPB-01	SDI-02	A-02	ROOM 110.4	ROC
BELDEN	1694A - Black	DV-1036-	RTR-01	VPB-01	SDI-03	A-03	ROOM 110.4	ROC
BEI DEN	1694A - Black	DV-1037-	RTR-01	VPB-01	SD1-04	A-04	ROOM 110.4	
~							Edit F	iter 🗸

able Cable Num		📪 Filter Editor		L
CableTy	C	And O	RCLoc	Des ^
BELDEN	16	[Available] Equals	DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16 16 16		DOM 110.4	ROC
BELDEN			DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16 16 16		DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16		DOM 110.4	ROC
BELDEN	16		DOM 110.4	
BELDEN	_	OK Cancel Apply	DOM 110.4	ROC
	16			1

Table: Combo. Selects either the Cables database or the Systems database.

Note: the data grid is read only.

2.7.7.2 Print Cable Labels and Port Tags

From this page you select the template file into which you will print the selected data.

Cable Labels and Port Tags Data Brother P-Touch Template File CABLENO_100_X_300_HOR_FLAG.bl CABLENO_100_X_460_HOR_FLAG_BAR CABLENO_1220_X_100_LONG.bl CABLENO_250_X_100_VER_WRAP_LOC, CABLENO_250_X_100_VER_WRAP_LOC, Copies	A-1001- A-1001	
CABLENO_260_X_100_VER_WRAP.Ibl CABLENO_260_X_50_VER_WRAP.Ibl CABLENO_50_X_250_HOR_FLAG.Ibl CABLENO_75_X_250_HOR_FLAG.Ibl PORTTAG_25_X_40_DESTPORT.Ibl	PA-01>L • PA-01> SPK-01>IN SPK-01>I	
Half Cut Chain Print Cut Mark Mirroring	>	
* Not all options available on all printers	Record 1 of 117	

Template File: listbox enumerates all *.lbl files in the {WireCAD Common App Data} \Plugins\Brother Ptouch\Templates\ folder.

<Preview>: Load the selected record into the selected template file and display it.

<Print All>: Prints the entire recordset to the printer.

<Print This>: Prints the selected record.

<Edit>: Launches the P-touch editor (if installed).

Copies: textbox: Enter the number of copies to print.

Preview: pane. Displays a preview of the selected record.

Record Selectors:

- HE - Record 1 of 117 - HE

Navigate through the recordset.

Printer Options:

Half Cut: If supported on the printer, will only cut through half of the label creating a roll of labels that can be torn off in the field. This is available on the industrial series printers like the PT-9500 and is really slick.

Chain Print: No space between label prints, nor feed or cut at the end.

Cut Mark: Prints a cut mark.

Mirroring: Inverts text.

Note: the .lbl file contains the info for the printer for which it was created. If you have multiple P-touch units attached to your computer, the report will attempt to print to the unit defined in the .lbl file.

This plugin extends the capabilities of the .lbl file. The plugin will evaluate field expressions and insert(merge) text values from any of the database fields into the label.

In order to evaluate properly, the field name must be enclosed in square braces [fieldname].

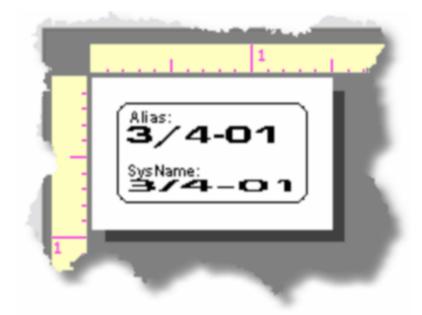
Text that is not to be replaced is entered normally.

Text that is to be evaluated and replaced is contained in a string that starts with the = symbol and contains at least one field definition.



In the above example, the text strings "Alias:" and "SysName:" will print as shown. The text strings starting with the = symbol will be replaced by the data from the fields in the current record.

Further, assuming that the field **[alias]** contains the data "**3/4-01**" and the field **[sysname]** contains "**3/4-01**", the label will print as follows:



Any characters *not* enclosed in square braces "[]" will be printed as shown.

2.7.7.3.1 Cable Number Fields

The following is a list of the available Cable Number fields that are available for use in the label:

Field Name	Description
Avai I abl e	True/False. True = the cable number is available and will show up in the available cables list of the Ver i f y Set t i ngs dialog.
Avai I abl eCor es	True/False. Depreciated. Not used.
Cabl el D	Unique Key. If this is visible, do not change it. Depreciated. Not used.
Cabl eGUI D	Unique Key (GUID)
Cabl eNo	The cable number. See the Project Cable Number Format Dialog.
Cabl eNoPrefix	Used with V3 cable number format.
Cabl eNoSuffix	Depreciated. Not used.
Cabl eType	Cable part number
Cabl eTypeManu	Cable manufacturer
Ckt Dst	Future. Do not use
Ckt I D	Future. Do not use
Ckt No	Future. Do not use
Ckt Sr c	Future. Do not use
Cr eat edBy	Who made the cable.
Dat eMbdified	When entry was modified last.
Dat eOr i gi nat ed	When entry was first created.
Dest Conn	Destination Connector
Dest Loc	Destination Location
Destpin	Destination Port
Dest Sys	Destination SysName
DstAlias	Destination Alias
l nt egr at or	User field.
Lengt h	Manually enter a length or assign a named path and automatically generate a length.
Multicore	True/False. Is it a Multicore cable

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Norm dDat b							
NamedPat h	A named path. See the Named Paths database.						
Project Revision	Inherited from the Global Projects database.						
Repl acedBY	Not used.						
SHEET	The drawing file name.						
Si gnal Type	Signal Type						
SRCAI i as	Source Alias						
Sr cConn	Source Connector						
Sr cLoc	Source Location						
Sr cPin	Source Port						
Sr c Sys	Source SysName						
User 1	It's up to you.						
User 2	It's up to you.						
User 3	It's up to you.						
User 4	It's up to you.						

The following is a list of the	ne available SysName fields that are available for use in the label:
Field Name	Description
Al i as	The friendly or functional name for this device
Conflict	Conflict resolution mode. Conflicts arise when two devices that are marked IsSequential are connected together. At this point we must discard one of the numbers.
Cur r ent Pr oj ect Re vi si on	Inherited from the Global Projects database.
Dat eAdded	The date created.
Dat eModified	Last Modified.
El evat i on	The El evat i on element of the location data.
Equipment Name	Equipment Name
I sSequent i al	Reserve a sequential number for each input and output regardless of connection state. Not currently used.
Locat i on	The Locat i on element of the location data. The Location and Elevation fields will be concatenated together using the System Location Delimiter to create the Location data. ex Room 101.Wall, or 101-11.12
Manuf act ur er	Manufacturer name.
SysName	The name element of the sysname.
User 1	For you.
User 2	For you.
User 3	For you.
User 4	For you.

2.7.7.3.3 More about the .LBL file

The lbl file is Brother's template file for the P-touch electronic labeling systems for PC. Therein you define the look of the printed output.

Some important points to remember:

- 1. The lbl file contains printer specific information.
- 2. If the printer for which the lbl file was created is not found on your machine and you have only one P-touch printer driver on your machine, the label will print to that machine.
- 3. If you have multiple P-touch device drivers installed on your machine and the one for which the lbl file was created is not found you will receive an error stating that the printer cannot be found. Switch to the P-touch editor and change the printer settings to one of the installed drivers.

2.7.8 DWG Diff

Welcome to the DWG Diff Help File

DWG Diff is a utility the displays the differences (and commonalities) between two dwg drawings.

Features:

- Open, View, Print dwg files.
- Difference the selected layout.
- Display Common, A not B, B not A drawing elements.
- Displays not only the drawing entity differences but also lists difference in the drawing structure such as:

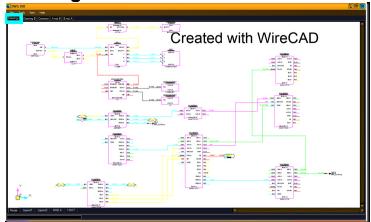
Layers Layouts Text Styles Blocks Dimension Styles

- Save the differenced drawings as dwg or pdf.
- Print the differenced drawings.
- · Control the layers.

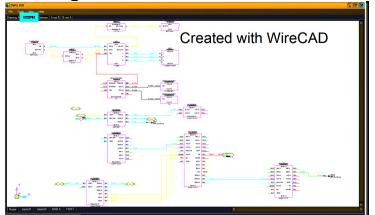
File	Tools	View	Help				
Drawing	A Drav	wing B	Common	A not B	B not	A	
A not B	Layer	s Block	s Text 9	Styles I	ayouts	Dimension Styles	

2.7.8.1 Screen Shots

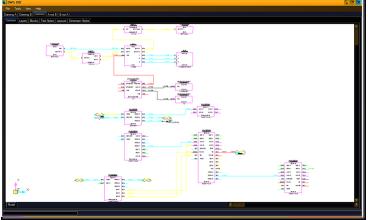
Drawing A



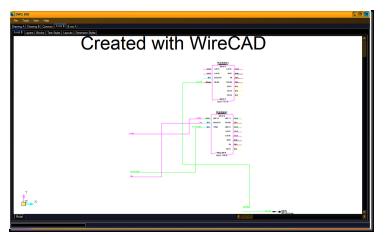
Drawing B



Common to Both



Entities in A but not B







2.7.8.2 Functions

Menu Items

File>Open A: Open the A drawing. File>Open B: Open the B drawing.

Tools>Calculate Differences: Does the work.

Compares the selected drawing space eg: Model or Layout.

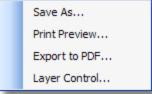
Model	Layout1	Layout2	ANSI A	11X17	BOOM STOLEN

View>Zoom Extents: Zoom the selected space to the extents of all entities.

Help>Help: Displays this file.
Help>Software Activation...: Displays the activation screen.
Help>About: Displays the about screen that show version information etc.

Right-click Context Menus

The following menus are available from all drawing spaces:



You can call DWG Diff from a command line or script and pass in filenames for the A and B drawings as well as output filenames.

The following is the command line usage:

dwgdiff.exe a="<Your A DrawingFilePath>" b="<Your B DrawingFilePath>" m=[i]mmediate |
m=[w]ait | m=[s]ilent

a="<Your A DrawingFilePath>" - this is required if you are passing in variables to the command line. b="<Your B DrawingFilePath>" - this is required if you are passing in variables to the command line. m=[i]mmediate | m=[w]ait | m=[s]ilent - required. opA="<Diffed Output Filename and Path A not B>" - Optional Output File. opB="<Diffed Output Filename and Path B not A>" - Optional Output File. opC="<Diffed Output Filename and Path Common>" - Optional Output File.

a=, b=, op=A, opB=, opC= should be quoted strings if the file paths contain spaces. They should also contain fully qualified file names with extensions.

The variable order is not important.

MODES

m=s opens drawings calculates differences and outputs any of opA, opB, or opC if any; also runs silently without the user interface being shown. m=i will immediately calculate differences. m=w will wait for you to click Tools>Calculate Differences once DWG Diff is open. both m=i or m=w show the user interface.

EXAMPLES

Open two drawings and calculate the differences: dwgdiff.exe a="c:\my a drawing.dwg" b="c:\my b drawing.dwg" m=i

Open two drawings and show the user interface and wait for you to press Tools>Calculate Differences:

dwgdiff.exe a="c:\my a drawing.dwg" b="c:\my b drawing.dwg" m=w

Open two drawings, calc diffs and write out the AnotB differences. Does not show UI. dwgdiff.exe a="c:\my a drawing.dwg" b="c:\my b drawing.dwg" m=s opA="c:\my Output A Drawing.dwg"

Open two drawings, calc diffs and write out the AnotB, BnotA and Common drawings. Does not show UI. dwgdiff.exe a="c:\my a drawing.dwg" b="c:\my b drawing.dwg" m=s opA="c:\my Output A Drawing.dwg" opB="c:\my Output B Drawing.dwg" opC="c:\my Output Common Drawing.dwg" WireCAD 9 allows you to define project specific rules.

There are four contexts in which rules will be evaluated. Rules are contained in the **Project Rules** grid. Rules can be enabled/disabled by use of the **Project>Settings[Project Rules] Enable Project Rules** setting.

A Rule consists of:

- 1. The **Expression** to evaluate.
- 2. The **Context** in which to evaluate the expression.
- 3. The **ExecutionOrder**. If multiple rules are defined to evaluate within the same **Context** they will be evaluated in the **ExecutionOrder** order.
- 4. A **Description** of the rule.

Rule Contexts:

- 1. AssignCableNoAssignBeforeEdit executed during a new Cable Number Assignment or existing Cable Number Edit before the dialog is shown.
- AssignCableNoAssignAfterEdit as above but after the user has clicked Save on the dialog or if Verbose Cable No Assignment = false then during the Cable save process.
- 3. AssignSysNameAssignBeforeEdit executed during a new SysName Assignment or existing SysName Edit before the dialog is shown.
- 4. AssignSysNameAssidnAfterEdit as above but after the user has clicked Save on the dialog or if Verbose SysName Assignment = false then during the SysName save process.

Example

Let's assume that you have the following requirements:

- 1. SDI SignalType where the Length > 100 should use a different CableType than the default defined in the Project Signal Types Default Cable Type grid.
- 2. We want to modify the connector type from BNC to KINGS 2065-10-9 if the CableType is 1694

For requirement number 1 we will create a new rule as follows:

- Context AssignCableNoAssignAfterEdit. We use this so that we can get the Length from the user.
- Expression (SignalType = 'SDI' && Length >=100) then set CableType = '1694'
- **Description** My First Rule. Change cable type for SDI if over 100. This is descriptive text for you and your team. It can be whatever.
- ExecutionOrder 0. Rules execute in the order specified. Any Rule with the ExecutionOrder < 0 will not execute.

For requirement number 2 we will create two rules as follows:

- Context AssignCableNoAssignBeforeEdit. We use this so we can see our changes in the edit dialog.
- Expression (SRCConn = 'BNC' && CableType = '1694') then set SRCConn = 'KINGS 2065-10-9'
- Description BNC to Kings
- ExecutionOrder 0. Rules execute in the order specified. Any Rule with the ExecutionOrder < 0 will not execute.
- Context AssignCableNoAssignBeforeEdit. We use this so we can see our changes in the edit dialog.

- Expression (DestConn = 'BNC' && CableType = '1694') then set DestConn = 'KINGS 2065-10-9'
- **Description** BNC to Kings
- ExecutionOrder 1. Rules execute in the order specified. Any Rule with the ExecutionOrder < 0 will not execute.

2.8.1 Expression Syntax

```
(true part [ boolean other true part ]) then set SomeProperty =
'SomeStringValue' [else set SomeProperty = 'SomeOtherStringValue']
syntax in [] is optional
```

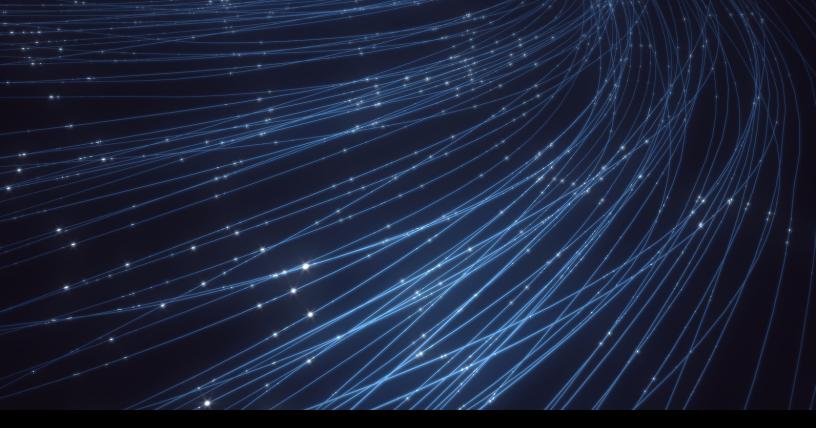
Description	Syntax	Example
boolean that sets a property if true	set	Assume the property we want to test is the SignalType field and if true then change the CableType to equal 1505 (SignalType = 'SDI') then set CableType = '1505'
		Assume the property we want to test is the SignalType field AND the Length field and if true then change the CableType to equal 1505 (SignalType = 'SDI' && Length > 100) then set CableType = '1505A'
Strings	'some string'	
Numbers	1001	
Boolean AND	& &	this and that then (1=1 && 2=2) then
Boolean OR		this or that then (1=1 2=2) then
Equality	=	
Test Null	is null	(SomeProperty is null) then
Set a Property (Assignment)		(1=1) then set NumericPropertyName = 1000 Of (1=1) then set StringPropertyName = 'string value'
Wildcard (any	00	Used in conjunction with the LIKE operator (CableType LIKE '1505%')
from here)		then will evaluate to true for any value that starts with 1505
Wildcard (any	?	Used in conjunction with the LIKE operator (CableType LIKE '1505?')
one)		then will evaluate to true for any value that starts with 1505 and has
		one and only one additional character.

Limitations

This syntax has no block structure. If you need to execute multiple set property operations you will need to create multiple rules.

Illustration
The following is NOT supported:
(true) then
something;
something else;
some other thing;
else
another thing
or another thing

Consider creating a plugin in the SDK if you need to create very complex rules. There is a Project Rules Events project template to use as a prototype to get you started.



WireCAD CMS Tools Manual

The WireCAD ENT CMS tools are built upon and extend the WireCAD PRO tool set for the documentation of large scale management of the fiber systems.

This section pertains to the ENT product level.

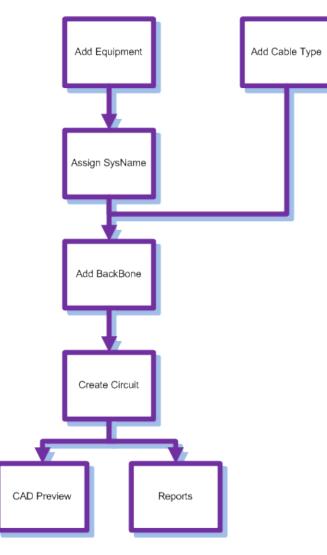
3.1 CMS Tools Concept

WireCAD v9 with CMS tools has introduced the ability to work in a different manner from previous versions of WireCAD.

The standard work flow for WireCAD users has been to create your Functional Block Diagrams first, then assign SysNames and Cable Numbers and lastly, generate reports based on this information.

WireCAD v9 CMS allows you to start by entering your SysNames and Cable Numbers into the Database first, create Backbones and Circuits and then generate a Functional Block Diagram based on the information set in the Database.

The CMS tools work on a declare then visualize approach.



The following subjects assume that you understand basic WireCAD procedures:

- Adding Equipment to the Equipment Library
- Adding Signal Types.
- Adding Cable Types.
- Assigning SysNames.
- Adding Locations.

3.2.1 Backbones

This is a step by step guide on how to create Backbones. Backbones are represented in the cables database by a collection of cables.

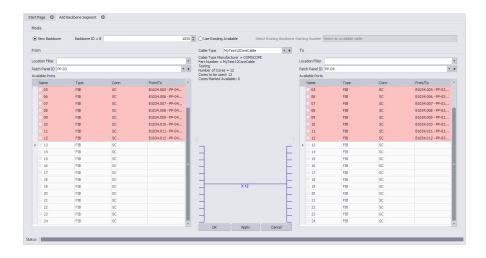
Each cable in the backbone has the same Cable Number Prefix. When you create a new Backbone you are creating a collection of cables based on the selected Cable Type. If you are documenting fibers think one fiber equals one core/conductor/cable. backbone cables are flagged with the boolean value isBackbone = true. Doing so distinguishes a cable as being part of a backbone structure.

Open the Backbones grid by double-clicking the icon in the Project Explorer [Project Databases] [Backbones]

Command Line Shortcut: bbg

Before You Start

Before creating a Backbone, you will need to make sure you have created your Equipment and Cable Types associated with this project.



Menu: Database > Backbones Default command line shortcut: bbg Related Project Settings: Backbone Status Items Product Level: ENT

The Backbone Grid will show you a list of all the backbone segments in your project and allow you to modify their status or delete the entire backbone cable group at once. The status will refer to whether the backbone is in use, proposed, dead ETC. New backbone status can be created in the project settings menu. There are 3 default status available; in use, proposed & dead.

The Backbone Grid is easier to use than the Cables Database if you are looking for basic information about a backbone such as number or origin and destination information or if you are simply wanting to change the status of the backbone.

To access The Backbone Grid, type **BBG** in the command line.

With The Backbones Grid open, a list of all created backbones and cores will show along numerous columns of information about each backbone core.

ject Tent File Edit View Databas				Trab																		
ect Explorer 🛛 🖗 🛪		e O Badt																				
3 5 8	100	37	XIU	*																		
ent Project: Lawa Test Main	Badbo	nes Previe	v																			
*	Badbor																					
		kto ble Ty Ce	1.0		SRC Sva	Dest Sys	SRC Pro	Dest Pin	SRCLee	38.00	DestLoc	Dest ti	SRC Corn	Dest Com	Multi Core	Avelebie	Status	Ovner	In River	In Beckb	Tiber Node	
Gobal Databases		Cable No Pre		Cable No	per pla	Destoys	260, 991	Destron	SHOL LDC	SKLD	DATELOC	Destro	Sec. Com	Dest Conn	PILID CORE	Average	SCHELE	Owner	18 KOBEP	28 DBOD	FIDER PRODE	
Equipment Library		WES., LA		81001.01	AD-0001	CD-59-5	PERO 1	PBR67	Location		Location			2			PROPOSED +		٠	S.		
Signal Types Cable Types	æ	WES LA		81001.01	40-0001	CC-59-5	FBR02	FBR68	Location		Location		2	2			PROPOSED		•	× ×		
Connectors		B WES LA		83001.02	AD-0001	CD-59-5	PERGS	TOR60	Location		Location		2	2	0	0	PROPOSED		•	19		
Permissions				81001.03	40-0001	CC-59-5	FER04	FBR70					-	2	0	0	PROPOSED		•	M		
🗖 Color Codes		WES LA WES LA		83001.04	AD-0001 AD-0001	CC-59-5	PEROS	PBR71	Location		Location		2	7	0	0	PROPOSED		•	8		
Projects													2	2	0					M		
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- Cables		B WES LA		81001.13	Available	Available	Available	Available	Location		Location		Available	Available		9	SPARE		۰	S.		
- Cable Number Format		WES., LA		81001.14	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۲	Ś		
Drawings Named Paths		B WES LA	NA MM	83001.15	Available	Available	Available	Available	Location		Location		Available	Available		19	SPARE		٠	¥.		
- Next Numbers		I WESH LA	NA MM	8 900 1, 95	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۲	1		
- To Do List		🗄 WES LA	NA MM	83001.17	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۰	2		
Discrepancies		B WES LA	NA MM	8 900 1. 58	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		٠	1		
Related Projects (Read Only)		🗄 WES LA	NA MM	8 200 1.29	Available	Available	Available	Available	Location		Location		Available	Available		9	SPARE		۰	2		
Reports		B WES LA	NA MM	8 900 1.20	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		٠	1		
New Report		0 WES 14	NA MM	83001.21	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۲	×.		
New Report with Wizard		B WES LA	NA MM	8 900 1.22	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۰	8		
- 1x2_9N0_L060.repx		B WES LA	NA MM	83001.23	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		۰	1		
- 1x3N0_BAR.repx		. WES LA	NA MM	81001.24	Available	Available	Available	Available	Location		Location		Available	Available		1	SPARE		٠	8		
- BRADY 388X 133NOSEG9HET	¥	Cable No Pre	fte: 81002																			
- BRADY 1X 133BAR / epx		B WES LA	NA MM	81002.01	4D-0003	CC-54-4	FER01	FBR01	Location		Location		2	2	0	0	PROPOSED		٠	8		
- BRADY 1X 133SD. repx		0 WES LA	NA MM	81002.02	AD-0003	CC-54-4	PERO2	PER02	Location		Location		2	7		0	PROPOSED		٠	9		
- BRADY75X150NO.repk		B WES LA	NA MM	81002.03	40-0003	CC-54-4	FER03	FBR03	Location		Location		2	2	0	0	PROPOSED		•	8		
- BRADY_JET_30.repx - BRADY_JET_31.repx		WES., LA		81002.04	AD-0003	CC-54-4	PER:04	TER04	Location		Location		2	2	0	0	PROPOSED		•	1		
- BRADY_THT_75_SD.repx		B WES LA	NA MM	81002.05	40-0003	CC-54-4	FERIOS	FBR05	Location		Location		2	2	0	0	PROPOSED		•	8		
- BRADY_THT_9_SD.repx		WES., LA		8 2022.05	AD-0003	CC-54-4	PER/06	TEROS	Location		Location		2	2	0	0	PROPOSED		•	N		
- HT_30L_NO_TYP_SHEET.re		WES LA		81002.07	40-0003	CC-54-4	FER07	FBR07	Location		Location		2	2	0	0	PROPOSED		•	N		
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ect E Find 🌋 Devorites																						

Controls

- Copy Selection Down Create a selection vertically in the grid and click Edit>Copy Selection Down or Ctrl+D and the topmost cell's data will be copied to all selected cells below.
- **Delete Selected Backbone** This function will delete ALL cables associated with the selected Backbone. If you are just trying to delete a single cable you should do that from the Cables database.
- Refresh Query the database and reload the data into the grid.
- Attach Document Useful for storing field survey reports and other documents associated with this backbone. You can attach as many documents as you need. The documents are stored in the database. You can click on the link provided in the grid to launch the document into the system document reader for that file extension (MIME Type).
- Rename Source Connector(s) Renames the Source Connector (SrcConn) field and any jumpers or horizontal cables attached to this backbone.
- **Rename Destination Connector(s)** Renames the Destination Connector (DestConn) field and any jumpers or horizontal cables attached to this backbone.
- **Rename FiberMode** Renames the Fiber Mode (FiberMode) field and any jumpers or horizontal cables attached to this backbone.

While a number of fields are shown in **The Backbone grid**, only the **Status**field & **Owner** field are modifiable. All other fields are simply shown for reference.

Note: When marking a backbone as a status that is blocking you must make sure that this cable is no longer used in an active circuit. If WireCAD detects that this backbone is still in use, you will be presented with a warning message stating "Cannot mark a cable as <Blocking Status Name> that is part of an existing Circuit. Please remove the Cable from the Circuit, then change its status. "

2	×
Cannot mark a cable as DEAD that is part of an existing Circuit Please remove the cable from the Circuit then change its statu	
OK	

Note: You will also receive a warning message if you try to delete a cable that is part of an existing circuit. You must remove the cable/backbone from the circuit before deleting. If you wish to delete individual cores, you can do so from inside the cables database however this information will not persist back into the CAD drawings.

×
You cannot delete a Backbone that is associated to any Circuit. Please delete any circuits that use the Backbone before attempting to delete the Backbone.
ОК

Note: When deleting a backbone in **The Backbone Grid**, the entire group of cables will be deleted even if you have only selected a single core. Make sure that you want to delete the entire backbone segment before selecting delete.

Note: Deleting backbones in **The Backbone grid**, does not adjust number sequence. If you wish to reuse deleted backbone numbers, you will need to manually access the **Next Numbers Grid** and change the next available number to the one you would like to use. Example, you have created backbones 1001,1002,1003 & 1004. The next number in the sequence would be 1005. If you then delete 1002,1003 & 1004, the Add Backbone Segment Tool will label the next backbone as 1005. To reuse 1002, 1003 & 1004, you need to manually select these as next in the sequence by doing so in the <u>Next</u> Numbers **100**.

3.2.1.2 How To: Create a New Backbone

The following procedure details the creation of backbones in the CMS module. Backbones are multi-core cables in the cables database that interconnect two (or more) patch panels.

Note: While this tool is open in your window other WireCAD users will be locked out of the Cables table of the Project database.

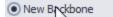
- 1. Make sure you have used the steps above to create your Equipment, Customize your I/O and create your Cable Types.
- 2. Open the Equipment Library 418.
- 3. Find the equipment you would like to use.
- Click [Add to Project Database Only]. You can add as many pieces of equipment you as you would like at this time however you will need to have at least the 2 definitions that the Backbone are linked to.

Manufacturer	OPE		Equipment Name	FOT FC		
Sysname	FOT-0001					* Nev
Alias	FOT-0001					
ocation	Location	* +	Elevation	Elevation		
Jser 1			User2			
lser3			User4			
P Address			Subnet Mask			
Power Consumption			Power Consumption Unit			
Weight			Weight Unit			
=lags		٠				
				Add Many	Add	Cancel

- 5. If there are multiple pieces of the same equipment in this location, you can select the **[Add Many]** to create multiple pieces of equipment at the same time. Note: WireCAD will automatically SysName each piece of equipment using the next available number in the sequence.
- 6. Enter in your location for this equipment.
- 7. Click [Add] or [Add Many].
- 8. Once you have added your equipment into the Project Database, close your Equipment Library 418.
- 9. Enter ABS into the command line and press enter or click on the [Add Backbone] button on the homepage.
- 10. The Add Backbone Segment window should now be open.

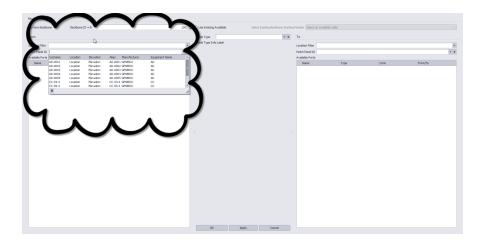
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Related Projects (Read Only)														
* Reports														
- New Report														
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- BRADYTS(150hD.repx														
- SIADY_2CT_30.repx														
- BRADY_RT_31.repx														
- 84401_7HT_75_50.repx - 84401_7HT_9_50.repx														
- HT_30LNO_TIP_SHEET.re														
- HT_223_BAR.repx														
- HT_263_NO.repx - HT_8_NO.repx						CK CK	Aç.	aphy .	Cancel					
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WireCAD										-	Nam	E Type: Conro Coord	inates Pixel Coord Ar	toSava In: 00:12

11. First select if you would like to create a **New Backbone** or **Use Existing Available**.



Use Existing Available

12. On the From side, select your equipment from the Patch Panel ID field.



13. On the **To** side, select your equipment from the **Patch Panel ID** field. Again, you can filter your results using the **Location Filter** Field.

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••	lew Baddone	Badbone ID = B			100	5 CUse Existing Available	Select Existing Backbone Starti	n orber Select	able cable	\mathbf{v}		
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	E FEROS	FIDER	2						CC-54-4 Locatio		CC-54-4 GENERIC	AD CC
	PER04	FIDER	2						CC-59-4 Locatio		CC-59-4 GENERIC	CC
	E FER.05	FIBER	2						h.			
	E FBR.06	FIBER	2									
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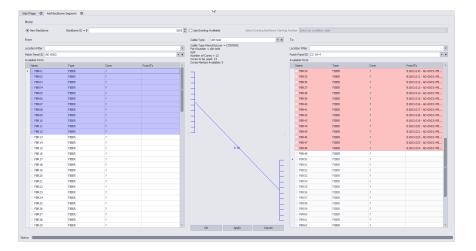
14. On both sides, ports that are available will be shown in white while ports that are currently being used will show as pink.

Vew Backbone	Sectione 3D = 5			1005	Use Existing Available Se	ect Existing Backbone Startin	g Number Select an availab	e cable		
n					Cable Type	- +	То			
					Cable Type Cable Type Info Label					
tion Filter					Cable Type and cable		Location Filter			
h Panel ID AD-0002				* +			Patch Panel ID			*
lable Ports							Available Ports			
Name	Type	Conn	From/To	<u>^</u>			Name	Type	Conn	From/To
FBR01	FIBER	2		_			E FBR34	FIBER	2	B1003.010 - AD-0003>FB
FBR02	FIBER	2		_			FBR35	FIBER	2	B1003.011 - AD-0003>FB
FBR03	FIBER	2		_			FBR36	FIBER	2	B1003.012 - AD-0003>FB
FBR04	FIEER	2					E FBR37	FIBER	2	B1003.013 - AD-0003>FB
FBR05	FIEER	2		_			FBR38	FIER	2	B1003.014 - AD-0003>FB
PBR05	FIEER	2		_			FBR.39	FIER	7	81003.015 - AD-0003>FB
PBR07	FIDER	2		_			E FER-40	FIER	?	81003.016 - AD-0003>PB
PEROS	FIRER	2					PBR41	FIDER	7	81003.017 - AD-0003>FB
PBR09	FIRER	2					PBR42	FIDER	7	81003.018 - AD-0003>FB
FOR 10	FIDER	2					 F0R43 	FIDER	?	81003.019 - AD-0003>FB
FOR 11	FIDER	2					FIR44	FIDER	?	81003.020 - AD-0003>F8
FOR 12	FIBER	2					FBR-45	FIDER	?	B1003.021 - AD-0003>FB
FBR 13	FIBER	2					FBR-46	FIBER	?	B1003.022 - AD-0003>FB
FBR14	FIBER	2					= FBR-47	FIBER	?	B1003.023 - AD-0003>FB
FBR15	FIBER	2					= FBR-48	FIBER	2	B1003.024 - AD-0003>FB
FBR 16	FIBER	2					E FBR-49	FIBER	2	
FBR:17	FIBER	2					· FBR.50	FIBER	2	
FBR 18	FIBER	2					· FBR.51	FIBER	2	
FBR 19	FIBER.	2					E FBR.52	FIBER	2	
FBR20	FIBER	2					· FBR.53	FIBER	2	
F8R21	FIBER.	2					E FBR.54	FIBER	2	
FBR22	FIBER.	2					II FBR.55	FIBER	2	
FBR23	FIBER.	2					B FBR.56	FIDER	2	
PBR24	PERER.	2					B MR57	FIDER	7	
PBR25	PIDER.	7					· PORSO	PODR	7	
PBR26	FIRER	1					· POR.59	POOR	7	
F0R27	FINER	1					· PER60	FOOR	2	
F0R28	FIDER	2					· FOR61	FOOR	2	
FBR29	FIDER	2		Ψ.	OK Acoly	Cancel	· FBR62	FIDER	?	

15. From the **Cable Type** field, select the **Cable Type** you would like to use as your backbone. If you have not already created a **Cable Type** for your backbone, you can do so by clicking the [+] sign and following the instructions <u>here</u> 47.

New Backbone	Badibone ID = B			1005 \$	a Bilde State Stat	
om					le Type To	
cation Filter				٠	Type Mar Menuf Cab Cable D Cable D Cable Co. M Location Filter	
tch Panel ID AD-0002				* +	SELDEN 1990 Audo True 3 Bath Rend ID CC-544	
vallable Ports					es to be uso BELDEN 9991 Audio True 6 Inversed BELDEN 9992 Audio, True 9	
Name	Type	Com	From/To		BELDEN 9993 Audio, True 12 Name Type Conn	From/To
B FER01	FIEER			_	BELDEN 9995 Audo, True 25 CORNING db test True 12 v FBR34 F38ER >	B1003.010 - AD-0003>FB
B FER02	FIBER	2			FBR35 FBER 7	81003.011 - AD-0003>FB.
· PERO3	FIDER	2		_	rtex rater ,	81003.012 - AD-0003>PB.
Internet	FIDER	2			T TER. 7 FIGER 7	81003.013 - AD-0003>F8.
FEROS	FIBER	2			FER.38 FIDER ?	81003.014 - AD-0003>F8.
E FER.06	FIBER	2			FBR39 FIBER ?	B1003.015 - AD-0003>FB.
E FER.07	FIBER	2		_	FBR40 FIBER ?	B1003.016 - AD-0003>FB.
E FER.08	FIBER	2			FBR41 FIBER ?	B1003.017 - AD-0003>FB.
E FER.09	FIBER	2			F8R.42 F38ER 7	B1003.018 - AD-0003>FB.
E FER 10	FIDER	2			F8R.43 F38ER 7	81003.019 - AD-0003>FB.
B FOR 11	PIDER	2			e FER44 FIER 7	81003.020 - AD-0003>P8.
FIR.12	FIDER	2			FIR45 FIBER ?	81003.021 - AD-0003>F8.
FER.13	FIBER	2			FBR-46 FIBER ?	B1003.022 - AD-0003>FB.
B FBR.14	FIBER	2			FBR47 FIBER ?	B1003.023 - AD-0003>FB.
E FBR.15	FIBER	2			FBR-48 FIBER ?	B1003.024 - AD-0003>FB.
E FBR.16	FIBER	2			5 FBR-40 F3BER 7	
E FBR.17	FIBER	2			FBR.50 F3BER 7	
E FER.18	FIDER	2			0 FERS1 FIDER 7	
© FER 19	FIDER	2			· MR52 MBR 7	
FER.20	FIBER	2			PERS3 FIBER ?	
E FER21	FIBER	2			FIBER 7	
B FER.22	FIBER	2			FIBER 7	
E FER23	FIBER	2			BERS6 FBER 2	
E FER24	FIBER.	2			FBRS7 FBBR FBBR	
E FER25	FIBER.	2			9 HERS8 MIDER 2	
B FER26	FIDER	2			PER59 PEER 7	
IFER27	FIDER	2			PTER60 FIDER 7	
FER.28	FIBER	2			PER61 FIDER ?	
E FER29	FIBER	2			OK Apply Cancel 9 FBR62 FIBER ?	

16. Select the ports you would like to use on the **From** side, then select a starting port on the **To** side. You will see that WireCAD will automatically draw a backbone based on your port selection and **Cable Strand** count. NOTE: See * Below!



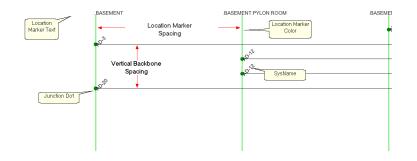
17. Click **[Apply]**. WireCAD will create this backbone and then revert to an empty page ready for another backbone assignment.

*Note: Always make sure that you are not overlaying on used ports and that the ports coming in are not the same as the ports going out. Example: If you have a Patch Panel with 24 Ports in and 24 Ports out, you could use ports 1-12 as your incoming ports and 13-24 as your output ports. This allows the other 12 ports on each side to be used for jumpers to other equipment while maintaining a backbone infrastructure.

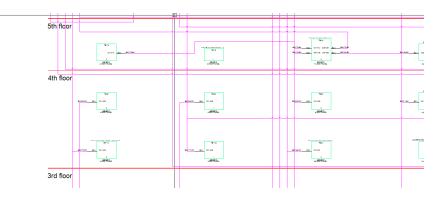
3.2.1.3 Backbone Visualization Settings

These settings are available on the Backbones Grid [Visualization Settings] tab. In order to preview Backbones you will first need to <u>Add Backbones</u>²⁴⁵ These settings determine the display of the Backbones Visualize tool. There are two variants:

1. Layered Digraph (ladder diagram).

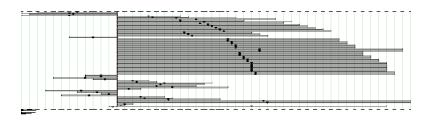


2. Riser Diagram



Layered Digraph Mode Data Source

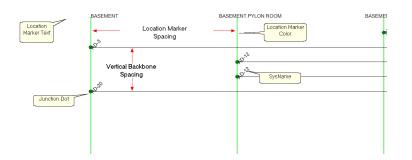
- Show All Shows all backbones in the database in the Visualize tool.
- Current Record Allows selection of only those backbones that touch the selected record.



- Search Depth How many branches deep are we going to search.
 Search Width How many backbones per branch.

Appearance

• Location Marker Spacing, Location Marker Text Height, Location Marker Color, Junction Dot Radius, Vertical Backbone Spacing(DU).



- Center Label Format String used to create the center label. Can make use of the following variables:
 - {0} = Backbone Number
 - {1} = Total Count
 - {2} = Total Available Count
 - {3} = Total Dead Count
 - {4} = Single Mode Fiber Count
 - {5} = Available Single Mode Fiber Count
 - {6} = Dead Single Mode Fiber Count
 - {7} = Multimode Fiber Count
 - {8} = Available Multimode Fiber Count
 - {9} = Dead Multimode Fiber Count

Example:

assume that our backbone number is 1001 with 12 single mode fibers of which 1 is dead and four are in use.

String:

B{0}-SM COUNT:{4} Avail:{5} Dead:{6}

Output:

B1001-SM COUNT:12 Avail:8 Dead:1

String: B{0}

- (-)

Output:

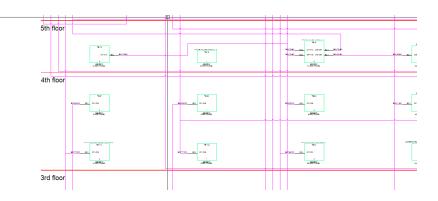
B1001

- Center Label Offset Offset from center in DU.
- Show SysNames Shows the SysName labels.
- Ignore Same Locations Hides backbones that originate and terminate in the same location.
- SysName Rotation Angle Sets the rotation angle of the SysName label if shown.
- SysName Text Height (100th DU) Sets the height of the SysName text if shown.

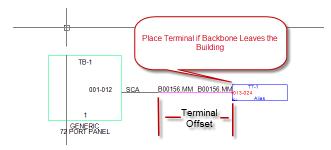
• SysName Text Offset - Offset from the endpoint of the backbone.

Riser Diagram Mode

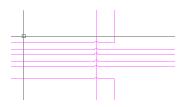
- Campus and Building The Campus and Building for which to build the riser diagram.
- Layout Max Columns, Column Spacing, Minimum Row Height Determine the layout of the panels in the diagram.



- Body Color, Body Width, Descriptor Locations Determines the appearance of the body of the panels in the diagram.
- Show Terminals if Backbone Leaves the Building, Terminal Offset If the other end of the Backbone is not in the selected building a terminal will be placed and a backbone drawn to it. The terminal's position from the port on the panel is determined by the Terminal Offset property.



• Apply Jumps -



- Avoid Other Cables Instructs the cable autorouter to attempt to avoid other cables.
- Show Unresolved Backbones If the Backbone cannot be placed in the drawing a list is generated. Enabling this setting shows the list as the function completes.

Title and Comment Block

• Show Title - Sets the visibility of the title/comment block.



MISC.

- Backbone Color by Signal Type Pulls the backbone color from the global Signal Types database.
- Show Directional Coloring Shows green dots for the source end of the backbone and red dots for the destination end if shown.
- Backbone Color Sets all backbones to the color defined.
- [Reset Default] Button to reset the settings to the defaults.

3.2.1.4 Backbone Preview Export

Exporting the CAD preview of the Backbones Visualization tool is as easy as clicking the **[Export]** button.

The current preview will be exported based on the Export Settings found in the <u>Application Menu ></u> <u>Settings [Project][Export Settings]</u> tool.

3.2.1.5 Import Backbone Data

Menu: Database > Backbones

Default command line shortcut: bbg Related Project Settings: Backbone Status Items

We have provided an import template that can be found at: c:\users\public\documents\WireCAD\WireCAD9\Import Templates\import_backbone_template.xlsx.

Command:

Open the Backbones Grid. Then click File>Import Backbones.

Prerequisites

You should have a Backbones import template excel file filled in with your backbone data.

Related Topics

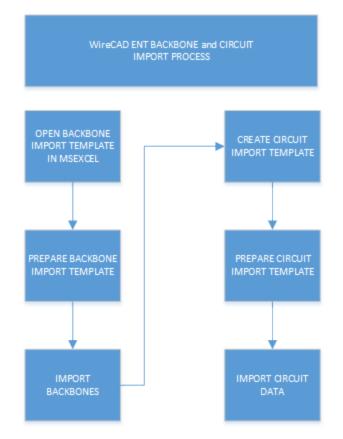
Import Circuits 276 Backbones Grid 242

This document, when properly filled out will not only import a single line of data that expands to many cables database entries as a backbone but will do the following as well:

- Create global Cable Type and Manufacturer.
- Create global panel data and Manufacturer.
- Create Project SysName data.
- Create Project Location data.

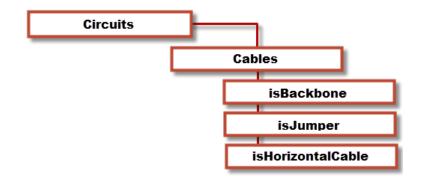
The import tool will perform several checks on the incoming data to ensure that it does not conflict with existing data. Some of these checks include:

- Basic template data check to make sure all required fields are filled in.
- Preflight queries to check against the existing project data. At this point in the import no data has actually been imported. If any errors are found the template row number is returned with error text describing the problem and the import is stopped.
- Post-flight queries to ensure no duplicates were created during the import. If found the error is reported with the opportunity to roll back the import.



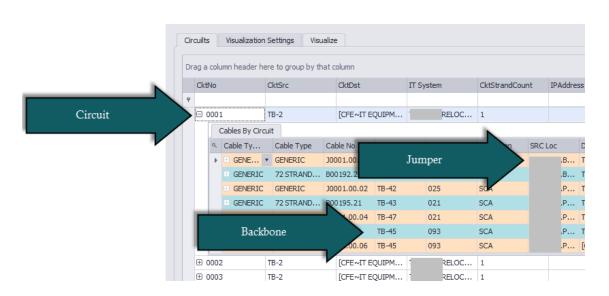
3.2.2 Circuits

A circuit in WireCAD is defined as a collection of cables. Each circuit may have a Name, Description, and other meta data. A circuit also has a strand count to indicate the number of connections made from the originating device on through to the terminating device. Circuits have a one-to-many relationship with the cables in the Cables database. Each circuit may have many cables but a cable can belong to only one circuit.



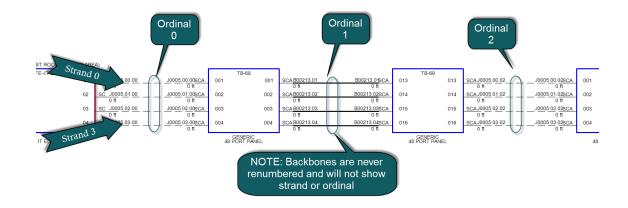
Menu: Database > Circuits Default command line shortcut: cmscg Related Project Settings: Circuit Status Items Product Level: ENT

The Circuits Grid presents the overall circuit data in list form with the child cable data attached for view.



- Attach Document Useful for storing field survey reports and other documents associated with this circuit. You can attach as many documents as you need. The documents are stored in the database. You can click on the link provided in the grid to launch the document into the system document reader for that file extension (MIME Type).
- Rename Circuit Renames a circuit and all of its cables.
- Combine Circuit See the topic Combining Circuits 274.

Strand Count and Ordinal Explanation



WireCAD uses the strand and ordinal to know the exact position of a cable in a circuit. Strand 0 will always be the topmost cable in the circuit with Strand n being the bottommost cable in a circuit. Ordinal 0 will be the leftmost set of cables in the circuit with Ordinal n being the rightmost set of cables in the circuit.

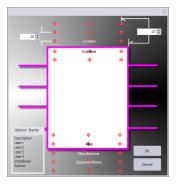
3.2.2.2 Circuits Preview Settings

These settings are available on the Circuits Grid [Visualization Settings] tab. In order to preview Circuits you will first need to Add Circuits 2007 These settings determine the display of the Circuits Visualization tool.

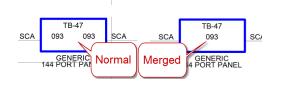
Circuits Visualization Set	ttings Visualize						
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Source Body Color	0	* Color	(0,0,255)		Destination Color	0	
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Show Attenuation Labels	Show Jumper	ength Labels	Show Backbone Length Lab	pels			
Show Jumper Numbers	🗹 Show Backbor	e Numbers	🗹 Show Length				
🗹 Auto Router Avoid Other	Cables						

Appearance

- Source, Middle and Destination Shape Choose one of the 16 stock shapes.
- Source, Middle and Destination shape Width in (100th DU) How wide is it.
- Source, Middle and Destination shape Color Set the color of the shape.
- Source, Middle and Destination shape Descriptor Locations Drag the descriptor to the location map or to the Hidden Items list to hide.



- Backbone Color Sets the color.
- Jumper Color Sets the color.
- Horizontal Cable Color Sets the color.
- Merge and Center Text in Body



• Text Height - Sets the height of all text in the visualization.

Layout

- Max Columns The maximum number of blocks placed before a new row is started below.
- Column Spacing The distance between blocks.
- Row Spacing The Distance between rows.

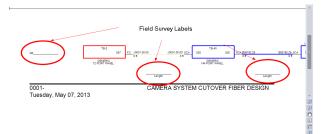
Title and Comment Block

- Show Title Sets the visibility of the title/comment block.
- **Title** You can type whatever you want in this field. In addition the following variables are available: {0} = Circuit Number
 - {1} = It System

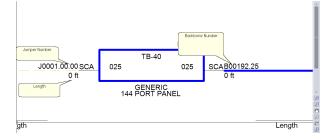
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	7, 2013		CAMERA	SYSTEM CUT	OVER FIBER	DESIGN
0001- Tuesday, May 0	7, 2013		CAMERA	SYSTEM CUT	OVER FIBER	DESIGN

MISC.

• Show Attenuation Labels, Show Jumper Length Labels, Show Backbone Length Labels



• Show Jumper Numbers, Show Backbone Numbers, Show Length



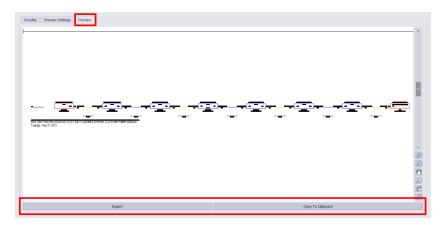
3.2.2.3 Outputting Circuits to CAD

Once a circuit has been defined you can create CAD views of single and multiple circuits. The tools to do this are contained in the **Circuits Grid** which you can access from the command line shortcut **CMSCG** or by selecting the **[CAD Preview/Circuits Grid]** on the home page.

Before accessing the **Circuits Grid**, please make sure to setup your export preferences in the settings menu.

Please refer here [281] for more information on the settings menu.

You can also batch output the selected records by clicking **Tools>Output Selected**. All export is governed by settings in the **Application Menu > Settings[Project][Export Settings]** tool.



- [Export] Output to file based on the Export Settings found in Application Menu > Settings [Project][Export Settings]
- [Copy to Clipboard] Copies the preview to the clipboard so it can be pasted into another drawing.

3.2.2.4 How To: Output a Circuit to CAD

This step by step will guide you on exporting a circuit.

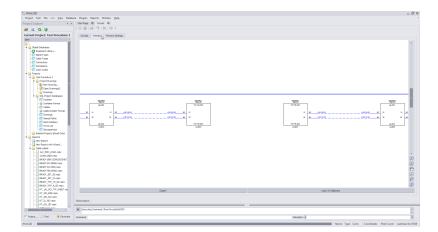
1. Enter **CMSCG** in the command line prompt. The **Circuit Grid** Window will open.

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2. Select the Circuit Number you would like to Export.

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- 88ADY 38158HO PRPK														
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- BRADY_THT_75_SD.Heps														
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3. Select the [Preview] Tab.



- 4. Verify the circuit is the one you would like use and click **[Export]**. A Windows explorer window will come up. Enter the path to export to, what you would like this file to be called and what file type you would like to export as.Note: All of these settings can be automated in the **Settings Menu**.
- 5. Click **[Save]**. Your exported file will now be created and placed in the location you have specified of the file type you specified in the **Save As Dialog filter**.

3.2.2.5 How To: Output Many Circuits to CAD

This Step by step will guide you on exporting multiple circuits.

Note: this is different from the command Tools>Output All Selected Circuits

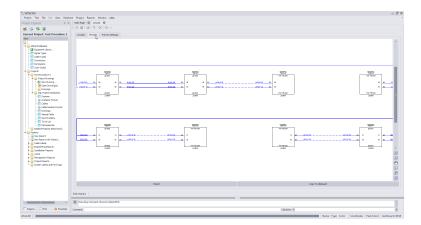
1. Enter **CMSCG** in the command line prompt. The Circuit Grid Window will open.

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2. Select the Circuit Numbers you would like to Export. You can select multiple circuits by dragging down with your mouse clicked, by holding [Shift] and selecting a set or by holding down [CTRL] and selecting multiple records individually.

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3. Select the [Preview] Tab.



- 4. Verify the circuits shown are the ones you would like use and click **[Export]**. A Windows explorer window will come up. Enter the path to export to, what you would like this file to be called and what file type you would like to export as.Note: All of these settings can be automated in the **Settings Menu**.
- 5. Click **[Save]**. Your exported file will now be created and placed in the location you have specified of the file type you specified in the **Save As Dialog filter**.

3.2.2.6 New Circuit Tool

The New Circuit tool is used to connect *Field End & Head End* Equipment together by adding jumpers between existing Backbones. Each circuit is comprised of descriptive data, such as **Name, Customer, IT System** or **Description**, **source** and **destination equipment** (SysNames); as well as a collection of cables in the Cable database. You simply select the ports that you wish to jumper from/to and add the jumpers/back bone segments to the **Proposed Cables list**. A **Path Finder** tool helps you search out possible routes. A **[Preview]** window presents the functional block view of the **Proposed Cables**. Once you are happy with the circuit, simply click **[Build]** and all Proposed cables will be added and associated to the named circuit.

To open the New Circuit tool open the Circuits grid and click **File>New** Command line shortcut: **nc**

Note: While this tool is open in your window other WireCAD users will be locked out of the Cables table of the Project database.

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Originates From Here	SCA	004		U			004	SCA		8010	18.004 - ACM3-1
Originates From Here	SCA	005					005	SCA		8010	18.005 - ACM3-1
Originates From Here	SCA	006		w			006	SCA		8010	18.006 - ACM3-1
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3.2.2.6.1 How To: Create a New Circuit

Menu: Database > Circuits Default command line shortcut: cmscg Related Project Settings: Circuit Status Items Product Level: ENT

Click File > New.

Before you Start

The use of this tool assumes the following:

- That you have added Backbones to the project.
- That you have added the necessary Cable Types to the global Cable Types 522.
- That you have an idea of what you want to connect together and that you know the first bit of infrastructure to which you will attach.
- That you have created your Customer Furnished Equipment(CFE) in the <u>Equipment Library</u> [418] for the originating and final destination equipment devices and/or that SysNames have been created for each individual piece of equipment to which you will attach.
- 1. Verify that you have created all your Equipment and Cable Types needed for this circuit.
- 2. From the Circuits Grid click **[File>New]** to launch the New Circuit tool.
- 3. Verify that your Circuit **Number/Name** is correct and that it is not duplicating an existing entry.

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From Ports			Show All O	utputs			То	Ports						
Coming From		Conn	Name					Name		Conn	Coming Fro	m	Going	То
Originates Fro	m Here	SCA	001		*			001		SCA			B010	18.001 - ACM3-1
Originates Fro	m Here	SCA	002				1	002		SCA			B010	18.002 - ACM3-1
Originates Fro	m Here	SCA	003					003		SCA			B010	18.003 - ACM3-1
Originates Fro	m Here	SCA	004					004		SCA			B010	18.004 - ACM3-1
Originates Fro	m Here	SCA	005					005		SCA			B010	18.005 - ACM3-1
Originates Fro	m Here	SCA	006		*			006		SCA			B010	18.006 - ACM3-1
Pr	ev	Remove	Add	Horizontal Segment		Add Jumper]	Add Virt	ual Segment	Add Backbo	one Segment		Next	Last
roposed Cables in	n Circuit													
CableNo	Src Equip	Src Port	Dst Equip	Dst Port	SRCLoc	DestLoc	SRCCor		estConn	CktStrandNumber	CktOrdinal	IsSDR	eversed	Length
3483.00.00		6 P 001	ACM1-1	001	AMU.ab	AMU.ANNEX 1		so		0		0		
J483.01.00	[GENERIC+	6 P 002	ACM1-1	002	AMU.ab	AMU.ANNEX 1	SCA	SC	CA	1		0		

- 4. Enter your IT System and Customer info. IT System is a descriptive name.
- 5. Select your **Origin**(named equipment) from the drop down menu on the left. Alternately, select the **Origin CFE** (Customer Furnished Equipment) and fill in the detail data in the dropdown.



6. Select your **Final Destination System** (named equipment) from the drop down menu on the right. Alternately, select the **Final Destination CFE**(Customer Furnished Equipment) and fill in the detail data in the dropdown.

) Final Dest	nation* (named e	Then This or This	5
 Final Desti 		xupinenty	
	it. Manufacturer	▼ Model/PN/Name	
	Alias		
	Location		*
			ОК

- 7. Select your **Jumper To Equipment**. This will be the first Patch Panel to which your **Origin** system will connect.
- 8. Select the ports from your **Origin** equipment and the **Ports** on your **Jumper To** equipment. You will see that WireCAD creates a preview jumper between the 2 for you to verify correct connections.

uit Number/Name*	483					IT System*			- + -	Customer chri	s_000	* +
nd Count*						2 🗘 In Service Date		12/10/2016				
Drigin* (named equip	ment)					+ 👌 🔘 Final Destinati	on* (na	med equipment)				* +
Drigin* CFE		[GENER	UC~6 PORT PANE	L] @ AMU.ab-[GENERIC	-6 PORT PANEL]	▼	on* CF	E	[GENERIC~144	ORT FIBER PAR	NEL] @ AMU.ab-[GE	NERIC-144 PORT F
ild Circuit Path Fi	nder Previ	ew										
	_								ACM1-1 @ AMU, ANNEX 1			+ + 0
mper From Equipmer	IC [GENER	C~144 PORT FIBER P		[GENERIC-144 PORT FI	BER I Length	0 \$			ACM1-1 @ AMU.ANNEX 1	. IST FLOOR. IU	12	* * 0
om Ports			Show All O	lutputs			То	Ports				
Coming From		Conn	Name				_	Name	Conn	Coming From	-	
Originates From H		SCA	001		- <u> </u>	Add Jumper	•	001	SCA			18.001 - ACM3-1
Originates From H		SCA SCA	002					002	SCA SCA			18.002 - ACM3-1
Originates From H		SCA SCA	003					003	SCA			18.003 - ACM3-1
Originates From H		SCA	004					004	SCA			18.004 - ACM3-1
Originates From H		SCA	005				-	005	SCA			18.005 - ACM3-1
originates month	ae	JCA	000		•		_	000	JCA		0010.	18.000 - ACH0-1
Prev		Remove	Add	Horizontal Segment		Add Jumper		Add Virtual Segment	Add Backbon	e Segment	Next	Last
posed Cables in Cir	ouit											
CableNo	Src Equip	Src Port	Dst Equip	Dst Port	SRCLoc	DestLoc S	RCCon	n DestConn	CktStrandNumber 0	ktOrdinal	IsSDReversed	Length

9. Click **[Add Jumper]**. Note: If you have connector types that WireCAD believes do not match, you will be presented with a window stating "Connector String Mismatch". If you want to turn this message off, you can do so in the **Application Menu > Settings>UserCMS**.

Connector String Mismatch
One or more of the connector types are mismatched. Do you want to continue?
You can turn this warning off from Project>Settings User[CMS]
Yes No

cuit	t Number/Name*	483						IT System*					- + -	Customer d	nris_000		•
and	d Count*						2	🗘 In Service Date			12/10/2016						
Or	igin* (named equ	upment)	First Er	inter the Originating	Equipment		- +	ct O Final Destin	ation* (nam	ed equipment)						
Or	igin* CFE		[GENE	RIC~6 PORT PANE] @ AMU.ab-[GENER	LIC-6 POR	T PANEL]	▼	ation* C	FE			[GENERIC~144	PORT FIBER F	ANEL] @	AMU.ab-[0	ENERIC-144 PORT F
lui	d Circuit Path	Finder Previe	"														
100	per From Equipm	ent ICENERIC	~144 POPT FIRED P	ANELL @ AMLL ab.(GENERIC-144 PORT	ETRED I	length	0 ‡	1	lumo	per to Equipment	CM1-1 4	AMU.ANNEX	1ST FLOOP	102		
	m Ports	lone loonerad		Show All O			cengui	• •		To Po			- A DIFFERENCE		102		
	Coming From		Conn	Name					[1	Name	Conn		Coming Fr	om	Goir	g To
	Originates From	Here	SCA	001		*				• (001	SCA				B01	018.001 - ACM3-1
	Originates From	Here	SCA	002						0	002	SCA				B01	018.002 - ACM3-1
	Originates From	Here	SCA	003						0	003	SCA				B01	018.003 - ACM3-1
	Originates From	Here	SCA	004		U				0	004	SCA				B01	018.004 - ACM3-1
	Originates From	Here	SCA	005						0	005	SCA				B01	018.005 - ACM3-1
	Originates From	Here	SCA	006		Ŧ				0	006	SCA				B01	018.006 - ACM3-1
	Pre	v	Remove	Add	Horizontal Segment		[Add Jumper]		Add Virtual Segment		Add Backbor	e Segment		Next	Last
0	posed Cables in (Circuit															
	CableNo	Src Equip	Src Port	Dst Equip	Dst Port	SRCL	oc 🛛	DestLoc	SRCCo	nn	DestConn	Ckt	strandNumber	CktOrdinal	IsSI	Reversed	Length
	3483.00.00	[GENERIC~6		ACM1-1	001	AMU.		AMU.ANNEX 1			SCA		0		0		
	3483.01.00	[GENERIC~6	P 002	ACM1-1	002	AMU.	ab	AMU.ANNEX 1	SCA		SCA		1		0		

10. Click the **[Next>]** button. Note: WireCAD will automatically populate an available route between Patch Panels using existing Backbone structures.

cuit	t Number/Name*	483					IT System*			- + -	Customer chris	_000		
and	d Count*						2 🗘 In Service Date	12	/10/2016					
Ori	rigin* (named equ	(uipment)					+ 🔄 🔘 Final Destin	ation* (named	equipment)					
Ori	rigin* CFE		[GENER	UC~6 PORT PANEL] @ AMU.ab-[GENE	ERIC-6 PORT PANEL	.] 🔻 🔘 Final Destin	ation* CFE		[GENERIC~144	PORT FIBER PAN	EL] @ AMU.ab	-[GENERIC-144	PORT F
Build	ld Circuit Path	Finder Preview	1											
				D 000 (00 00 FO		PANEL] Length			to Equipment	-M3-10 @ AMU.BLDG 1	00 10T D 000			
	nper From Equipm	Ment ACM1-1(@)	MU.ANNEX 1.151			PANEL] Length	0 +			.M3-10 @ AMU.BLDG 1	23.151 FLOOR			· · ·
	m Ports			Show All Ou				To Port						
	Coming From		onn	Name				Nar		Conn	Coming Fro		Going To	
	Originates From Here SCA		001					,	SCA	801018.001 - ACM1-1				
•	Originates From							► 033						
	Originates From Originates From		CA	002			B01018	038		SCA		2 - ACM1-1		
	Originates From	n Here S	CA	002	Jorizzatal Consent			038	1	SCA	801018.00	2 - ACM1-1		Last
	Originates From	n Here S		002	Horizontal Segment			038			801018.00			Last
rop	Originates From	n Here S	CA	002	forizontal Segment	sRCLoc		038	1	SCA	B01018.00	2 - ACM1-1		Last
rop	Originates From Pre-	n Here S ev Circuit	CA Remove Src Port	002			Add Jumper	SRCConn	Add Virtual Segment	SCA Add Backbor	B01018.00 ne Segment CktOrdinal	2 - ACM1-1 Next		Last
trop	Originates From Pre- posed Cables in (CableNo	n Here S ev Circuit Src Equip	CA Remove Src Port 001	002 Add H	Dst Port	SRCLoc	Add Jumper	SRCConn SCA	Add Virtual Segment	SCA Add Baddoor	B01018.00 ne Segment CktOrdinal	2 - ACM1-1 Next IsSDReverse		Last
rop	Originates From Pre- posed Cables in (CableNo 3483.00.00	n Here S ev Circuit Src Equip [GENERIC~6 P.	CA Remove Src Port 001	002 Add H Dst Equip ACM1-1	Dst Port 001	SRCLoc AMU.ab	Add Jumper DestLoc AMU.ANNEX 1	SRCConn SCA	Add Virtual Segment DestConn SCA	SCA Add Backbon CktStrandNumber 0	B01018.00 ne Segment CktOrdinal	2 - ACM1-1 Next IsSDReverse D		Last
rop	Originates From Pre- posed Cables in (CableNo 3483.00.00	n Here S ev Circuit Src Equip [GENERIC~6 P.	CA Remove Src Port 001	002 Add H Dst Equip ACM1-1	Dst Port 001	SRCLoc AMU.ab	Add Jumper DestLoc AMU.ANNEX 1	SRCConn SCA	Add Virtual Segment DestConn SCA	SCA Add Backbon CktStrandNumber 0	B01018.00 ne Segment CktOrdinal	2 - ACM1-1 Next IsSDReverse D		Last
rop	Preposed CableNo 3483.00.00 3483.01.00	n Here S ev Circuit Src Equip [GENERIC~6 P.	CA Remove Src Port 001	002 Add H Dst Equip ACM1-1	Dst Port 001	SRCLoc AMU.ab	Add Jumper DestLoc AMU.ANNEX 1	SRCConn SCA	Add Virtual Segment DestConn SCA	SCA Add Backbon CktStrandNumber 0	B01018.00 ne Segment CktOrdinal	2 - ACM1-1 Next IsSDReverse D		Last

11. Click [Add Backbone Segment].

cuit	t Number/Name*	483					IT System*			- + -	Customer			•
and	d Count*					2	In Service Date	12/10	/2016					
Or	rigin* (named equ	uipment)				* ÷	ੇ 🔘 Final Destin	ation* (named eq	uipment)					
Or	rigin* CFE		[GENE	RIC~6 PORT PANEL	.] @ AMU.ab-[GENE	RIC-6 PORT PANEL]	▼	ation* CFE		[GENERIC~144 P	ORT FIBER PANEL	L] @ AMU.ab-[GENERIC-144 P	ORT F.
uil	ild Circuit Path	Finder Preview												
	mper From Equipm	ACM1.1.0	AND AND Y A 107	E 000 103 33 [0	ENERIC-144 PORT	DANIE 2	0 0	Jumper to	Carina AC	M3-10 @ AMU.BLDG 12	1 107 0 000			
	mper From Equipm	Henc ACM1-1 (P)	AMULANNEX 1.151	Show All Ou		PANCEJ Length	0 +	To Ports	Equipment Ac	M3-10 @ AM0.0LDG 12	3.151 FLOOK			
										-				
	Coming From		Conn	Name	•			Name		Conn	Coming From		Soing To	
•	Originates From Here SCA							► 037 SC/			801018.001			
	Originates From	n Here S	iCA	002			B01018	038		SCA	801018.002	- ACM1-1		
	Originates From	n Here S	ica.	002			B01018	038		SCA	801018.002 -	- ACM1-1		
	Originates From		Remove		Horizontal Segment		B01018		d Virtual Segment	SCA Add Backbone		- ACM1-1	La	ast
	-	IV (Horizontal Segment				d Virtual Segment				La	ast
.0)	Prev	IV (Horizontal Segment	SRCLoc			d Virtual Segment		e Segment			ast
.0)	Prev	rv Circuit	Remove Src Port	Add			 Add Jumper	Ad		Add Backbone	e Segment	Next		ast
0	Prev posed Cables in C CableNo	V Circuit Src Equip	Remove Src Port 001	Add Dst Equip	Dst Port	SRCLoc	Add Jumper DestLoc	Add	DestConn	Add Backbone CktStrandNumber C	e Segment	Next IsSDReversed		ast
-00	Prev posed Cables in C CableNo J483.00.00	Circuit Src Equip (GENERIC~6 P.	Remove Src Port 001	Dst Equip ACM1-1	Dst Port	SRCLoc AMU.ab AMU.ab	Add Jumper DestLoc AMU.ANNEX 1	Adi SRCConn SCA SCA	DestConn SCA SCA SCA	Add Backbone CktStrandNumber C	e Segment (ktOrdinal 0	Next IsSDReversed		ast
•	Prev posed Cables in C CableNo 3483.00.00 3483.01.00	Circuit Src Equip [GENERIC~6 P. [GENERIC~6 P.	Remove Src Port 001 002	Dst Equip ACM1-1 ACM1-1	Dst Port 001 002	SRCLoc AMU.ab AMU.ab AMU.ANNEX 1	Add Jumper	SRCConn SCA SCA SCA	DestConn SCA SCA	Add Backbone CktStrandNumber C 0 1	e Segment (ktOrdinal 0	Next IsSDReversed		ast
•	Prev posed Cables in C CableNo 3483.00.00 3483.01.00 B01018.001 B01018.002	v Crouit Src Equp [GENERIC~6 P. [GENERIC~6 P. ACM1-1	Remove Src Port 001 002 001	Dst Equip ACM1-1 ACM1-1 ACM1-1	Dst Port 001 002 037	SRCLoc AMU.ab AMU.ab AMU.ANNEX 1	Add Jumper DestLoc AMU.ANNEX 1 AMU.BLDG 123	SRCConn SCA SCA SCA	DestConn SCA SCA SCA	Add Backbone CktStrandNumber C 0 1	e Segment (ktOrdinal 0	Next IsSDReversed		ast

- 12. Verify the correct cables have been added to the Proposed Cables In Circuit list.
- 13. Then click [Next].
- 14. Select the **Jumper To** Equipment to populate the **To Ports** list. Alternately you can click the **[Last]** button to populate the **To Ports** list with the ports of the **Final Destination Equipment**. That's what we will do here.
- 15. Click [Last].
- 16. Select the top two records.

uit Number/Name*	483					IT System*				· + -	Customer				* 4
nd Count*					2	C In Service Date		12/10/2	2016						
Origin* (named equi	ipment)					♂ ○ Final Destin	ation* (na	med equip	pment)						
Origin* CFE		[GENER]	C~6 PORT PANEL	@ AMU.ab-[GENERIG	C-6 PORT PANEL]	🔹 🔘 Final Destin	ation* CF	E		[GENERIC~14	4 PORT FIBER PA	NEL] @ A	MU.ab-[GE	INERIC-144 POR	T F
uild Circuit Path P	Finder Preview														
umper From Equipme	ent ACM3-10 @	AMU.BLDG 123.1ST	FLOOR-[GENERIC	-144 PORT PANEL]	Length	0 ‡	Ju	nper to Ec	quipment [E	ditValue is null]					÷
rom Ports			Show All Ou	tputs			То	Ports							
Coming From	C	m	Name					Name		Conn	Coming From	n	Going	То	
Originates From H			037			277-44422	,) •	A01		SC					
	Here S(037		Add Jumper		A02		SC					
Originates From H	Here SC	A	0.38				277 L	M02							
Originates From H	Here S(A	0.38				1	A02		sc			Termi	inates Here	
Originates From F	Here S	A	038							sc			Termi	inates Here	
Originates From H	Here S	A	0.38		•			A03 A04 A05		sc sc			Termi	inates Here inates Here	
Originates From H	Here St	A	038					A03 A04		sc			Termi	inates Here	
Originates From H		Remove		forizontal Segment		Add Jumper		A03 A04 A05 A06		sc sc sc	one Segment		Termi	inates Here inates Here	
Prev oposed Cables in Ci	/	Remove	Add H			Add Jumper		A03 A04 A05 A06 Add	Virtual Segment	SC SC SC Add Baddo	-		Termi Termi Termi	inates Here inates Here inates Here Last	
Prev oposed Cables in Ci CableNo	/)[Drouit Src Equip	Remove Src Port	Add H	Dst Port	SRCLoc	Add Jumper DestLoc	SRCCon	A03 A04 A05 A06 Add	Virtual Segment	SC SC SC Add Backbo	CktOrdinal	IsSDR	Termi Termi Next	inates Here inates Here inates Here	
Prev oposed Cables in Ci CableNo • J483.00.00	/ Drouit Src Equip [GENERIC~6 P	Remove Src Port 001	Add F Dst Equip ACM1-1	Dst Port 001	AMU.ab	Add Jumper DestLoc AMU.ANNEX 1	SCA	A03 A04 A05 A06 Add	Virtual Segment DestConn SCA	SC SC SC Add Baddo	CktOrdinal	IsSDR 0	Termi Termi Termi	inates Here inates Here inates Here Last	
Prev oposed Cables in Ci CableNo J483.00.00 J483.01.00	/ Jircuit Src Equip (GENERIC~6 P (GENERIC~6 P	Remove Src Port 001 002	Add H Dst Equip ACM1-1 ACM1-1	Dst Port 001 002	AMU.ab AMU.ab	Add Jumper DestLoc AMU.ANNEX 1 AMU.ANNEX 1	SCA SCA	A03 A04 A05 A06 Add	Virtual Segment DestConn SCA SCA	SC SC SC CktStrandNumber 0 1	CktOrdinal	IsSDR 0 0	Next	inates Here inates Here inates Here Last	
Prev oposed Cables in Ci CableNo 3483.01.00 B01018.001	arcuit Src Equip (GENERIC~6 P., (GENERIC~6 P., ACM1-1	Remove Src Port 001 002 001	Add F Dst Equip ACM1-1 ACM1-1 ACM3-10	Dst Port 001 002 037	AMU.ab AMU.ab AMU.ANNEX 1	Add Jumper DestLoc AMU.ANNEX 1 AMU.BLDG 123	SCA SCA SCA	A03 A04 A05 A06 Add	Virtual Segment DestConn SCA SCA SCA	SC SC SC Add Backbo	CktOrdinal	IsSDR 0	Termi Termi Termi Next	inates Here inates Here inates Here Last	
Prev oposed Cables in Ci CableNo • J483.00.00 J483.01.00 B01018.001 B01018.002	/ Jircuit Src Equip (GENERIC~6 P (GENERIC~6 P	Remove Src Port 001 002	Add H Dst Equip ACM1-1 ACM1-1	Dst Port 001 002	AMU.ab AMU.ab AMU.ANNEX 1	Add Jumper DestLoc AMU.ANNEX 1 AMU.ANNEX 1	SCA SCA SCA	A03 A04 A05 A06 Add	Virtual Segment DestConn SCA SCA	SC SC SC CktStrandNumber 0 1	CktOrdinal	IsSDR 0 0	Next	inates Here inates Here inates Here Last	

17. Click [Add Jumper]. This places the final jumper in the list.18. Click [Preview].

Start Page × Circuits × New Circuit* ×			
Circuit Number/Name* 483		IT System*	• + - Customer • + -
Strand Count*	2 💲	In Service Date 12/10/2016	•
Origin* (named equipment)	- + C	Final Destination* (named equipment)	× + ¢
Origin* CFE	[GENERIC~6 PORT PANEL] @ AMU.ab-[GENERIC-6 PORT PANEL] -	Final Destination* CFE	[GENERIC~144 PORT FIBER PANEL] @ AMU.ab-[GENERIC-144 PORT F 🔻
Build Circuit Path Finder Preview			
000 40 SBNBRC- 1 PORT PURC 011 PC1 - 01200000	2012/04/04 1/34 PLOOK-0222 24	2010-00 07 07 00 00	ализар районо-тос Роск Радан, Колц. 2010-001 - Ост Падан, Колц.
000 <u>800</u>	8/ 200527-00.00/ 000 000	AN-1-4-000-AN AD-1-4-000-AN AD-1 004 AD-1	
SEVERIC COORTRUNKS	601000 164 504 7568E	989,8710 166 508 75085	400-DERC 144 DOATTAGE FUNG.
December 10, 2016			

- 19. If everything look correct. Click Build Circuit tab.
- 20. Click [Build Circuit].
- 21. Done.

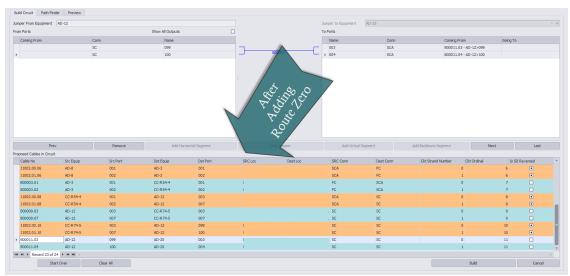
3.2.2.6.2 Path Finder Tab

Explanation:

The **Path Finder** tool can be used to find available ports and backbone segments from a source to a destination. The **Path Finder** tool will search the backbone structure for backbones that can be used to get from the source panel to the destination panel, then once a route is established the route candidate is checked for available port count. If all criteria are met the route is returned. If no routes can be established you will be notified.

om	AD-36				 Last Existing 	AD-25					
	Find			Cancel	Use Route Number	_		Ad	d Selected Route to Circuit		
arch Depth		8 🗘 Search Width		150 ‡ () Show All	Show Backbones	0		Show Only First Path Found	O Show On	nly Least Link Path	
			Found 2 c	andidate routes of which	0 failed due to overpopulation	. The shortest	route has 6 backbones wh	le the longest has 6			
Cable No Prefix	Cable No	SRC Sys	Dest Sys	SRC Pin	Dest Pin	SRC Loc	Dest Loc	Ckt Strand Number 🔺 Ckt Ordinal	A Route Number	 Made It 	t
800028	B00028.07	AD-33	AD-36	031	007	12	TH FLO., 10TH F	LO 0	1	0	
B00028	B00028.08	AD-33	AD-36	032	008	WK.12		1	1	0	
J1002	J1002.00.02	AD-33	AD-8-P1	031	001	- MAR		0	2	0	
J1002	J1002.01.02	AD-33	AD-8-P1	032	002			1	2	0	
800008	B00008.01	AD-8-P1	AD-9	001	001			0	3	0	
800008	B00008.02	AD-8-P1	AD-9	002	002		<u> </u>	1	3	0	
J1002	J1002.00.04	AD-9	AD-7	001	001		Segments ^D roposed Route	0	4	0	
J1002	J1002.01.04	AD-9	AD-7	002	002		₩ O	1	4	0	
B00007	B00007.01	AD-7	AD-8	001	001		e s a	0	5	0	
B00007	B00007.02	AD-7	AD-8	002	002		Segme Propos Route	1	5	0	
J1002	J1002.00.06	AD-8	AD-3	001	001		<u> </u>	0	6	0	
J1002	J1002.01.06	AD-8	AD-3	002	002		δ O C	1	6	0	
B00003	B00003.01	AD-3	CC-R54-4	001	001	1	α τ α	0	7	0	
B00003	B00003.02	AD-3	CC-R54-4	002	002		- ш	1	7	0	
J1002	J1002.00.08	CC-R54-4	AD-12	001	003	×	L R	0	8	0	
J1002	J1002.01.08	CC-R54-4	AD-12	002	007	×		1	8	0	
B00009	B00009.03	AD-12	CC-R74-5	003	003		0)	0	9	0	
B00009	B00009.07	AD-12	CC-R74-5	007	007			1	9	0	
J1002	J1002.00.10	CC-R74-5	AD-12	003	099	2 A		0	10	0	
J1002	J1002.01.10	CC-R74-5	AD-12	007	100	:CM		1	10	0	
B00011	B00011.03	AD-12	AD-25	099	003		-Ba	DOR 0	11	0	
800011	B00011.04	AD-12	AD-25	100	004		· · · · · · · · · · · · · · · · · · ·	DOR 1	11	0	1
J1002	J1002.00.01	AD-36	AD-8-P1	007	001			0	1	1	
J1002	J1002.01.01	AD-36	AD-8-P1	008	002			1	1	1	
800008	800008.01	AD-8-P1	AD-9	001	001			0	2	1	
800008	800008.02	AD-8-P1	AD-9	002	002			1	2	1	
J1002	J1002.00.03	AD-9	AD-7	001	001			0	3	1	
J1002	J1002.01.03	AD-9	AD-7	002	002			1	3	1	
800007	B00007.01	AD-7	AD-8	001	001		dim.	0	4	1	

2 possible routes returned each with 6 segments. We will use Route 0.



After adding Route 0

Controls

• From - Prepopulated by your selection with the last jumper added in the Build tab.

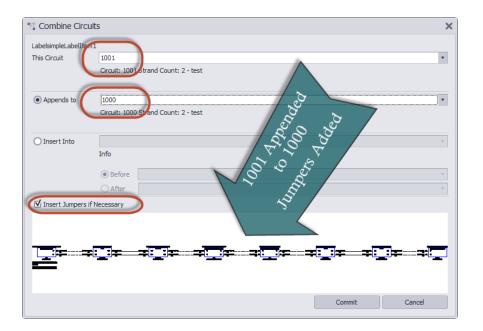
- Last Existing Select the last existing piece of infrastructure that we will search for.
- [Find] Start the search.
- [Cancel] Cancel the search.
- Use Route Number Once routes are returned for selection this dropdown will be populated with the available routes.
- [Add Selected Route to Circuit] Once you have selected a route this button will enable for you to add the route to the Proposed Cables to Add to Circuit list on the[Build] tab.
- Search Depth How deep to search more will take longer but find more routes.
- Search Width Maximum candidate routes to search.
- Show All Show all routes found and populated with jumpers.
- Show Backbones Only (for research) Show only the backbones without jumpers. Useful for research.
- Show Only First Path Found Stop searching when the first route is resolved.
- Show Only Least Link Path Search all then prune the list to the route with the shortest number of segments.
- Cable No Prefix, Cable No, SRC Sys, Dest Sys, Src Pin, Dest Pin, Src Loc, Dest Loc Fields pulled from the Cables database or populated by jumpers that would need to be created to complete this circuit along this route.
- Ckt Strand Number For more information about circuit strand and ordinal see here 257.
- Ckt Ordinal For more information about circuit strand and ordinal see here 257.
- **Route Number** The router may find multiple paths or none. If paths are found they will be returned with a route number. You may then select the which, if any, route to add to the circuit.
- Made It Indicates that the route made it to the destination. All routes shown will show Made It on the last segment.

3.2.2.7 Combining Circuits

Menu: Database > Circuits Default command line shortcut: cmscg Related Project Settings: Circuit Status Items Product Level: ENT

Click Tools > Combine Circuits.

WireCAD CMS tools support the concept of combining circuits. Circuits to be combined must have the same Strand Count. The Circuit Name/Number of the Circuit that is being appended or inserted will be discarded.



- This Circuit The Circuit Name/Number of the circuit that will be appended or inserted into another circuit. This circuit Name/Number will be discarded if successfully appended or inserted.
- Appends To The Circuit Name/Number of the circuit that will be appended to.
- Inserts Into The Circuit Name/Number of the circuit that will be inserted into.
- Before Before this SysName.
- After After this SysName.
- Insert Jumpers if Necessary It is possible to create collections of cables in a circuit that do not interconnect. If you do not select this option you will create collection of cables that do not interconnect.
- Preview

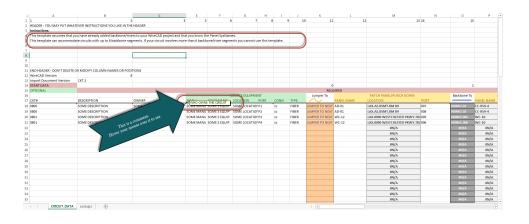
7 Combine Circuit	ts					>
LabelsimpleLabelItem 1	L					
This Circuit	1001					Ψ.
	Circuit: 1001 Strand	Count: 2 - test				
 Appends to 	1000					Ŧ
	Circuit: 1000 Strand	Count: 2 - test				
O Insert Into						Ŧ
	Info					
	Before					
	After					
Insert Jumpers if N	Vecessary					_
	=:::=:::				= =::::	
				-		
					Commit	Cancel
	-		-			

• [Commit] - Do it.

3.2.2.8 Import Circuit Data

Menu: Database > Circuits Default command line shortcut: cmscg Related Project Settings: Circuit Status Items Product Level: ENT

Click Tools > Import Circuits.



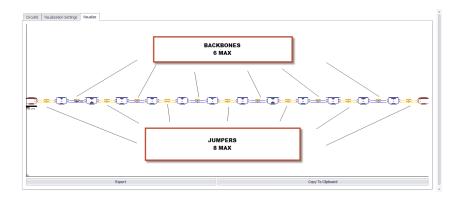
Command:

Open the **Circuits Grid**. Then click: **File>Create Import Template**. Open the **Circuits Grid**. Then click: **File>Import Circuits**.

Limitations

Simplex, duplex or n-strand/core count can be imported. You are limited to 82 rows of circuit data. If you are importing more than 82 rows start another file.

The import template will only accommodate circuits with a maximum of 6 backbones/risers, or in other words a simplex/duplex/n-plex circuit with a maximum of 8 jumpers.



Prerequisites

You must have created backbone data in order to establish circuits.



You will need to have entered or imported backbone data in order to create circuits.

This is a multi-step process.

Step 1:

Create the import template:

Open the Circuits Grid. Then click: File>Create Import Template.

This will export the data from your project to the import template. This makes the use of drop downs with project-specific data possible. Without this you will likely get errors if you were to just type the data manually into the import template.

c:\users\public\documents\WireCAD\WireCAD9\Import

Templates\SomeImportTemplateNameWithADateCode.xlsx

NOTE: Be sure to use the most current import template.

Step 2:

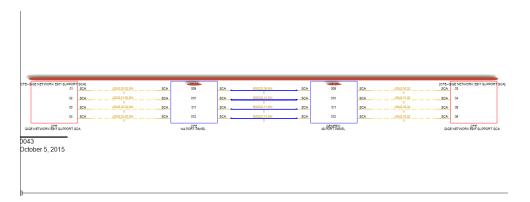
Open the import template in MSExcel and enter your data into the Circuit Import Template created in Step 1 above.

Be sure to fill in all fields.

NOTE: If you leave the Circuit Number field blank one will be assigned on import.

A circuit in its simplest form will consist of source and destination equipment with at least one backbone and two jumpers:

The following is a n-plex simple circuit:



This import would require 4 rows in the import template. One row for each horizontal strand/core.

When completing the import template you will need to type the source and destination equipment manufacturers/name and port info.

You will then need to select the first jumper action. The jumper will either jumper to the next backbone or to the final destination.

You will then select the first panel into which we will apply a jumper and the port we will use.

NOTE: The ports displayed in the drop downs are available ports. If you are trying to use a port that is not listed check to see why that port is not listed.

Port and System ID fields are strictly validated. You cannot enter field data in the generated template that is not allowed.

Once you have the first row of the circuit defined you will need to select the Final Action in Column BN. Your choices are:

- CKT CONTINUES ON NEXT LINE
- CKT COMPLETE. NEW CKT NEXT LINE
- CKT COMPLETE. END OF FILE

There can only be one and only one CKT COMPLETE. END OF FILE row in the template.

Once you have entered all of your data. Save the file and proceed to the next step.

Step 3:

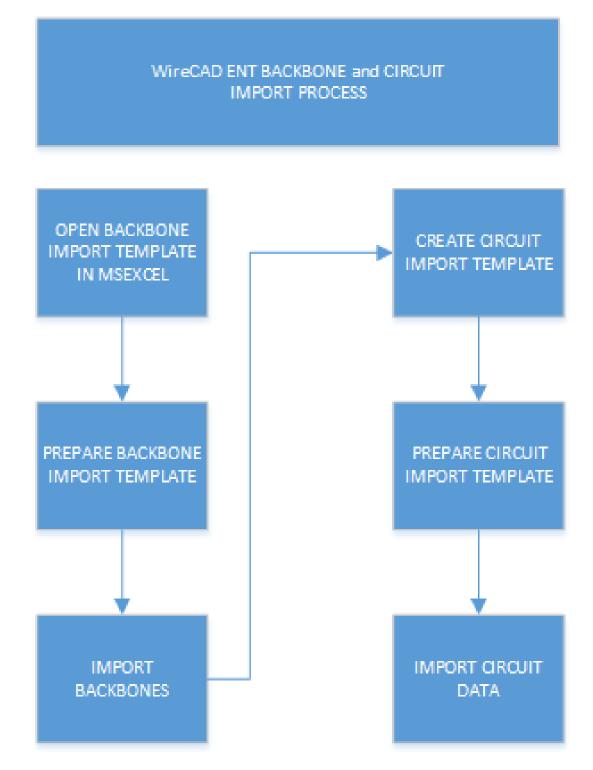
Import your data using the Import Circuits tool.

The Import Circuits tool performs several data integrity checks before the data is actually imported:

- Is the import template the proper format.
- Is all of the necessary data in place.

Then the data is validated against existing data in a preflight check.

- Do the backbones exist.
- Are the ports already assigned to another circuit.
- Is the circuit number available.



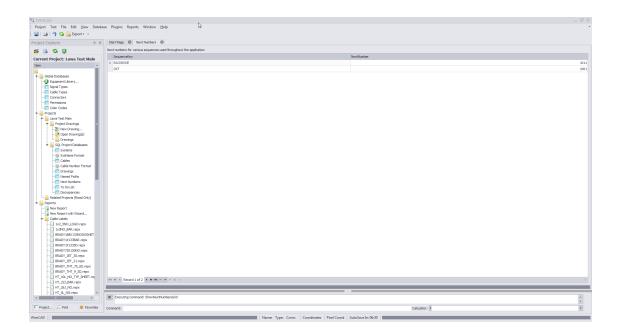
3.2.3 Next Numbers Grid

Menu: Database > Next Numbers Default command line shortcut: NN Related Project Settings: None Product Level: ALL

The **Next Numbers** Grid will show you the next available Cable number based on your <u>Cable Number</u> Format 124. To access the **Next Numbers Tool**, type NN in the command line prompt.

This grid will show you both **Backbone Cable Numbers** as well as **Standard Cable Numbers**. As you progress through your project, these numbers will change.

To edit these numbers (such as in the event of deleted Backbones) simply click in the Next Number box and fill in the desired number. Be sure that you are not entering a number that is already in use.



Note: Yours will look different as the Next Numbers grid will automatically create entries for each new sequence used by the application.

3.3 CMS Settings and Options

Menu: Application Menu > Settings

Default Commandline Shortcut: set

To access the settings menu, click **Application Menu > Settings**. Then select one of the three default sets of settings **Application**, **User** or **Project** by clicking on the down arrow.

Note: Third party Plugins may register their own settings categories and panels. Shown are the stock settings.

*† Settings	\searrow	×
Application	Application Settings Some of the basic settings and behaviors Check for Program Updates Automatically Upon Startup Show Application Setup Wizard Upon Startup Community Library Auto-Contribution Mode AutoContributeMyWork Release License Lease Upon Application Shutdown	
	Default Project Database Host(SQL only) ocalhost □ Use SQL Server Project databases by default 1 Users (mere mortals) can select Project Database Mode Save Close Restore Defaul	ts li

3.3.1 User Settings

Menu: Application Menu > Settings[User][CMS User]

These are the additional user settings that pertain specifically to the CMS module.

*† Settings	×
Application User User Basic Projects List Drawing Drawing Command Line Short CMS User	CMS User Settings Some settings specific to you Use Stock Wire-CAD Startup Page Default New Circuit Strand Count 2 \$ Warn of Connector String Mismatch
Project Project CMS Basic Export Settings	
	Save Close Restore Defaults

- Use Stock WireCAD Startup Page Not used anymore.
- **Default New Circuit Strand Count** When creating a new circuit, a default strand count for jumpers is created. This will change that strand count to a different value.
- Warn Of Connector String Mismatch Having this box checked will allow a warning message to display anytime WireCAD detects that 2 ports being connected have a different connector type.

Menu: Application Menu > Settings[User][CMS User]

These are the additional project settings that pertain specifically to the CMS module.

Note: You will need to have an open project in order to access these settings.

Note: These settings are project specific and will need to be created for each new project.

Jser 🔻	Cable Management Some basic setting Manage Status Items	System Basics	5		
 Basic Projects List Drawing 	Default New Backbone Status	IS PROPOSED PROPOSED			
Drawing (advanced) Command Line Short CMS User					
10	Backbone Number Format	B{0}	Circuit Number Format	{0}	
roject 🔹	Jumper Number Format	J{0}.{1}.{2}	Horizontal Cable Number Format	H{0}.{1}.{2}	
Basic	Default Jumper Manufacturer	GENERIC •		GENERIC	
🔐 Advanced	Default H Cable Manufacturer	GENERIC	Default H Cable P/N	GENERIC	
 Locations CMS Basic 					

- Default New Backbone Status When creating a backbone, you have the ability to mark a "status" on that backbone such as "In Use", "Proposed" ETC. Selecting a status will cause that to become the default for all backbones in this project. Status Items are defined in the Status Behavior Project Settings panel.
- **Default New Circuit Status** Just like above, when creating a Circuit, you have the ability to mark a status on that circuit.
- Backbone Number Format The variable {0} contains the next number in the Next Numbers grid for Backbones.
- Circuit Number Format The variable {0} contains the next number in the Next Numbers grid for Circuits.
- Jumper Number Format -

The variable {0} contains the Circuit base number.

The variable {1} contains the Strand Number of the circuit for this jumper

The variable {2} contains the Ordinal Number of the circuit for this jumper.

3.3.3 Output Settings

Menu: Application Menu > Settings[Project][Export Settings]

7t Settings		×
 User ▼	Ouput Settings Determines the default preview output behavior	
 Basic Projects List Drawing Drawing (advanced) Command Line Short CMS User 	□ Use Template	
Project 🔻	Create Folders For Each IT System Automatically Overwrite Files of Same Name	
 Basic Advanced Locations CMS Basic 	Append Date Stamp to File Name Gircuit Post Process Script	•
Export Settings	Backbone Post Process Script Save Close Restore Default	

- Use Template Path to a template drawing that the output will be exported into. Your template drawings can contain any page borders or layouts and settings that you wish.
- Always Ask for Filename and Path You are involved in the file name selection and path.
- Circuit File Name Format Sets the file name format for Circuit output. {0} = Circuit Name.
- Backbone File Name Format Sets the file name format for Backbone output. {0} = Backbone Number.
- File Format Presets the output format.
- Path Where do we output.
- Create Folders for Each IT System Create a new folder for each IT System and output the preview to that folder.
- Automatically Overwrite Files of Same Name Self-explanatory.
- Append Date Stamp to File Name Self-explanatory.
- **Circuit Post Process Script** Path to a c# file which will be run post export but pre write-to-disk. See the Post <u>Process Scripts</u> [286] topic for more information.
- Backbone Post Process Script Path to a c# file which will be run post export but pre write-to-disk. See the Post Process Scripts [286] topic for more information.

3.3.4 Status Behaviour

Menu: Application Menu > Settings[Project][Status Behavior]

Application 🗸	As	signed to Circuit Color			
Jser ^		SeaShell			•
00					
Basic	St	atus Item Behaviour			
Projects List		Context	Status Display Name	Back Ground Color	Is Blocking
🎤 Drawing	٩				
Drawing (advanced)	•	Backbones_Status 🔹	Available	255, 255, 255	
😥 Command Line Shortcuts		Backbones_Status	DEAD	255, 165, 0	\checkmark
Enterprise CMS		Backbones_Status	In Use	245, 222, 179	\checkmark
		Backbones_Status	PROPOSED	255, 255, 255	
Project ^		Backbones_Status	Reserved	255, 192, 203	\checkmark
🚱 Basic		Backbones_Status	Unknown	255, 192, 203	\checkmark
Advanced		Circuits_Status	INSERVICE	255, 255, 255	
		Circuits_Status	PROPOSED	255, 255, 255	
Docations	*				
Delete Handling					
Project Rules					
Enterprise CMS					
Export Settings					
Status Behaviour					
	He	(+(+ Record 1 of 8 → ++)	# + - ▲ √ × <		۱.

• Assigned to Circuit Color - The color to display in the Backbones grid if the record is assigned to a circuit. Here we see circuit 0232 using the backbone B000003.41.

d	ktNo	CableType	CableType	CableNo	SrcSys	DestSys	SRCPIn	DestPin	SRCLoc	SRCE	DestLoc	DestEl	SRCConn	DestConn	MultiCore	AvailableC
																8
	œ	GENERIC	48 STRAND	800003.36	AD-3	CC-R54-4	036	036	AMU.BLDG		AMU.COM		FC	SCA		
	Đ	GENERIC	48 STRAND	B00003.37	AD-3	CC-R54-4	037	037	AMU.BLDG		AMU.COM		FC	SCA		
	Ð	GENERIC	48 STRAND	800003.38	AD-3	CC-R54-4	038	038	AMU.BLDG		AMU.COM		FC	SCA		
	Ð	GENERIC	48 STRAND	B00003.39	AD-3	CC-R54-4	039	039	AMU.BLDG		AMU.COM		FC	SCA		
1	-	GENERALG	10 31104140	000000.40	80-0	CORDIN	0.40	040	AP10.0LD G		AMD.COM		TC .	308	- 0	
	0232	GENERIC	48 STRAND	B00003.41	AD-3	CC-R54-4	041	041	AMU.BLDG		AMU.COM		FC	SCA		
-	0222	CENERIC	10 0770-110	000003.42	10.0	CC 051 1	0.12	0.42	MU.DLDC		NU CON		10	001	- 8-	
	Ð	GENERIC	48 STRAND	B00003.43	AD-3	CC-R54-4	043	043	AMU.BLDG		AMU.COM		FC	SCA		
	÷	GENERIC	48 STRAND	B00003.44	AD-3	CC-R54-4	044	044	AMU.BLDG		AMU.COM		FC	SCA		
	0242	GENERIC	48 STRAND	B00003.45	AD-3	CC-R54-4	045	045	AMU.BLDG		AMU.COM		FC	SCA		
	0243	GENERIC	48 STRAND	B00003.46	AD-3	CC-R54-4	046	046	AMU.BLDG		AMU.COM		FC	SCA		
	œ	GENERIC	48 STRAND	B00003.47	AD-3	CC-R54-4	047	047	AMU.BLDG		AMU.COM		FC	SCA		
	Ð	GENERIC	48 STRAND	800003.48	AD-3	CC-R54-4	048	048	AMU.BLDG		AMU.COM		FC	SCA		
•	 CableNol 	Prefix: B00004														
	Đ	GENERIC	24 STRAND	B00004.01	AD-4	AD-5	001	001	AMU.BLDG		AMU.BLDG		ST	ST		
	Ð	GENERIC	24 STRAND	B00004.02	AD-4	AD-5	002	002	AMU.BLDG		AMU.BLDG		ST	ST		
	Ð	GENERIC	24 STRAND	B00004.03	AD-4	AD-5	003	003	AMU.BLDG		AMU.BLDG		ST	ST		
	Đ	GENERIC	24 STRAND	800004.04	AD-4	AD-5	004	004	AMU.BLDG		AMU,BLDG		ST	ST		0

- **Context** Backbones_grid or Circuits_grid.
- Display Name The name of our status.
- Background Color Self-explanatory.
- Is Blocking A blocking status is one that blocks operations from proceeding. For example: if we mark a backbone fiber as DEAD we would not want to use that in a Circuit. If the status item is set as Is Blocking = true then the New Circuit tool will not allow a circuit to involve that strand of fiber.

3.3.5 Post Process Scripting

Post Process Scripting of the output of the Visualizers in WireCAD allow you to customize the final appearance of the created document.

What follows are two example scripts, one for the Circuit output and the other for the Backbone output. The process is the same for both. Only the method signature is changed.

Circuits Export Script Example

```
using System;
using System.Data;
using System.Text;
using System.Windows.Forms;
using System.Diagnostics;
using System.Reflection;
using System.IO;
using WireCAD;
using WireCAD.Interfaces;
using VectorDraw.Professional.vdObjects;
using VectorDraw.Professional.vdFigures;
using VectorDraw.Professional.vdPrimaries;
using VectorDraw.Professional.vdCollections;
using WireCAD.ProjectFile.DAL;
using VectorDraw.Geometry;
/// <summary>
/// Fill your titleblock with your data
/// </summary>
//Your class name
public class TitleBlockFiller
      //the method signature is key so this next line must appear as shown
      public static void Run(Workspace ws, Circuits c, vdDocument doc)
      {
             string drawingName = Path.GetFileName(doc.FileName);
             //change this next line to be your titleblock name
             string BlockNameToUpdate = "ansi";
             //Get the layout by name that we want to update
             vdLayout layOut = doc.LayOuts.FindName("ANSI_B");
             //loop through the entities in the layout
             foreach (vdFigure figure in layOut.Entities)
             {
                   //if we find a viewport let zoom it to the extents of our model
                   if(figure is vdViewport)
                   {
                          vdViewport vp = figure as vdViewport;
                          vp.ZoomExtents();
                          vp.Update();
                   }
                   //now look for our titleblock
```

if (figure is vdInsert) //cast our base figure into an insert object so we can access its properties vdInsert insert = (vdInsert) figure; //now we will test to see if the insert name is one that //we know to be a titleblock //Modify this to meet your needs if (insert.Block.Name.ToLower().Contains(BlockNameToUpdate)) { //need to fix it. //this next bit makes it insert get the latest version from the blocks table insert.Update(); insert.Invalidate(); //we got one so let's set the attributes //we will use the safeSetAttribute function so that if the attribute doesn't exist it won't //fail //Modify this to meet your needs //Enter your Attribute names and the values you want to fill them with ws.Utilities.SafeSetAttributeValue(insert, "SHEET", layOut.Name); ws.Utilities.SafeSetAttributeValue(insert, "Drawing_Name", Path.GetFileNameWithoutExtension(drawingName)); ws.Utilities.SafeSetAttributeValue(insert, "DWG_Number", c.CktNO); ws.Utilities.SafeSetAttributeValue(insert, "COMPANY", "Slate Gravel Co"); ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS", "Number 1 Quary Way"); ws.Utilities.SafeSetAttributeValue(insert, "ADDRESS2", "Bedrock - The World"); ws.Utilities.SafeSetAttributeValue(insert, "DATE", DateTime.Now.ToShortDateString()); ws.Utilities.SafeSetAttributeValue(insert, "Scale", "NTS"); insert.Update(); insert.Invalidate(); doc.Redraw(true); } } } //Now create a text item that displays our circuit number in the upper righthand corner vdText(doc); vdText t = new t.TextString = string.Format("CKT - {0}\n{1}",c.CktNO, c.CktDescription); t.HorJustify = VectorDraw.Professional.Constants.VdConstHorJust.VdTextHorRight; Box bb = layOut.Entities.GetBoundingBox(true,true); t.Height = .25d; t.InsertionPoint = new gPoint(bb.Right-3,bb.Top-2);

```
layOut.Entities.AddItem(t);
doc.ActiveLayOut = layOut;
}
```

Backbones Export Script Example

The only difference in the two examples is the method signature. Use the code above replacing: public static void Run(Workspace ws, Circuits c, vdDocument doc)

With:

}

public static void Run(Workspace ws, CMSSettings settings, vdDocument doc)



Reference

Here you will find a listing of all menu functions, forms, and dialogs.

4.1 Ribbon Tabs and Dialogs

This section provides a reference to the individual controls in the dialogs accessed in the Ribbon Toolbar.

Only dialogs that need explaining are documented

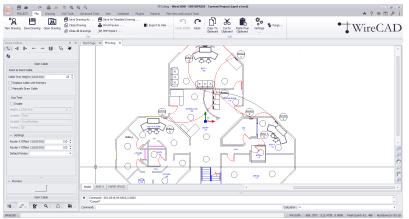
Please note that although this reference is quite complete, only dialogs that really need explaining are documented. For example, we assume that you can figure out what menu entries like Save and Save As do for yourself.

This also applies to simple dialogs whose functions are explained elsewhere. Some of these dialogs are listed, but only with references to the relevant topics in the Procedures sections.

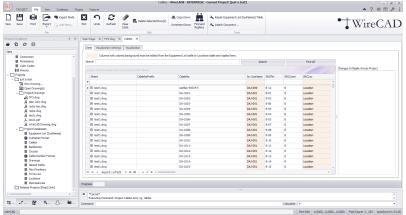
4.1.1 The Workspace

The WireCAD workspace has four main components: The Application Menu at the top of the screen, the Ribbon Toolbar where you access all program functions, the Tool Panels collection for navigating and managing your projects and the Main Window where you edit the content of your projects. The Main Window can display four distinct environments:

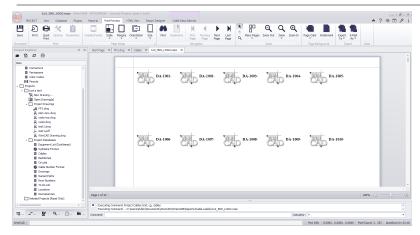
1. The Drawing environment



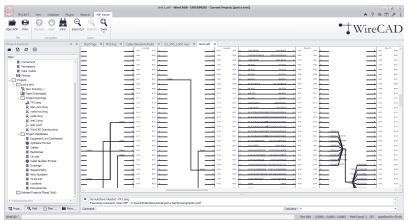
2. The Data environment



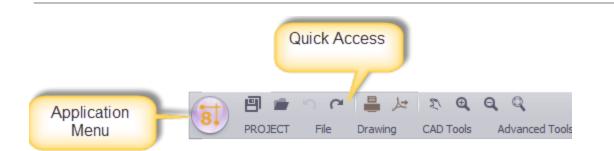
3. The Reporting environment



4. The PDF viewer environment



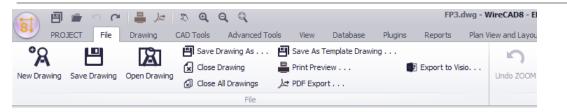
The Application Menu and Quick Access Toolbar



The Application Button in the top left corner of the Help & Manual window is one of the most important controls. It provides access to the functions normally accessed in the File menu in menubased programs. This is where you open existing projects, create new projects, save your projects under other names and so on.

The Quick Access Toolbar next to the Application Button is a place for frequently-used tools.

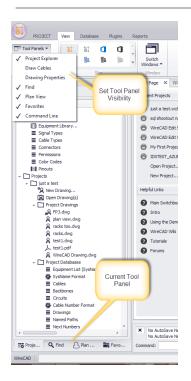
The Ribbon Toolbar



The Ribbon Toolbar is the control center where you access virtually all of WireCAD's functions. If you use Microsoft Office 2007 you will already be familiar with the Ribbon interface. It is context-sensitive, automatically displaying functions relevant to what you are currently doing.

Tip: The Ribbon can also be operated almost entirely via the keyboard. To display the accelerator keys just press and release the ALT key once – the keys will be displayed in icons superimposed on the Ribbon.

Tool Panels

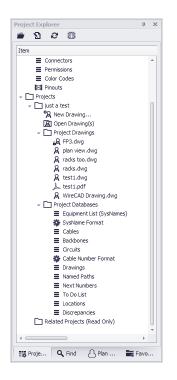


Tool Panels are organizations of controls. There are different Tool Panels depending on the current environment.

The Project Explorer Tool Panel

æ...

The Project Explorer is like Windows Explorer for WireCAD projects. When you load or create a project all its contents are displayed here, including both the Global Equipment tables and the Project Databases and files.



Note: This tool panel is active at all times.

The Draw Cables Tool Panel

The Draw Cables Tool Panel contains all the tools for drawing cables. You can draw cables with different relationships. You can also set the drawing behavior of cables.

Start Cable	
Point to Point Cable	
able Text Height (1/100 DU)	25 韋
Replace Cable with Pointers	
Manually Draw Cable	
Aux Text	
Enable	
Height (1/100 DU)	0 🌲
Location Over	~
Variable CircuitNumber	-
Format {0}	
 Settings 	
Router X Offset (1/100 DU)	150 💲
Router Y Offset (1/100 DU)	100 🌲
Default Pointer	•
Preview:	
г	

Note: This tool panel is only active when the current environment contains a drawing.

The Drawing Properties Tool Panel

The Drawing Properties Tool Panel allows editing of granular drawing settings. If no entity selection exists in the drawing the Drawing Properties window will display the general document properties.

	lic\Documents\just a test\D	-
Grid Space X	1.0000	
Grid Space Y	1.0000	
GridStyle	Dot	
Limits	0.0000,0.0000,0.000	
OrthoMode		
OrthoModeAxis	X, Y, Z	
PolarTrack		
PolarTrackAngle	Ø 45.0000°	
PolarTrackLock		n
SnapAngle	0°	
SnapBase	0.0000,0.0000,0.0000	
SnapMode		
SnapSpaceX	1.0000	
SnapSpaceY	1.0000	
Keyboard	^	
OrbitActionKey	AltLeft	
OsnapDialogKey	Ctrl+None	
PanMouseButton	Middle	
SelectionPreviewDo	Down	
SelectionPreviewUp	Up	
UrlActionKey	Ctrl+None	
Misc	^	-

Note: This tool panel is only active when the current environment contains a drawing.

The Find and Replace Tool Panel

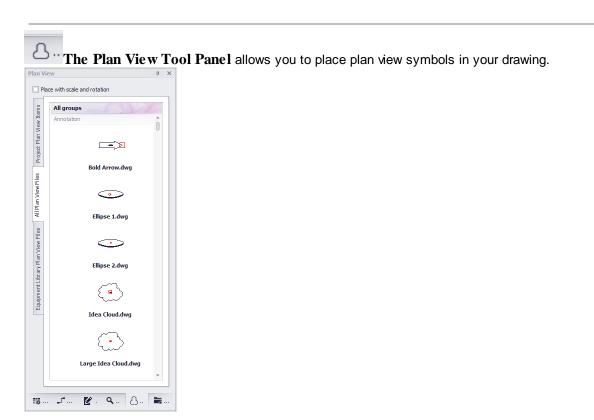
0	
ч.	

The Find and Replace Tool Panel allows you to search the current drawing, all drawings and the project databases for text and replace that text with your entered values.

ind	# X
ind:	× Find
Search Where	
Active Drawing	
All Project Drawings	
Project Databases	
 Search Options 	
🗹 Show File	
🗹 Show Item Type	
 Replace 	
Replace With	

Note: This tool panel is active at all times.

The Plan View Tool Panel



Note: This tool panel is only active when the current environment contains a drawing.

The Favorites Tool Panel

The Favorites Tool Panel holds blocks that you have saved as favorites (right-click entity in drawing>Add to Favorites).

avorites	ψ×
X Scale Factor 1 🗘	2
Y Scale Factor 1 💲	
Explode after insert	
Favorites - Double-Click to Add to Drawing	
Item	
👻 🛄 Global Favorites	
★ 1.dwg	
my router.dwg	
★ PESA-COUGAR Sv0.dwg ★ VTR.dwg	
Your User Favorites	
Project Favorites	
iiii _	

Note: This tool panel is only active when the current environment contains a drawing.

The Command Line Interface

The Command Line Interface allows you to see the command history, receive prompts from the application and execute commands directly. For a full list of command line command you can view/edit the Application Menu>Settings[User][Commandline Shortcuts] grid.

	ecuting Command: Open PDF - C:\Users\PLoBic\Documents\yust a test\Drawings\test1.pdf arit find dependent file: C:\Users\Tarab Documents\Warketing\Art\bires\WireCAD logo.jpg	* *
Command	d: Calculator: •	

4.1.2 Ribbon Tabs

4.1.2.1 Application Menu



The Application Menu contains the following static menu functions:

- New Project... Displays the New Project Wizard. 329
- **Open Project** Display a file open dialog. Browse to and select a *.wc6plf file to open the WireCAD Project.
- Save Project As... Displays the <u>Save Project As</u> dialog. Use this to create a copy of the current project in a different location.
- Close Project Closes the current project.
- Frequently Used Folders >
 - Project Folder Opens the root folder of the current project in a window explorer window.
 - Global Data Folder Opens the global data folder. C:\Users\Public\WireCAD\WireCADx

User App Data Folder - Opens C:\Users\<YOUR USER NAME>\AppData\Local\WireCAD\WireCADx

Security Tools >

View Permissions - Shows the permissions grid.

- Manage Security... Shows the Users Groups and Permissions dialog 3361.
- Check In/Out >

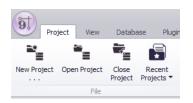
Pack Up / Check Out - <u>Packup/check</u> out utility. Collects all info for the project and makes is portable.

Unpack Project ... - Unpack a project. 341

Check In Project - <u>Check in a Checked Out project</u> 342.

- Project Info Project specific info [513] like the current revision and related projects list.
- Account Info Who is the project for 343.
- Application Setup Displays the <u>Application Setup Wizard</u> . This is show once on startup but you can review and change settings here.
- Settings Displays the main <u>Settings</u> 352 dialog.
- Exit Exits the program.

4.1.2.2 Project



The Project Ribbon Tab is a static menu structure. It does not change with environment changes. The Project Ribbon Tab contains the following menu items:

- New Project ... Display the New Project Wizard 329.
- **Open Project** Display a file open dialog. Browse to and select a *.wc6plf file to open the WireCAD Project.
- Close Project Close the current project.
- Recent Projects Most recently used projects list. This is selection is based on the Project List setting in the Application Menu>Settings[Project List].

Other

While WireCAD does not currently merge any other tools with the Project menu, authors of WireCAD plugins have the ability to merge their own tools onto this ribbon tab. Consult their documentation for information.

4.1.2.3 File

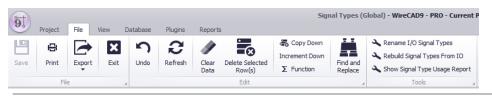
The File Ribbon Tab is a dynamic menu that changes its structure with the current environment. *Drawing Environment*

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Proje	ect File	Drawing C/	AD Tools	Advanced Tools	View	Database	Plugins	Reports	Plan View and	Layout To	ols					
New Drawing	Save Drawing	Open Drawing	Close	Drawing As Drawing All Drawings	_	review	awing	Export to Visio	S Undo TextString	Redo	Copy To Clipboard	Cut to Clipboard	Paste from Clipboard	Settings	Purge 	Todo
				File								Edit				Todo

Again, we will not explain the obvious ones.

- New Drawing ... Shows the <u>New Drawing Wizard</u> 384.
- Save As Template Drawing Any drawing may be used as a template from which other drawings may be created. Simply Save As Template Drawing to make your drawing usable in the New Drawing Wizard as a starter drawing.
- Print Preview ... Display the Print Preview 386 dialog.
- **PDF Export** ... Display the <u>PDF Export</u> and dialog.
- Export to Visio <u>Create smart Visio drawings</u> where the WireCAD cable become live active Visio connections.
- Settings ... Display the main <u>Settings</u> 352 dialog. Same as clicking Application Menu>Settings.
- **Purge** ... <u>Purge</u> 404 unused entities from the drawing.
- Todo Create a <u>New Todo 496</u> linked to this drawing.

Data Environment



For an general discussion on grid basics see this topic 381.

- New Create a new item on the collection. The dialog presented will differ based on the collection.
- Clear Data [Del] -
- Delete Selected Rows [Ctrl + Del] -
- Copy Down [Ctrl]+[D] -
- Increment Down [Ctrl]+[I] -
- Find and Replace -
- Function Displays the Expression Builder dialog so you can manipulate data using the Expression engine.
- Tools See Grid Specific Functions for a listing of the tools available to each data grid.

Other

While WireCAD does not currently merge any other tools with the File menu, authors of WireCAD Plugins have the ability to merge their own tools onto this ribbon tab. Consult their documentation for information.

4.1.2.4 Drawing

Active only when the current environment is a drawing.

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Snap Mode	* Extension Tracking Crtho Mode 0.0000, 0.0000, 0.000	GripBlockStandard	Cayouts	Text Styles	J. 0.00000111	Select	Move	Q Rotate	4 Trim		* Polar Array Bring to Front Send to Back	Corner	• WireCAD
	Status			Format					Мо	dify	_		-

- Grid Mode Toggle the visible grid [F7]. Note: the visible grid is rendered only for the Drawing Limits which can be set in the Drawing Properties Tool Panel.
- Snap Mode Toggle the invisible snap grid [F9]. The invisible snap grid is based on the SnapX and SnapY settings in the Drawing Properties Tool Panel.
- **Polar Track Mode** Toggle PT mode. When enabled and in a function requesting a point from the drawing the selectable polar angle will be restricted to the **Polar Track Angle** in the Drawing Properties Tool Panel.
- Extension Tracking -
- Ortho Mode Toggle restrict movement to horizontal/vertical only.
- **Coordinate** Displays the cursor position in current coordinates. Coordinates are expressed in drawing units (DU).Drawing units do not express particular units(meters,inches etc).

In this part user have to make some assumptions in order to define that the coordinates of the drawing mean particular units(meters,inches etc).

For example:

For a mechanical drawing we can make the assumption for example: where one drawing unit defines one millimeter(1 D.U=1mm).

For a architectural/technical drawing we can make the assumption for example: where one drawing unit defines one meter(1 D.U=1m) or one foot.

This can be very helpful in designing, dimensioning, retrieving information from the drawing (distances, area calculations).

- GripBlockStd Show only one grip per insert.
- GripBlockAtts Show one grip per attribute in the selected insert.
- Layers ... Shows the Layers 391 dialog.
- Layouts ... Shows the Layouts 393 dialog.
- **Point Styles** ... Shows the <u>Point Styles</u> 394 dialog.
- Text Styles ... Shows the <u>Text Styles</u> 395 dialog.
- Dim Styles ... Shows the Dimension Styles [336] dialog.
- Model Space Bounds Shows the Model Space Boundaries [398] dialog.
- **Groups**... Shows the <u>Groups</u> 399 dialog.
- Images ... Shows the Images 401 dialog.
- UnSelect Clears the current selection. Same as pressing {esc}.
- Select Start a selection.
- Erase Erase the current selection. If no selection then you will first be prompted to select entities.
- Copy Copy the current selection. This is a base-point or offset copy and is preferred over [Ctrl][C] then [Ctrl][V] if copying in the same drawing as it is lighter weight. If no selection then you will first be prompted to select entities.
- Move Move the current selection. If no selection then you will first be prompted to select entities.
- Scale Scale the current selection. If no selection then you will first be prompted to select entities.
- Rotate Rotate the current selection. If no selection then you will first be prompted to select entities.
- Mirror Mirror the current selection. If no selection then you will first be prompted to select entities.
- Stretch Stretch polylines in the current selection. If no selection then you will first be prompted to select entities.

• **Explode** - Explode the current selection. This function will reduce complex object to their primitive constituent parts. For example; exploding an insert unlinks all of the entities back one level. Exploding a polyline reduces the polyline to a collection of line segments. If no selection then you will first be prompted to select entities.

Entities that can been exploded:

vdDimension explode to vdLines, vdText(s), and vdInserts (the arrows).

vollnsert explode to the entities that is consist of. (If there are Inserts inside Blocks then you may need to apply more than 1 explode to get the base entities).

vdPolyHatch explode to vdPolyline(s).

vdPolyline explode to vdLine(s) and/or vdArc(s).

vdRect explode to vdPolyline.

vdText explode to vdPolylines(only texts with fontfile SHX).TTF(true type font) texts are not exploded.

• **Trim** - Trim objects at a cutting edge defined by other objects the current selection. First select the objects that define the cutting edges at which you want to trim an object and then the object.

Objects that can be trimmed include arcs, circles, elliptical arcs, lines. Notice that the trim command do not function if the objects do not intersect.

- Extend Extend lines, arcs, polylines until they intersect with some other object which is used as limit of the extension. Firstly you have to select the objects that consist the limits of the extension. Then you have to choose a point at an object that you want to extend. If the object you want to extend does not intersect with above objects then nothing will happen.
- Fillet Connect two lines , two arcs, or one arc with a line(these two objects must have at least one common point either visible, or in their extension) , with an arc with a specific radius. The value of the radius has some restrictions depending the position of the objects. If radius=0 then simply the objects are either extended until they intersect each other in one point(if there was not an intersection point) either trimmed(if an intersection point is visible).
- Offset Create a new object in parallel direction and in specified distance from the original object which is used as pattern for the new object. When you execute offset command, you are prompted to select an object. Then you have to specify the offset distance which is the distance that the new object will be drawn from the original object. Then you have to set the side that the object will be draw because there are two sides.
- **R Array** Creates multiple copies of objects in a rectangular pattern. Shows the <u>Rectangular Array</u> 403 dialog. With the rectangular array you can create an array defined by a number of rows and columns of copies of the selected object. First you have to select the objects. Then you have to define number of rows and number of columns of the rectangle, the distance between rows and the distance between columns. If no selection then you will first be prompted to select entities.
- **P Array** Same as R Array but copies radially around a center point. Select the objects to copy. Then set the center point and next define the numbers of the copy objects that will be created and the fill angle. Lastly choose if the object will be rotated or not.
- **BTF** Bring to front. This changes the Z order of the objects in the render engine bringing the current selection to the front. If no selection then you will first be prompted to select entities.
- **STB** Send the current selection to the back of the Z order. If no selection then you will first be prompted to select entities.
- Corner Causes lines that can intersect to intersect. Start the command then select the first line then the second line.

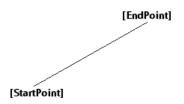
4.1.2.5 CAD Tools

Active only when the current environment is a drawing.

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/ Line Point 🖬 Image Frame 🔿 Ellisose 🛱 Inser	ert Block Into Drawing 📫 Make a Block 🎁 Horizontal 🔿 Radius	
🖓 Polyline 🖂 Rectangle 🦯 Construction Ray 🛛 🗷 Write	te Block to File 💼 External Reference Manager (XREF) 🧵 Veritcal 🐼 Diameter	WireCAD
⊙ Circle T Text ▼	rate Attribute Definition 🛭 🗲 Edit Attributes 🧳 Aligned 🐺 Angle	• whet AD
Entities	Blocks and Inserts (Groups) A Dimensions A	

Entities Page Group

• Line - A single line segment. Lines can be one segment or a series of connected segments, but each segment is a separate line object.



• **Polyline** - 2D/3D line composed of line and arc (bulges) segments. Polyline is specified by an array of Vertexes (points). When the Polyline has thickness then the extrusion vector of the polyline defines the direction of the thickness. Polylines can be Open or Closed, can be SPLine and be filled with a color or a hatch.



• Circle - A full circle is defined by its CenterPoint and its Radius. Circle is drawn in the plane that is defined by CenterPoint and ExtrusionVector.



 Point - An object which occupies a single point in the coordinate system. The display of the point is inherited from the document Point Style property and can be set by clicking Drawing>Point Styles...

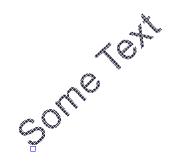


• Rectangle - A rectangular object defined by an insertion point, height and width.



• Text >

Single Line of Text - Text inherits its style from the document Text Styles collection which can be edited by clicking Drawing>Text Styles... Text entities do not have font properties directly but inherit the font and font properties from the associated Text Style.



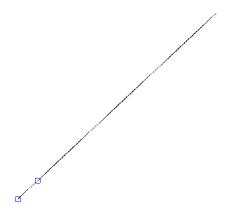
Multiline Text (MTEXT) - A mutiline text entity.



• Image Frame - Used to render images in the document. Images may either be linked or imbedded in the drawing file. The image frame defines the location and size of the displayed image. To imbed an image you must edit the document Images collection **Drawing>Images**.



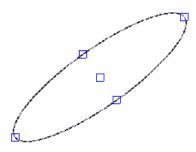
• **Construction Ray -** A line entity defined by its starting point and an angle.



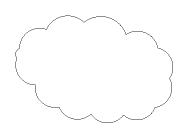
• 2 or 3 Pt Arc - A circular arc defined by the center point, the radius, the start angle and the end angle. An arc is always drawn anti-clockwise from the StartAngle to the EndAngle. The StartPoint and EndPoint properties of an arc are calculated through the StartAngle, EndAngle and Radius properties. The ExtrusionVector is always vertical to the arc. Arc is drawn in the plane that is defined by CenterPoint and ExtrusionVector.



• Ellipse - Draw an Ellipse.



• Cloud - Draw a cloud.

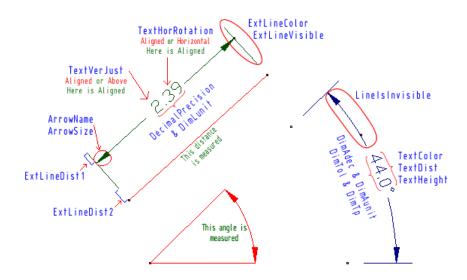


Blocks and Inserts Page Group

- Insert Block Into Drawing Opens the Inserts 405 dialog. You can then insert an existing block into the drawing or browse to another file to insert in the drawing.
- Write Block to File Writes the selected insert out to its own file prompting you for the file save as name and location as well as the new basepoint for the drawing.
- Create Attribute Definition A tag/value data pair that can be included in a block to display editable text.
- Make a Block Select entities and group them into a unit called a block. The block resides in the document Blocks table. To display a block we Insert an instance of the block into the drawing at some point, scale, and rotation.
- External Reference Manager Other drawings may be displayed within the drawing space and maintained as separate files. These are called Externally Referenced (XREFS) drawings. The externally referenced drawing cannot be edited in the current drawing, only viewed, positioned, scaled and rotated. This function opens the External Reference Manager 406 dialog.
- Edit Attributes Allows editing of the attributes of the selected insert of a block.

Dimensions Page Group

Dimensioning is the process of adding measurement annotation to a drawing. There are many ways to dimension objects and many ways to format dimensions. You can create dimensions for a wide variety of object shapes in many different orientations. You can create dimension styles to format dimensions quickly and ensure that dimensions in your drawing conform to industry or project standards. Dimensions show the measurements of objects, the distances or angles between objects, or the distance of a feature from an origin you specify. There are three basic types of dimensioning: linear, radial, and angular. Dimensions can be horizontal, vertical, aligned, rotated, angular. A linear dimension measuring the distance between two points which is displayed parallel to the points being measured. In aligned dimensions, the dimension line is parallel to the extension line origins. The extension line origins are specified using the DefPoint1 and DefPoint2 properties.



4.1.2.6 Advanced Tools

Active only when the current environment is a drawing.

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Equipment Library	Rack Builder	Assign SysName		O Reset	Pointer Operations *	Sync Insert	e SysName Ass : with Database ysNames		Assign Terminal(s	Assign Cable	Error Check	O Reset	Verbose Cable Assignment Add Multi-core Cable Draw Cable	입는 Add Spare Cable(s) 화 Recover Cables 값 Tidy Cable (Make Ortho)	Slurp Cables	🕹 Auto Block	WireCADify Block Add Connection Point				
Equipmen	Rack Tools				Equi	pment Functi	ons						Cable Functions			AutoScheme	WireCADify Tools				

Equipment Library page group

• Equipment Library - Opens the Equipment Library 418.

Rack Tools page group

• Rack Builder - Opens the Rack Builder 439 tool.

Equipment Functions page group

- Assign SysName Assigns a <u>SysName 441</u> to all selected inserts that are assignable.
- Error Check Shows the <u>Drawing SysName Error Check</u> 449 dialog.
- Sync Insert with Database Checks the selected insert to see if the SysName, Alias, Manufacturer, EquipmentName, Location and User fields match the Equipment List. If they do not you will be presented with the Sync Equipment Decision [414] dialog.
- Verbose SysName Assignment When checked displays the <u>SysName Assignment</u> dialog. Otherwise the assignment proceeds with all default information.
- **De-Assign SysName** De-Assign will remove the SysName data from the insert and mark the record in the database deleted/available.

See also: <u>Project Delete Handling</u> 377 settings.

- Reset Selected SysNames, Reset All SysNames Reset will remove the SysName data from the insert and do nothing with the database. The Reset functions are useful if you need to reuse a drawing and reassign new numbers.
- Slurp SysNames Gets all of the SysName data from the drawing and adds it to the database if not found in the database.
- Assign Terminal(s) Starts the terminal assignment dialog for the current selection of assignable terminals.
- Link Selected Pointers Allows you to link a selection of pointers with another selection of pointers.
- Rereference Drawing Pointers (change sheet reference name) Allows you to change the name
 of the sheet to which pointer(s) are pointed.

Cable Functions page group

• Assign Cable Number - Assigns the cable 443 a number based on several factors:

The Project Settings[Starting Number] 374

Project Cable Number Format 124 tool.

- Next Number 553 sequence.
- Verbose Cable Assignment See below.

The process of assignment will update drawing with the number as well as place an entry in the project **Cables** table.

- Error Check Shows the Error Check 451 dialog.
- Verbose Cable Assignment When checked displays the <u>Cable Assignment</u> dialog. Otherwise the assignment proceeds with all default information.

- Add Multicore Cable Displays the Add Multi-core Cable 450 dialog. There you select the cable type number base, etc. and build an entry in the Cables table for every core in the associated cable type marking the records available.
- Draw Cable Starts the Draw Cable 570 function.
- **De-Assign Cable Number** De-Assign will remove the Cable data from the drawing and mark the record in the database deleted/available. This function works across pointers. In other words if the cable that is being de-assigned is pointed to another cable/drawing the complementary pointer is de-assigned as well.

See also: Project Delete Handling 377 settings.

- Reset All, Reset Selected Cables Removes the Cable data from the drawing and do nothing to the database. The Reset functions are useful if you need to reuse a drawing and reassign new numbers. This function does not work across pointers.
- Recover Cables The Recover Cables function does the following:

Gets all cable data from the drawing.

Compares it to the Cables table of the project.

Updates the Cable Number information in the drawing for matches. A match is found when the source and destination SysNames, Locations, and Port names match.

- Tidy Cable Forces the selected cable to be orthogonal (horizontal or vertical only).
- **Slurp Cables** Gets all of the Cable data from the drawing and adds it to the Cables table if not found in the database.

AutoScheme Tools page group

- Auto Block Shows the <u>Auto Block</u> 452 dialog. With Auto Block you can place functional blocks in the drawing on a grid simply by selecting which SysName to place.
- **Ratsnest** Shows the <u>Ratsnest</u> dialog. Used in conjunction with Auto Block to wire the placed blocks. Pulls cable data from the Cables table, searches the drawings for matches and when found places a cable.

WireCADify Tool page group

- WireCADify Block Shows the WireCADify Block 457 dialog. Add the WireCAD attribute set to your CAD blocks. You do not need to use this command on any WireCAD generated block.
- Add Connection Point Shows the Add Connection Point 458 dialog. Add WireCAD Connection Points you blocks that you have WireCADified. You do not need to use this command on any WireCAD generated block.

4.1.2.7 View

The View tab is dynamic. It merges tools from the current environment. **Static View**

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Tool Panels >

Project Explorer - Toggle the visibility of the <u>Project Explorer</u> [569] Tool Panel. Draw Cables - Toggle the visibility of the <u>Draw Cables</u> [570] Tool Panel. Drawing Properties - Toggle the visibility of the <u>Drawing Properties</u> [571] Tool Panel. Find and Replace - Toggle the visibility of the <u>Find and Replace</u> [573] Tool Panel. Plan View Tools - Toggle the visibility of the <u>Plan View Tools</u> [576] Tool Panel. Favorites - Toggle the visibility of the <u>Favorites Tool</u> [576] Panel. Command Line - Toggle the visibility of the <u>Command Line</u> [576] Tool Panel.

Command Line - Toggle the visibility of the <u>Command Line</u> Tool Panel. There may be others depending on the plugins that are loaded. These are the default tool

panels.

- Show Start Page Toggle the visibility of the Start Page.
- Skin Gallery Select the look and feel of the application.
- Switch Windows {Current Window Set} Toggle the active window.

Drawing Environment View

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Pan	Zoon	۱	Coom Out	Zoom Extents	Coom W Coom A Coom A Coom Pr	a l	Coom SG	ale	(8) New	Viewport Viewport fro vate Viewpor		S END	₽ INS	≫ INTER	QUAD → TANG ∧ APPINT	O bisable	Measure Distance Area id	Tool Panels •	81 ()	\$.		0	↓ ▼ Switch Window	h		
						View								Object Sn	aps		Info				Skin		Windo	w		

View page group

- **Pan** Reposition of the view. This can be better done with the mouse wheel of your mouse. Depress the mousewheel to click the button underneath it to activate the PAN mode. NOTE: this relies on your mouse driver middle button set to default.
- Zoom Commands Zoom command allows the user to increase or decrease the apparent size of objects, so the user can control the part of the drawing that is included in the screen. Zoom commands are transparent. Transparent commands are commands that can be invoked when another command is active.

Remarks:

There are several ways to execute the zoom command:

"E"(Extends) Zooms to display the drawing extents

"P"(Previous) Zooms to display the previous view

"W"(Window) Zooms to display an area specified by two opposite corners of a rectangular window. User must specify these two corners.

"A"(All) zooms to the drawing limits or current extents, whichever is greater.

• Zoom Scale - Show the Zoom Scale dialog. Zooms the display at a specified scale factor. For example, entering 2 doubles the apparent display size of any objects from what it would be if you were zoomed to the limits of the drawing. Entering 0.5 causes each object to be displayed at half its current size on the screen.

- Regenerate Re render the entire drawing.
- New Viewport commands Viewports are areas that display different views of your model. As you work, you can split the drawing area into one or more adjacent rectangular views known as model viewports. In large or complex drawings, displaying different views reduces the time needed to zoom or pan in a single view. Also, errors you might miss in one view may be apparent into others. ViewPorts are treated as rectangle drawing objects which display views and can be moved or resized. They can be created only a layout and not in Model space. You can also attach viewports to closed polygons (polylines, circles, ellipses, rectangles).

Object Snaps page group

OSnap	Function							
End	End Point snap							
Mid	Mid Point snap							
Center	Center snap							
Ins	Insertion Point snap							
Perp	Perpendicular To snap							
Near	Nearest snap. This one overrides all others.							
Inter	Intersection snap							
Node	Point snap							
Quad	Quadrant snap							
Tang	Tangential To snap							
AppInt	Apparent Intersection snap							
Disable	Toggle currently selected OSnap state							
All	Enable/Disable all.							

Object Snaps - OSnaps provide an easy way to pick geometric points from the drawing.

Info page group

- **Measure Distance** Measure the distance in Drawing Units(DU) between two points selected from the drawing.
- Area Measure the area of a selected object.
- ID Get the drawing ID of the selected object.

Other

While WireCAD does not currently merge any other tools with the View menu, authors of WireCAD plugins have the ability to merge their own tools onto this ribbon tab. Consult their documentation for information.

4.1.2.8 Database

No environments currently merge with this tab. This is the default view but Plugins may register additional commands.

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	Manufacturers	Cable Types			Proje	ect Signal Types	Todo List	Pack Project Database
	Equipment	Signal Types			Loca	itions	惧 Import Project Data Wizard	Pack Global Database
Equipment Library	Connectors	Pinouts	Equipment List (SysNames)	Cables Inde Grids	🗙 📕 Nam	ed Paths	# Add Multicore Cable	🛟 Synchronize Global Database
Equipmen	Global Data	base Grids			Project D	atabase Grids		Utilities

Equipment Library page group

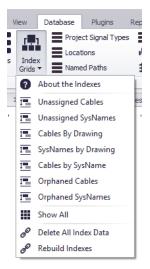
• Equipment Library - Show the global Equipment Library 418.

Global Database Grids page group

- Manufacturers Show the global Manufacturers 516 Grid.
- Equipment Show the global Equipment 517 Grid.
- **Connectors -** Show the global <u>Connectors</u> [521] Grid.
- Cable Types Show the global <u>Cable Types</u> 522 Grid.
- Default Signal Types Show the Default <u>Signal Types</u> Grid. This grid defines many default behaviors like cable color and default cable type. For more information see this topic on <u>Signal</u> <u>Types</u> 45.
- **Pinouts** Show the global <u>Pinouts</u> 524 tool.

Project Database Grids page group

- Equipment List Show the project Equipment List 532. This is the collection of all SysNamed equipment across all drawings in the project.
- Backbones Show the project Backbones grid. (ENT ONLY). This is the collection of all Backbones in the project.
- Circuits Show the project Circuits grid. (ENT ONLY). This is the collection of all Circuits in the project.
- **Cables** Show the project <u>Cables</u> grid. This is the collection of all **Cables** in the project.
- Index Grids > For more information see this topic [133]. This sub menu will show any or all of the index grids and allow you to delete and rebuild the indexes.



- Locations Show the project Locations grid. This is the collection of all Locations in the project.
- Named Paths Show the project Named Paths grid. This is the collection of all Named Paths in the project.
- Todo List Show the project Todo List.
- Import Project Data Wiz Show the project Import Data Wizard. This tool allows you to import cable and equipment data from other sources.
- Add Multicore Cable Displays the Add Multi-core Cable 450 dialog. There you select the cable type number base, etc. and build an entry in the Cables table for every core in the associated cable type marking the records available.

Utilities page group

- Pack Project Database This file base database utility will compress and reorganize your project database.
- Pack Global Database This file base database utility will compress and reorganize your global database.
- Synchronize Global Database Show the global database <u>Synchronizer</u> tool. This tool allows you to import/export/merge two global databases of either SQL,VISTA, or SQL Azure.

4.1.2.9 Plugins

This tab is dynamic. Depending on product level and installed third party or WireCAD plugins these menu items are subject to change.

									test1.pdf - WireCAD8 - ENTERPRISE - Current Project: [just a test]
PI (8)	ROJECT View	Database	Plugins	Reports	PDF Vie	ver			🔺 ? 🖶 🗆 🖉 i
Plugin Manager	Script Editor/Runner	Translation Manager		Brother P-Touch	PatchVerx	Extract Al Blocks	Fixer	DWG Diff	• WireCAD
		Plugins					CAD Tools		

Plugins page group

- Plugin Manager ... Shows the Plugin Manager 505 dialog where you can control which plugins are loaded.
- Script Editor Runner Shows the <u>Script Editor/Runner</u> of dialog. This tool allows you to create custom scripts to perform tasks. You can view/edit existing scripts that show how to do a bunch of things by browsing to the script folder in c:\users\public\wirecad\wirecad\scripts. Therein you will find many example scripts. Scripts are written in C# and the editor provides intellisense hints.
- **Translation Manager** Shows the <u>Translation Manager</u> 207. While not technically a plugin we have always shown it here so why break with tradition. All text (strings) in WireCAD are held in a dictionary. The dictionary is editable through the Translation Manager. All strings default to English if the machines current culture cannot find a translation in the dictionary. You have the ability to change the displayed messages, column headings, and all other strings.
- Batch Plot Show the Batch Plot 215 tool. This tool allows you to scan the drawings for layouts and select the layouts to print/plot in a batch. You can save/load your settings for the next time around.
- Brother P-Touch! Show the Brother P-Touch! plugin to print directly to P-Touch! printer with USB ports that support direct print. (NOTE: not all P-Touch! printers with USB ports support direct print).
- **PatchVerx** If you have installed PatchVerx on your machine this icon will be present so you can run the worlds best patchbay designation strip tool inside of WireCAD and pull data directly from your Cables table and place in on your patchbay label.

CAD Tools page group

- Extract All Blocks Extracts all blocks and writes them out as individual dwg files to the selected folder.
- Bulk Block Fixer If you want to use someone else's CAD blocks you will need to fix them so they work with WireCAD. This is the tool.
- **DWG Diff** Drawing Differencing tool. Compare two similar drawings and create three views A not B, B not A, and Common to Both. Compares geometry and drawing collections like layers, linetypes, etc.

4.1.2.10 Reports

Items on this tab are static. Whether or not the gallery displays is based on the Application Menu>Settings[User][Basic]ReportShowMode.

PROJECT View Database	Plugins Reports PDF Viewer	test1.pdf - WireCAD8 - ENTERPRI	ISE - Current Project: [just a test]		- 2× • ? # I & i
New with Wizard Generate Bill of Materials Scan Project For Discrepancies	BRADY1X1335D	BRADY75X150NO	BRADY_JET_30	BRADY_JET_31	* * *
		Reports			4

Reports page group

- New with Wizard... Create a new report using the New Report Wizard. We recommend that you find a report in the existing Reports Gallery that is close and save that as your new name then edit your changes there. You will save a bunch of time.
- Generate Bill of Materials Shows the <u>BOM generator</u> which counts equipment, cable, and connectors in the project. NOTE be sure to run this tool before you run any of the BOM reports or they will be empty.
- Scan Project for Discrepancies Scan for common problems. Shows the <u>Discrepancy Scanner</u> (501) dialog. When it finishes you can see the results in the **Project Discrepancy** list from the **Project Explorer**.
- **Reports Gallery** Lists all reports in the **%REPORTS%** support path and its subdirectories. Clicking a gallery item will load the report into a report form for preview/design/export.

4.1.2.11 Plan View and Layout Tools

Active only when the current environment is a drawing.



For more information see the <u>Plan View and Layout Tools</u> topic.

Estimating page group

• **Take Offs -** Show the <u>Take Offs</u> 465 tool. This tool assists in counting items in the drawing.

Locations page group

• Add Boundaries from Text - Add Location Boundaries will using a text entity to derive the location name. Once you select a text entity the Boundaries form is displayed allowing you to set the remainder of the properties.

Cabling page group

- **Draw Backbone ENT only.** Draw a polyline representing the backbone in the plan view space. Then assign a number, cable type, source and destination ports and add that to the database.
- **Draw Cable** Drawing a polyline representing a cable from a location boundary to another location boundary or from placed equipment to placed equipment. Cable information is then created in the Cables table.
- **Populate Cables** Automatically places arched cables from location to location as defined in the Cables table.
- **Draw Prewire Cables** Draw a polyline representing prewire cables and add the data to the Cables table marking the IO as PREWIRE. Later, you can assign cables to those PREWIRE entries.

Equipment page group

- **Populate Equipment** Automatically place **SysName**d equipment in the drawing in the **Location Boundaries** if found.
- Place Equipment Place unnamed plan view equipment in the drawing. Preferably after Location Boundaries have been defined.

4.1.2.12 Print Preview

Visible only when the active environment is a report.



Related Topics Print Preview Reports Form 555

4.1.2.13 HTML View

Visible only when the active environment is a report.

	BRADY1X133SD.rep	× - WireCAD8 - ENTER	PRISE - Current Project:	[just a test]		- 8 ×
8 PROJE	JECT View Database	Plugins Reports	Print Preview HTML	View Report Designer	Cable Data Selector	▲ ? ⊕ 🗉 🖉 i
Back Forwar	ard Home Refresh P	ind				• WireCAD

Related Topics HTML Preview Reports Form 556

4.1.2.14 Report Designer



Related Topics Report Design Form 557 A discussion on report design can be found here

4.1.2.15 Toolbox



Related Topics Report Design Toolbox Form 559

4.1.2.16 Cable Data Selector

Visible only when the active environment is a report.

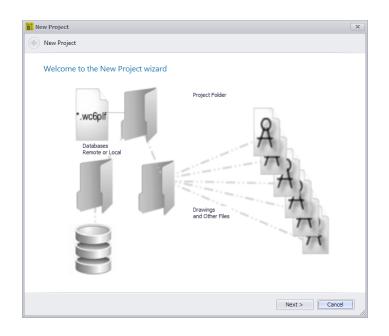
	BRAD	0Y1X133SD.repx - WireCA	D8 - ENTERPI	RISE - Current P	roject: [just a	test]		
81	PROJECT View	v Database Plugins	Reports	Print Preview	HTML View	Report Designer	Cable Data Selector	▲ ? ⊕ 🗉 🖉 i
R eload	Clear All Clear	Copies 1 +	App	ly				• WireCAD

Related Topics Cable Data Selector Form 562

4.2 Dialogs

4.2.1 Application Menu Dialogs

4.2.1.1 New Project Wizard



Application Menu > New Project... Commandline: np *Explanation*

WireCAD Projects are a loosely coupled collection of files, folders and databases. The New Project Wizard will guide you through the steps of creating a new Project with several different options for different database types.

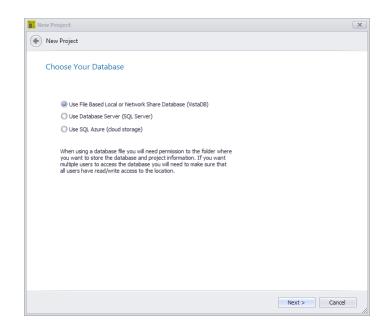
For a more extensive discussion see the <u>How To: Create a New Project</u> ⁵⁹ topic.

Related Topics Create a new Project 58

Dialog Options

• Navigate Forward, Navigate Backward





Related Topics Choose your Database Type 200

Choose Database Page Options

- Use File Based Local or Network Share Database (VISTADB) File based databases.
- Use Database Server (SQL Server) You will need the host name and log in info to proceed.
- Use SQL Azure (cloud storage) You will need a Microsoft Azure account for this option. Don't have one? Contact us. We can help.



Project Name and	Location	
Name:		
Description:		
Project Files Path:	C: \Users\Public\Documents	•
Database File Location:		
Project Lead Person:		
Project Path:		

Name, describe and locate the project.

NOTE: SQL, and SQL Azure do not like project names that start with a number.

Related Topics Default Project Location

Name, Description, Location Page Options

- Name 50 Characters max. Must not have any operating system illegal characters. We also recommend not using the ['] apostrophe.
- Description Required.
- Project Files Path Pulled from the Settings, you can change it here.
- Project Lead Person Who is in charge here.



w Project		
New Project		
Database Server	Information	
Database Host:	J	
	Enter your SQL Azure database name	
	Use Windows User Validation	
Database User:	testUsername	
Database Password:	*****	
		Test Connection

How do we log in to the SQL Server. There is a subtle distinction to be made between SQL And SQL Azure:

- SQL Server the database name will be the Project Name.
- SQL Azure the database name will be the name you gave your SQL Azure database. We will create a schema on that database with the project name as the schema name.

Related Topics

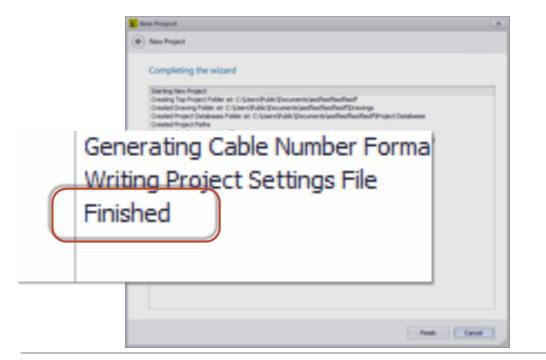
Choose your Database Type 200

Database Host Page Options

- Host Name The host name and instance of your SQL Server.
- Database Name The database name. See the explanation above.
- Use Windows Security Not valid on SQL Azure.
- User Name and Password
- Test Can we connect?

Next >

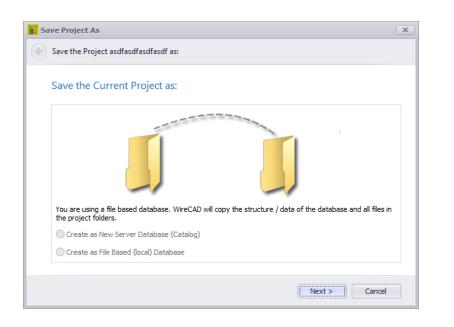
There are several pages of project settings that can also be found in the **Application Menu>Settings[Project]** dialog.



Finalization

Clicking Finish starts the project creation process. Make sure that at the end the log tells you that it finished. If not the project was not properly created and you may experience errors later.

4.2.1.2 Project Save As



Application Menu > Save Project As ... Commandline: save project as *Explanation*

This tool allows you to save a project as a new name in a new location. SQL projects may be saved as new SQL databases or file based databases. A File Based database may only be saved as a file based database.

Dialog Options

• Navigate Forward, Navigate Backward



- Create a New Server Database Only if source project is SQL.
- Create as File Based (local) Database Only if source project is SQL.

Save Project As	
Save the Project as	dfasdfasdfasdf as:
Select Path	
Save As:	asdfasdfasdf
Save Project Path:	C:\Users\Public\Documents
	○ Create New Empty Database
	Copy All Database Information
	es a copy of the project with the new name in the new path. tion, you can either copy all database data with the new name, pty database.
	Next > Cancel

Select the location and whether we copy the data from the database or create a new empty database.

4.2.1.3 Manage Security

N	New User		Search A.D.		New Group	
			Search A.D.			
L	Jser Name	+		6	Group Name	+
0	Group	•		C	Description	
	UserName	Group			GroupName	Description
Ŷ				۴		
Þ	cbh	Users		Þ	Administrators	The Great and Powerful OZ
	chris_000	Administrators			Users	Mere Mortals

Application Menu > Security Tools > Manage Security ... Commandline: security

Explanation

Administrators can manage users, groups and permissions. If WireCAD Security is enabled (see related topics). The person that enabled the Security option is the Administrator (the Great and Powerful Oz). All other users will be added automatically to the Users (mere mortals) group. Oz may:

- Change the group to which the user belongs.
- Create new groups.
- Modified group permissions.
- Create other Ozes.

So to be clear. Users belong to Groups. Groups have Permissions.

NOTE: No action is required to add a user. They simply need to open WireCAD. If their user profile does not yet exist in the WireCAD Security database it will be add to the Users group.

NOTE: Oz can proactively add users by searching the Active Directory and adding the user to the group of his choosing.

Related Topics <u>Application Setting - WireCAD Security</u> <u>Application Setup Wizard</u>

Users and Groups Tab Options

- New User Create a new user and assign to a group.
- **New Group** Create a new Group and associate Permissions set. After creating the new Group, switch to the Permissions tab and set the permissions on the collections and drawings.

• Search Active Directory - Using the standard AD search box.

Select this object type:		
Users, Groups, or Built-in securit	y principals	Object Types
rom this location:		
CBH-LAPTOP-2013		Locations
inter the object names to select	(examples):	Check Names

• User Grid - Assign the User to a Group.

Permissions Tab Options

		······				
Se	ers and Groups Permissi	ons				
Dr	ag a column header here t	o group by that column				/
	Name	AllowEdit	AllowDelete	AllowAddNew	GroupName	
P						*
•	ProjectInfo	\checkmark	\checkmark	\checkmark	Administrators	
	NamedPaths	\checkmark	\checkmark	\checkmark	Administrators	
	ProjectSettings	\checkmark	\checkmark	\checkmark	Administrators	
	ProjectRevisions	\checkmark	\checkmark	\checkmark	Administrators	
	Drawings	\checkmark	\checkmark	\checkmark	Administrators	
	DefaultDisplaySettings	\checkmark	\checkmark	\checkmark	Administrators	
	Circuits	\checkmark	\checkmark	\checkmark	Administrators	
	DrawingRevisions	\checkmark	\checkmark	\checkmark	Administrators	
	DiscrepancyReport	\checkmark	\checkmark	\checkmark	Administrators	
	RelatedProjects	\checkmark	\checkmark	\checkmark	Administrators	
	WorkOrderDetail	\checkmark	\checkmark	\checkmark	Administrators	
	181-ul-0-ul-u				A destated as a second	•
V						

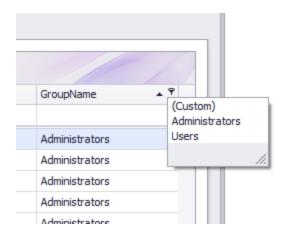
Explanation

Each data collection in WireCAD has Edit, Delete, and Create permissions. This grid enumerates each collection for each group.

Related Topics

<u>Grid Basics</u> 38

- Collection Name This is usually the table name in the database.
- Permissions. Edit, Delete, AddNew.
- GroupName You may find it handy to filter by group name then set the permissions for the group.



• Select All and Clear Selection.



4.2.1.4 Packup / Checkout

8. Che	ckout Project		x
🔶 P	Packup/CheckOut		
S	Settings		
	Check Out Project		
	Check Out Project		
	Expected Return Date:	*	
	Final Output		
	Compress Output	Include Archived Drawings in Zipped Output	
	FileName and Path:		
		Next > Cancel	

Application Menu > Check In/Out > Pack up /Check Out ... Commandline: packup

Explanation

A WireCAD project is a loosely coupled group of files, databases and settings. The global database is maintain separately from the project database, and drawings may have linked images. In order to move the project to another machine we will need to gather all of the resources used to create the project into a central location (the project folder).

The Packup / Checkout Tool performs the following functions:

- Copy a file based version of the Global Database into the Project\Project Databases folder and sync it will the SQL Server version if necessary.
- Copy all linked images to the drawings directories.
- If check-out the flag the project as read only.
- If compress the zip all the project folder items into a single zipped file with the project_name.zip

NOTE: This process can take some time on large projects.

Related Topics Moving Projects 189

Dialog Options

- **Check Out Project** Flag the Project Read Only. This is useful if the project is going out into the field for commissioning. The version that stays in the office should not be edited.
- Expected Return Date Let the people in the office know when you think you will have the project checked in.

• Compress Output - Zip it.

4.2.1.5 Unpack Project

8. Unpa	ick Project	x
🔶 Ur	nPack/Check-In	
Se	ettings	
	Path to Project to UnPack/Check in	
	Open Project Options	í I
	Open project after UnPack	
	Next > Cancel	

Application Menu > Check In/Out > Un Pack ... Commandline: unpack

Explanation

The complementary function to the Pack Up is the Un Pack. This function performs the following:

- Unzip the compressed file (if necessary).
- Sync the local Global Database with the one found in the incoming Project Databases folder.
- Open the project for use.

NOTE: This process can take some time on large projects.

Prerequisites

A project that has been Packed Up. Using the Pack Up / Check Out tool. No project can be open or the tool will not run.

Related Topics Pack Up / Check Out Moving Projects

Dialog Options

- Project Path Browse to the zipped file or the .wc6plf file.
- Open project after unpack Of course.

4.2.1.6 Check in Project

🚼 Unpa	ck Project		x
💽 UI	Pack/Check-In		
S	ettings		
	Path to Project to UnPack/Check in		
	Open Project Options		i I
	Open project after UnPack		
		Next > Cancel	

Application Menu > Check In/Out > Check In... Commandline: packup

Explanation

The complementary function to the Check Out is Check In. This function performs the following:

- Unzip the compressed file (if necessary).
- Sync the local Global Database with the one found in the incoming Project Databases folder.
- Syncs the Project Database of the incoming project with the location database.
- Overwrite all drawings with the incoming ones.
- Remove Read Only flag.

NOTE: This process can take some time on large projects.

Prerequisites

A project that has been Checked Out. Using the Pack Up / Check Out tool. The Checked Out local project must be open before this tool will run. The project names of the local and incoming projects must match or the tool will fail.

Related Topics Pack Up / Check Out 339 Moving Projects 189

Dialog Options

- Project Path Browse to the zipped file or the .wc6plf file.
- Open project after unpack Of course.

4.2.1.7 Account Info

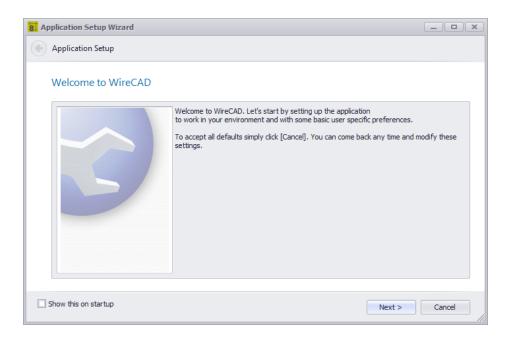
8				Edit	Account	Information		
Save	Print	X Exit	S Undo	C Refresh				
	File	4	E	dit 🔺				
Account	Name	1				ContactName		
Contact	Phone					ContactFax		
Contact	Email					AccountWebsite		
Account	Address 1							
Account	Address2							
Account	City			State			AccountPostalCode	
Account	InfoUser 1					AccountInfoUser2		
Account	InfoUser3					AccountInfoUser4		
Informat	ion:							

Application Menu > Account Info Commandline: Edit Account Info

Explanation

This dialog allows you to enter account specific data for use in reports.

4.2.1.8 Application Setup Wizard



Application Menu > Application Setup Wizard... Commandline: showappsettings

Explanation

This wizard runs once at the start of WireCAD. You can always run it again to change the settings, but most of the settings in the wizard are contained in the Settings dialog.

Dialog Options

• Navigate Forward, Navigate Backward



• Show This Again - Show this dialog again.

,	n Setup
Global D	atabase Location
cable type	AD Global Database contains information that we only want to define once. Things like manufacturers, equipment, s and connectors. it is desireable to share this information with collegues.
	mine where your global databases are going to reside. al Machine] if you are working entirely local (default single user mode)
Select [Re RECOMME Select [SQ use this se	Server) if you would like to attach to global data on a SQL Server (wan-lan multi-user) tting if you are connecting to a SQLAzure database or your own SQL Server instance.
Select [Re RECOMME Select [SQ use this se Location	NDED L Server] if you would like to attach to global data on a SQL Server (wan-lan multi-user) titing if you are connecting to a SQLAzure database or your own SQL Server instance.
Select [Re RECOMME Select [SQ use this se Location	NDED L Server] if you would like to attach to global data on a SQL Server (wan-lan multi-user) titing if you are connecting to a SQLAzure database or your own SQL Server instance. Machine
Select [Re RECOMME Select [SQ use this se Location	NDED L Server] if you would like to attach to global data on a SQL Server (wan-lan multi-user) titing if you are connecting to a SQLAzure database or your own SQL Server instance. Machine Machine Inte Network Share - NOT RECOMMENDED

Global Database Location Page Options

- Local Machine The default location is c: \users\public\WireCAD\WireCADx\WireCADGlobalEquipment.vdb3. You may rename the file in order to better organize your global data by client. See this topic on the <u>Global Database Location</u> stress.
- **Remote Network Storage** This is not recommended but is possible. Why do we do this? Well we hate to limit you. Here are the ramifications of using file based storage over a network:

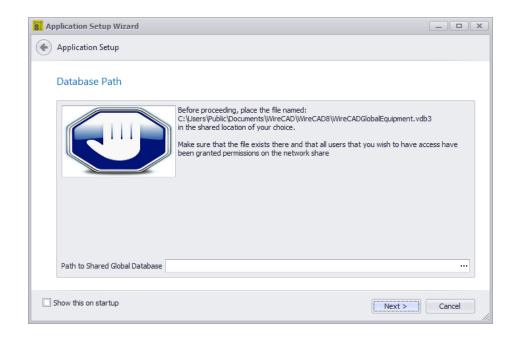
The file is not network fault tolerant like SQL Server.

Data can become locked and in some cases corrupt.

You may find yourself having to Pack (compact and repair) the database if you get locked out of

it.

• SQL Server - This is the best option for shared storage, but you lose portability.



Database Path Page Options

• Path to Shared Global Database - Show if the first selection is Remote Network Storage. Enter the Path to the WireCADGlobalEquipment.vdb3

Where is Your D	atabase	e	
Enter the database s	erver host	t name and instance.	
Oreate stand-alor	ne databa:	se	O Use existing database. Create global db using schema name
Host	localho	st	
Global Database Nam	e WireCA	ADGlobalEquipment	
Schema Name	WireCA	ADGlobalData	
Vindows Sec	urity	Database Login	
		User Name	testUsername
		Password	*****
			Test Connection

Show only if the initial selection is SQL Server.

Database Host Info Page Options

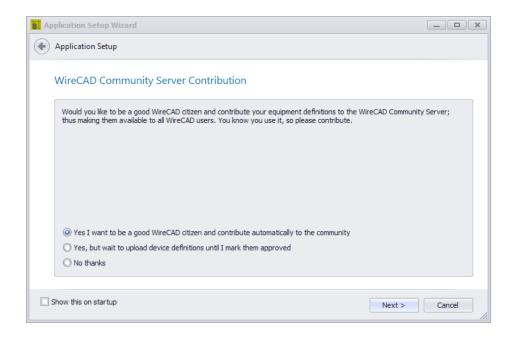
- Create stand-alone database Use this option if you are installing on an internal network.
- Use existing database. Create global db using schema name. Use this option if you are installing on a SQL Azure database. The schema name is use to separate different data structures on the same database.
- Host The hostname\instance name or IP address\instance name.
- **Global Database Name** Either the name of the existing global database or the name of the SQL Azure database on which we will create our global database schema.
- Schema Name Name this something like WireCADGlobalData.
- Use Windows Security Not available on SQL Azure.
- User Name, Password -
- Test See if we can connect.

Create empty database
Be patient.
Create Database and Add Data
Next > Cancel

Shown only if the SQL Server Option is selected.

Create Tables and Add Data Page Options

- Add default global data Create the database on the host and add the selected default data.
- Create empty database Create the database on the host with no data.
- Create Database and Add Data Do it!



WireCAD Community Server Contribution Mode Page Options

- Yes I want to contribute
- Yes but wait until I check the Approved field
- No Thanks You can still manually upload from the Equipment Library in this mode.

Application Setup Wizard	
Application Setup	
Use WireCAD Security Settings	
Select Use WireCAD Security if you want to limit access to the application.	
Administrators set up Groups and Permissions, then assign users to those Groups.	
WireCAD can use either a file based(VISTA) or server based(SQL) permissions set. Choose SQL Server based if you have up a global equipment server.	set
WireCAD uses the windows built-in or Active Directory logins so user creation is easy.	
Use WireCAD Security	
Permissions Database Location VISTA	•
Create SQL Permission Database	
Show this on startup	ncel
Next > Car	ncel

WireCAD Security is used to restrict user access to key application sections and functions. If enabled, the user launching WireCAD will be subject to the rules of the group to which they belong. The user that initiates WireCAD security will be the only Administrator and will need to assign all other user permissions. This is managed through the Manage Security [336] dialog.

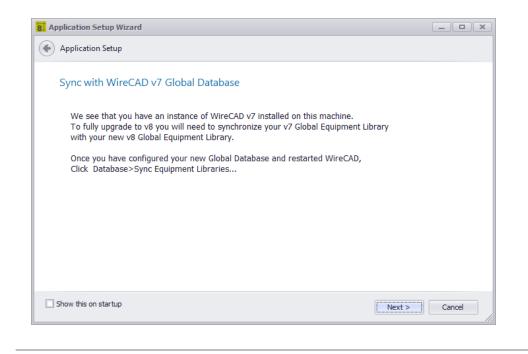
Use WireCAD Security Setting Page Options

- Use Security -
- Database Type -

VISTADB - while you can use VISTADB as the security database it is only application to this machine.

SQL - we will create the permissions database on your SQL Server using the SQL host and login information.

Create SQL Permissions Database - Do It!



We found a WireCAD previous version. In order to use the work that you have already done you will need to synchronize with the previous version Global Database. There are many variables that can be configured to locate the Global Database elsewhere. When you finish the Application Setup Wizard restart WireCAD then launch the Database >Sync Global Database tool and set the remote database to look at your previous instance.

Related Topics

Synchronizing with Another Global Database 1981 Sync Global Database dialog 4881

4.2.1.9 The Settings Dialog

Application ~	User Settings				
User ^	Customize It For You				
405	Open New Drawing Upon Application Startup				
Basic	☑ Use the New Drawing Wizard When Creating a N	ew Drawing			
Projects List	🗹 Open My Last Project When I Start WireCAD	Show Library Tips and Trick	s		
🖉 Drawing	Show the WireCAD Startup Page When I Start W	ireCAD			
Drawing (advanced)	Warn Me When I Mismatch a Signal Type While Drawing Cables				
Command Line Shortcuts		When I Double-click a Many-to-Many Cable Assign All of Them			
	Keep My Equipment Library Open After I Add Equi		ual Monitore)		
Project ^	When I Link Pointers Go Back to the Starting Dra		dar Horney		
💮 Basic	My Spacebar is my Enter Key	Ming when Finished	Futurta		
Advanced		Mousewheel Double-Click 20			
Locations	Library Multiple Port Add Leading Zero Count		0 🛊		
808	Only applies to newly created ports. This setting				
Delete Handling	I will manually refresh my Project Explorer (faste				
Project Rules	When a Drawing Opens Don't Show the Draw Ca	bles Tool Panel, I Know How to Find it.			
	Lazy load my drawings in the Project Explorer. Factors	aster but does not show all folders expan	ded.		
	Default BOM Snapshot Name {0}	Report Show Mode	ProjectExplorer 🔹		
	Automatically validate my equipment when I operation	n the Equipment List grid			
	Automatically Index Project and Draawings	Show Index Operation Proc	ress		

Application Menu > Settings Commandline: set

Explanation

The Settings dialog is comprised of the following sections:

• Application - settings that determine the behavior of WireCAD for this machine. These settings are stored in the Global Application Data folder as ApplicationSettingsXxml.

 Basic
 3561

 WireCAD Security
 3561

 Global Database Location
 3571

 Support Paths
 3561

 Organization
 3661

 Enable/Disable Plugins
 3671

 Todo List
 3621

• User - settings specific to your user profile on this machine as UserSettingsXxml.

 Basic
 364

 Projects
 List

 Drawing
 306

 Drawing
 (advanced)

 Sommand
 Line

 Enterprise
 CMS

 Expert
 Mode

 372

- Project settings specific to the current project. These settings are stored in the project folder as ProjectSettingsXxml.
 - Basic 374 Advanced 375 Locations 376 Delete Handling 377 Enterprise CMS 378 Export Settings 379 Project Rules 380 Status Behavior 381

NOTE: These are the stock basic settings panels. Third party developers may register their own settings panels. See their documentation.

Prerequisites None

Dialog Options

- Save Commit your changes and issue a SettingsChanged command to the application.
- Close Do nothing and discard your changes.
- Restore Defaults Restore the defaults of the current settings panel.

4.2.1.9.1 Application Settings

Application settings that determine the behavior of WireCAD for this machine. These settings are stored in the Global Application Data folder as ApplicationSettingsXxml.

4.2.1.9.1.1 Application Basic

Settings X
Application Application Settings Some of the basic settings and behaviors Some of the basic settings and behaviors Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Equipment Library Connection and Contribution Image: Support Paths Image: Community Library Auto-Contribution Mode Image: Support Paths Image: Community Library Auto-Contribution Mode Image: Community Library Auto-Contribution Mode Auto-ContributeMyWork Image: Community Community Library Community Library Auto-ContributeMyWork Image: Community Library Community Library Community Library Communit
Save Close Restore Defaults

Basic Panel Options

- Check for Program Updates Automatically on Startup If updates are available you will see a banner pop up in the lower right-hand corner of the screen.
- Show Application Setup Wizard on Startup This is usually unchecked except the first run of the application. You can always start the Application Setup Wizard by clicking Application Menu > Application Setup Wizard.
- Community Server Contribution How will you contribute to the WireCAD Community?
- Customer Experience Improvement Program You must opt in to the CEIP. We will then gather usage and error data. The generic data will be uploaded to our servers and aggregated so we can bring you a better application.
- Silent Plugin Load Hide all error messages on startup.
- Default Project Database Host Applies only to SQL projects. Presets the New Project Wizard.
- Use SQL Server Project Databases by Default Presets the New Project Wizard.
- Users (mere mortals) can select Project Database Mode Some organizations may wish to limit selection of project database type.

4.2.1.9.1.2 WireCAD Security

🚺 Settings	x
Application A Basic WireCAD Security Global Database Loca Support Paths Organization	WireCAD Security Using WireCAD Security limits access to program function by Users and Groups If you on to use WireCAD Security you will need to select a Security Database location. We recommend using SQL server based security databases in a multi-user environment.
User ^	NOTE: Use the File>Application Setup wizard to setup WireCAD Security Use WireCAD Security
🚱 Basic	Security Database Type VISTA 🔹
Projects List	
🌽 Drawing	
🎤 Drawing (advanced)	
Command Line Shortcuts	
Enterprise CMS	
Project ^	
	Save Close Restore Defaults

WireCAD Security Panel Options

• Use WireCAD Security - Enable Security. When enabled the WireCAD security system uses the current login to determine program access. If your user is a member of the Administrators group you will be able to control the access of other users via the Application Menu > Security > Manage Security... dialog.

n	lew User		Search A.D.	N	lew Group	
U	lser Name	*		G	roup Name	+
G	iroup			D	escription	
	User Name	Group		C	Group Name	Description
2				4		
Þ	cbh	Administrators		+	Administrators	The Great and Powerful OZ
					Users	Mere Mortals
	Record 1 of 1				Record 1 of 2	- <

• Database Type - Typically you will only use security in a multi-user environment with a SQL host, but the capability exists to use file based VistaDB databases.

4.2.1.9.1.3 Global Database Location

oplication ^	Database Co	onnection			
Basic	Custom	ize Database Type and Lo	cation		
WireCAD Security	Database Mode	VISTA			•
Global Database Loca	VISTADB Location	C: \Users\Public\Documen	ts\WireCAD\WireCAD8		
Support Patits	🥖 Global DB File Name	WireCADGlobalEquipment	t.vdb3		
Organization	SQL Server Login	Information			
genization	Host Name and In	stance localhost			
er ^	Database Name	WireCADGlobalEquipm	ent		
Basic	Use Schema	Schema Name	WireCADGlobalData		
Projects List	Vuse Windows	Security			
S Drawing	User Name	testUsername			
Drawing (advanced)	Password	*****			
Command Line Shortcuts				Test Conne	ection
Enterprise CMS					
niect ^					
oject ^					

Global Database Location Panel Options

- Database Mode VISTA/SQL. NOTE: SQL will work for SQL AZURE as well. We will need the database name and schema name.
- VISTADB Location Path to the VISTADB file that is your WireCADGlobalEquipment.vdb3 file.
- Global DB File Name Note that this is the default name given to the global database file but you may change it.
- Host Name and Instance This can be a fully qualified path, ip address, or host name.
- **Database Name** The name of the global database to connect to. This is WireCADGlobalEquipment by default but you may choose to rename it.
- Use Schema, Schema Name WireCAD supports multiple schema in the same database file. This is useful if you are using a cloud based SQL Server service that charges by the database. You can have a schema for your global database and one for each of your project databases. All contained within the same database file.
- Use Window Security Use this if you wish Windows security to manage the login. This will not work with SQL Azure.
- User Name, Password
- Test Connection Test to see if you can connect and have the appropriate privileges.

4.2.1.9.1.4 Support Paths

Application	 Support Paths 		
-0-	Where we expect to f	find things	
Basic	Blocks %BLOCKS%	C: \Users \Public \Documents \WireCAD \WireCAD8 \Blocks	
WireCAD Security	Images %IMAGES%	C:\Users\Public\Documents\WireCAD\WireCAD8\Images	
Clobal Database Loca	Documents %DOCUMENTS	% C:\Users\Public\Documents\WireCAD\WireCAD8\Documents	
Support Paths	Icons %ICONS%	C: \Users\Public\Documents\WireCAD\WireCAD8\Icons	
Organization	Template Drawings	C:\Users\Public\Documents\WireCAD\WireCAD8\TemplateDrawings	
Jser	 Reports 	C: \Users \Public \Documents \WireCAD \WireCAD8 \Reports	
	Default New Project Location	on C:\Users\Public\Documents	
 Basic Projects List Drawing 	files to be moved or	is are used as variables in equipment definition external file paths. This allows exte r reside in OS indepentant paths. A typical path looks like this: (filename.ext where %&LOCKS% will be replaced by the program with the path ab	
 Drawing (advanced) Command Line Shortcu Enterprise CMS 	uts		

Application - Support Paths Panel Options

- Block %BLOCKS% The path that will replace the %BLOCKS% variable in the equipment library.
- Images %IMAGES% The path that will replace the %IMAGES% variable in the equipment library.
- Documents %DOCUMENTS% The path that will replace the %DOCUMENTS% variable in the equipment library.
- Icons %ICONS% The path that will replace the %ICONS% variable in the equipment library.
- Template Drawings The path to the Template Drawings folder. This is the folder where Template Drawings are saved when using the File > Save As Template Drawing function is used and the folder that the New Drawing Wizard searches to fill the Templates list:

Select a Template Drawing	
(None)	· Alexandria · Alexandria · Alexandria
WCTEMPLATE_AH.dwg WCTEMPLATE_AHC.DWG	
WCTEMPLATE_ARC.DWG	
WCTEMPLATE AV.DWG	=
WCTEMPLATE_AVC.DWG	
WCTEMPLATE_B.DWG	L
WCTEMPLATE_BLANK.DWG	
WCTEMPLATE_C.DWG	
WCTEMPLATE_D.DWG WCTEMPLATE_E.DWG	

- **Reports** The path to the top reports folder. This is a recursive search and will enumerate all subfolders and files.
- Default New Project Location Presets the New Project Wizard.

1.4		
Name: Description:		
Project Files Path:	C:\Users\Public\Documents	
Database File Location	e	
Project Lead Person:		
Project Path:		

4.2.1.9.1.5 Organization

8 Settings		x			
Application ^	The settings are used in some of the plugins. For an example, see the Title Block Filler plugin				
Global Database Loca	Company Name	WireCAD			
Support Paths	Address1	1112 6th Street South			
(🎲 Organization	Address2				
User ^	City	Nampa			
Basic	State/Region	Idaho			
	Postal Code	83651			
Projects List	Country	USA			
Drawing	Phone	+1 661.253.4370			
🎤 Drawing (advanced)	Fax	+1 208.468.8797			
Command Line Shortcuts	Web Address	www.wirecad.com			
Enterprise CMS					
Project ^					
		Save Close Restore Defaults			

Application - Organization Panel Options This one's self-explanatory

4.2.1.9.1.6 Enable/Disable Plugins

9 Settings		×
Settings Application Application Application Application Basic Global Database Location Support Paths Organization Enable/Disable Plugins Todo List User Disaving Projects List Disaving Disaving Command Line Shortcuts Enterprise CMS Project	Hide Plugins that you never use to increase program startup speed Hidden Plugins (not loaded on program startup) Active Plugins Al Block Extractor.wpi Batch Plotter.wpi BrotherProuch.wpi DWG DIF.wpi PatchVerx.wpi WireCAD.Proouts.wpi VireCAD.Proouts.wpi	×
🛞 Basic 🔻	Save Close Restore Default	s

Enable/Disable Plugins Panel Options

Move items to the left-hand list to disable.

Move items to the right-hand list to enable.

This panel only works with Plugins that support the wpi manifest file. Auto-discovered Plugins cannot be disabled from here.

4.2.1.9.1.7 Todo List

8. 9	iettings			x
A	pplication ^	Enter one item per line Assignees	Todo Statuses	
	Basic WireCAD Security Global Database Loca Support Paths Organization Todo List	Fred Finistone Fred Finistone Barny Rubble Betty Rubble	 In Progress Deferred Vialing Parts Done 	*
	Iser Basic Basic Projects List Projects List Prawing Command Line Shortcuts Enterprise CMS		Todo Priorities Uke Now Man Tomorrow Some Day Whenever	*
	Ŧ		Save Close Re	store Defaults

Explanation

Sets the drop downs in the Project Todo List

Application - Todo Panel Options

- Assignees List of people to whom a task may be assigned.
- Statuses List of Todo item statuses. Modify this to suit your needs.
- Priorities List of priorities. Again, make it fit your needs.

4.2.1.9.2 User Settings

User settings specific to your user profile on this machine. The path to these settings is usually: C:\Users\<YOUR_USER_NAME>\AppData\Local\WireCAD\WireCAD9\UserSettings.xml.

Your system administrator has the ability to modify this.

You can use:

Application Menu > Frequently Used Folders > User Application Data Folder To know the path we are using.

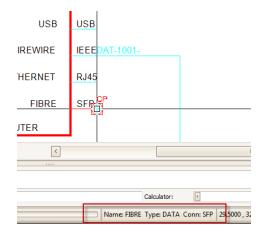
4.2.1.9.2.1 User Basic

v v v	User Settings			
lser ^	Customize It For You			
20.5	Open New Drawing Upon Application Startup			
Basic	🗹 Use the New Drawing Wizard When Creating	a New Drawing		
Projects List	Open My Last Project When I Start WireCAE	Show Library Ti	os and Tricks	
🖗 Drawing	Show the WireCAD Startup Page When I Sta	rt WireCAD		
Drawing (advanced)	Warn Me When I Mismatch a Signal Type Wh	ile Drawing Cables		
Command Line Shortcuts	When I Double-click a Many-to-Many Cable	ssian All of Them		
niert A	Keep My Equipment Library Open After I Add		Works on Dual Monitors)	
roject ^	When I Link Pointers Go Back to the Starting		<i>,</i>	
🖟 Basic	My Spacebar is my Enter Key	-	uble-Click Zooms Extents	
Advanced	Library Multiple Port Add Leading Zero Count	. Housenneer bot	0 🛊	
Locations	Only applies to newly created ports. This se	tting presets the Add Port Dialog		
Delete Handling	I will manually refresh my Project Explorer (f			
Project Rules	When a Drawing Opens Don't Show the Draw		o Find it.	
age in oject i daleo	Lazy load my drawings in the Project Explore			
	Default BOM Snapshot Name {0}		now Mode ProjectExplorer	.
	Automatically validate my equipment when I		ion node in ojecasipionen	
	Automatically Index Project and Draawings			
	Automatically Index Project and Draawings	Show trues op	erauori Progress	
		Save	Close Resto	re Defaults

These are settings for your user profile on this machine.

Basic Panel Options

- Open New Drawing Upon Application Startup Opens a blank new drawing when WireCAD starts.
- Use the New Drawing Wizard Shows the New Drawing Wizard when you click File > New. Allows the use of template drawings. If set to false, just creates a new drawing without a template.
- Open My Last Project When I Start WireCAD Behaves like earlier versions of WireCAD that opened the last project automatically on startup.
- Show Library Tips This shows the Tips and Tricks form in front of the Equipment Library.
- Show the WireCAD Startup Page
- Warn of Signal Type Mismatch When you finish drawing a cable WireCAD will check the source and destination port signal types and let you know if they don't match. You can use the new status panel to know the port type if you are confused.



- When I Double-click a Many-to-Many Cable Assign All of Them Many-to-Many cables that are set for Multiple Database Entries can either be assigned all at once by a single double-click, or if this setting is turned off a double-click will find the closest port to the cursor and assign that.
- Keep Equipment Library Open This is useful if you are using dual monitors and want to have the Equipment Library stay open on the other monitor.
- When I Link Pointers Go Back to the Starting Drawing When Finished The default Link Pointer function will leave you on the second sheet. If you set this to true it will jump you back to the first sheet.
- My Spacebar is my Enter Key This is helpful when executing command line commands.
- MouseWheel Double-click Zooms Extents
- Library Multiple Port Add Leading Zero Count
- I Will Manually Refresh the Project Explorer True to disable autorefresh on the Project Explorer. This may be helpful if your project grows to have hundreds of drawings.
- When a Drawing Opens Don't Show the Draw Cables Tool Panel
- Lazy Load my drawings in the Project Explorer True to disable recursive search of all drawing subfolders. This may be helpful if your project grows to have hundreds of drawings.
- Default BOM Snapshot Name Presets the BOM Generator. The {0} represents the current date.
- **Report Show Mode -** Where are we seeing the reports.
 - Project Explorer appends the reports tree after the project.

Reports Gallery - populates the Reports Gallery with thumbnails and descriptions from the accompanying report manifest xml files (if any).

- Automatically validate my equipment when I open the Equipment List grid Default = true but can be expensive on large projects.
- Automatically Index Project and Drawings For more information see the <u>Understanding</u> Indexes 133 topic. True will re-index the project on open and drawings on save.
- Show Index Operation Progress Displays the progress bar during index operations.

4.2.1.9.2.2 Projects List

Application ^	Most Recently Used Proj Manage your most recently used p		
🎡 Basic	Most Recently Used Projects List Count		6 🛊
MireCAD Security	FileName	FilePath	Exists
Global Database Loca	 just a test.wc6plf 	C:\Users\Public\Documents\just	\checkmark
Support Paths	WireCAD Edit Suite Project.wc6plf	C:\Users\Public\Documents\Wire	\checkmark
Organization	sql shootout nab 2014.wc6plf	C: \Users\Public\Documents\sql s	\checkmark
	WireCAD Edit Suite Project - SQL	C: \Users\Public\Documents\Wire	\checkmark
Jser ^	My First Project RITI.wc6plf	C: \Users\Public\Documents\My Fi	\checkmark
Basic	IDXTEST_AZURE.wc6plf	C: \Users\Public\Documents\IDX	\checkmark
 Projects List Drawing Drawing (advanced) Command Line Shortcuts Enterprise CMS 			
Project ^		Clear Remove Missing It	ems Remove Item

The Most Recently Used (MRU) projects list. The depth of the list is set. As soon as the list count is exceeded the oldest item is discarded.

Projects List Panel Options

- Most Recently Use Projects List Count How many items allowed in the list.
- Projects List displays the name path and whether the project can be reached.
- Clear Reset the list.
- **Remove Missing Items** Remove items that cannot be found because the path has changed or is currently unavailable.
- Remove Item Remove the selected row.

4.2.1.9.2.3 Drawing

Application ^	Drawing Environment Sett		
Basic	Set up the drawing environment to your li	ing. Other users on ti	his machine will be able to set their own settings.
MireCAD Security	Auto Save Duration (in minutes)	10 🌲	🗹 Drawing Background Follows Skin Theme
Global Database Loca	Arrow Move Nudge Distance	0.05 💲	Background Color 255, 255, 255 👻
Support Paths	Grip Color 0, 0, 255 🔹		
Organization	Grip Size 10 🗘 🥕	<u>i</u>	OSnap Color
User ^			
💮 Basic	Cross Hair Size in Pixels 2000 🗘	Pi	ick Size in Pixels 10 🗘
Projects List	t.		
Drawing Drawing (advanced)	Show Layout Tabs		Mousewheel Zoom Scale Plus20 -
Command Line Shortcuts	Show the UCS Axis		Show Rulers Width 25 🛟
Enterprise CMS	🗹 Show Paper Space Paper (Draws a "Paper	border indicating the	e selected printer paper bounds)
302 Enterprise ento	Save Drawing After Every Cable Number	Assignment	Default File Format DWG 2007 🔹
Project ^	Touchscreen Mouse Logic 🗹 Clear Sele	ction After Command	Executes

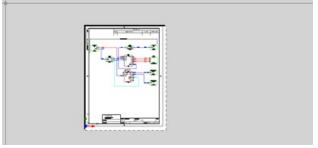
Common user specific drawing environment settings.

User - Drawing Panel Options

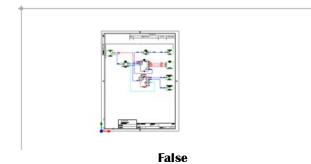
- Auto Save Duration Sets the Auto Save Duration. Auto Save saves only drawings that are modified but not currently involved in a function.
- Arrow Move Nudge Distance When nudging a selection how far do we move in the direction.
- Grip Color, Grip Size, Cross Hair Size
- Show UCS Axis Shows the UCS Axis:

1 ×

• Show Paper Space Paper - When a layout is selected, show the current page size as returned by the selected printer as a white "page."



True



- Save Drawing After Every Cable Number Assignment Setting this to true is not recommended but will speed the assignment process. You are responsible then for saving the drawing to ensure drawing/database parity.
- Touchscreen Mouse Logic
- Clear Selection After Command Executes Overrides the default behavior of leaving the selection set in tact after an operation.
- Drawing Background Follows Skin Theme, Background Color, OSnap Color
- **Pick Size** Sets the pick size in pixels. The pick determines the search window aperture when clicking the cursor.

4.2.1.9.2.4 Drawing (advanced)

Application ^	Advanced Drawing Behaviors and Properties		
	General Document Properties		A +
Basic	BackupOnSave	True	1
MireCAD Security	DisableShowPrinterPaper	False	
Global Database Loca	DisableXrefToolTips	True	
	EnableToolTips	True	
Support Paths	EnableUrls	True	
Organization	MirrorText	True	U
	ShowUCSAxis	True	
Jser ^	Global Render Properties		~
(0)	Action HighLight Quality	HighSpeed	
🚱 Basic	Action Properties	Default	
Projects List	CrossSize	10	
/ Drawing	CursorAxisColor	Black	
Drawing (advanced)	CursorPickColor	Black	
	CurveResolution	500	
Command Line Shortcuts	GridColor	Tomato	Ŧ
Enterprise CMS			
Project ^			

These are really granular controls of the render engine. It is beyond the scope of this manual to explain each we will hit some, but play with them if you are interested and see how they behave.

User - Drawing Advanced Panel Options

- BackupOnSave Saves the file with the ~. bak extension before overwriting the existing file.
- DisableShowPrinterPaper Same as Show Paper Space Paper.
- **DisableXrefTooltips** Sometimes XREF tool-tips can be annoying.
- EnableTooltips Show tool-tips or not.
- EnableURLs URLs of object will be opened.
- MirrorText Controls how the Mirror command deals with text.
- CurveResolution How many segments to a circle.
- PickAdd Sets whether a user selection action replaces the current selection or adds to it.
- SelectActionKey Set a key value used in combination with mouse-down to add or remove selected item(s) from a selection.

4.2.1.9.2.5 Command Line Shortcuts

Application ^		Command Name	Alias	ShortCut	Assembly	NameSpaceA	MethodName	
	٩							
💮 Basic	•	About	about				About	0
WireCAD Security		Activate Viewport					ActivateViewport	
Global Database Loca		AddAttribute					AddAttribute	
Support Paths		Add Attribute	AddAttribute	att			AddAttributeEx	
Organization		AddBackboneSe	abs				AddBackboneS	
		Add Cable Jumps		aj			AddCableJumps	
User ^		AddCircuit	nc				AddCircuit	
Basic		AddConnection					AddConnection	
107		AddEditPluginInfo					AddEditPluginInfo	
Projects List		AddMultiCoreCa		mc			AddMultiCoreC	
Drawing		Add Vertex		av			AddVertex	
Drawing (advanced)		Arc	Arc	a	VectorDraw.P	VectorDraw.P	ArcEx	
Command Line Shortcuts		Area		aa			Area	
Enterprise CMS	1	Assign Cable Nu		ac			AssignCableNu	
		AssignSysName		as			AssignSysName	-
Project ^	Re	aister Your Own Cor	mmand Rem	ove Command		Click to Check	c for Warnings Che	eck

User - Command Line Shortcuts Panel Options

- Register Your Own Command, Remove Command Developer function.
- Check Checks the shortcuts to see if you have any duplicates.
- Commands List You may freely edit any of the columns:

CommandName Alias ShortCut

Even though the grid allows you to edit the following fields if you are not a developer you should **NOT** edit any of the columns:

Assembly NameSpaceAndClass MethodName You will break WireCAD.

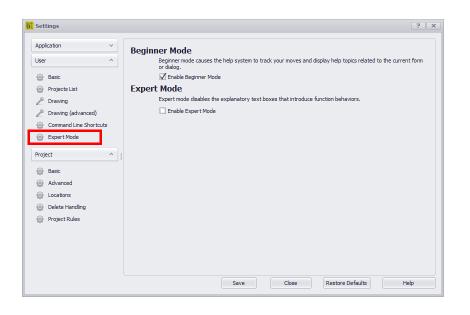
4.2.1.9.2.6 Enterprise CMS

8 Settings	x
Application ^ Basic Gibbal Database Loca Support Paths Granization	CMS User Settings Some settings specific to you ✓ Use Stock WireCAD Startup Page Default New Circuit Strand Count 2 ↓ Warn of Connector String Mismatch
User Basic Basic Draving Command Line Shortcuts Command Line Shortcuts Enterprise CMS Project	
	Save Close Restore Defaults

Enterprise CMS Panel Options

- Use Stock WireCAD Startup Page No longer active. Has no effect.
- **Default New Circuit Strand Count** When creating a new circuit, a default strand count for jumpers is created. This will change that strand count to a different value.
- Warn of Connector String Mismatch Having this box checked will allow a warning message to display anytime WireCAD detects that 2 ports being connected have a different connector type.

4.2.1.9.2.7 Expert Mode



User - Export Mode Panel Options

Explanation

Fine tune WireCAD for you.

- **Beginner Mode** tightly couples the help system with your actions in the application. The help system will display topics based on the current form or dialog.
- Enable Expert Mode Once you learn WireCAD functions, the explanatory dialogs that show before a function executes can be disabled.

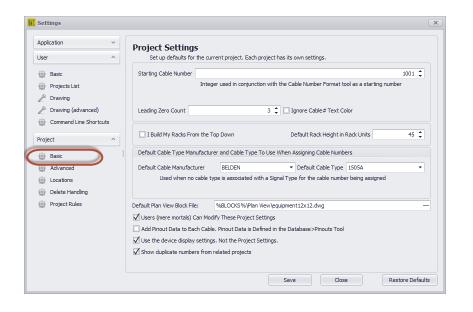
The functions that will execute without explanation are:

- Rack Builder tool.
- De-assign Cable.
- De-assign SysName.
- Reset All SysNames.
- Reset Selected SysNames.
- Reset All Cables.
- Reset Selected Cables.
- Project switching will not inform you that the current project needs to be closed.
- Equipment Library tips will not be shown.

4.2.1.9.3 Project Settings

Settings specific to the current project. These settings are stored in the project folder as ProjectSettings9.xml.

4.2.1.9.3.1 Project Basic



Basic Panel Options

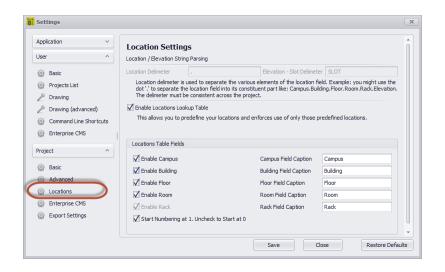
- Starting Cable Number The default starting number of ALL sequences.
- Leading Zero Count How many leading zeros in SysNames and Cable Numbers.
- Ignore Cable # Text Color Does not color the Cable Number text entities.
- I Build My Racks From the Top Down, Default Rack Height
- Default Cable Type This is the default of defaults. The Project Signal Types table can override this.
- **Default Plan View Block File** If no Plan View File is defined on the Equipment definition then this will be used by the Populate Equipment function in the Plan View Tools.
- Users (mere mortals) Can Modify These Project Settings If you can see and edit this you are a WireCAD Administrator or have not set up WireCAD Security.
- Add Pinout Data to Each Cable Allow pinout data to be attached to a cable as it is being assigned. The pinout criteria must match in order to be a candidate for inclusion in the list of available pinouts for a cable.
- Use the device display settings This setting prioritizes any Equipment Library device settings saved with the device over the settings saved for the project.
- Show duplicate numbers from related projects Only if Verbose assignments are being done.

4.2.1.9.3.2 Advanced

Project - Advanced Panel Options

- Disable Find Next Available SysName, Disable Find Next Available Cable Number The default behavior is for WireCAD to look-up the next number from the Next Numbers table, then check to see if that number is in use if so keep incrementing until an available number is found. Disabling this functionality will use the number in the Next Numbers table without checking its availability.
- Automatically Consume Prewire Cables This will use those numbers applied to the PreWire Cable instead of producing a new number.
- Strict Multi-core Assignment Enforces a policy that all cores in each end of a multi-core cable must originate from the same location.
- IP Mask
- **Maintain Relational Data** See this discussion on Understanding Indexes. Disabling this will not disable the indexing function if you call Re-index but will not attempt to initiate the data in real time.
- **Disable Cable Number Edit Dialog Mask** If you find the masking of the Edit Cable Data Cable Number textbox to be cumbersome you can disable it here. This also disables the mask on the SysName assignment dialog.

4.2.1.9.3.3 Locations



Project - Locations Panel Options

- Location Delimiter Settable on project creation only this is the delimiter that separates CAMPUS from BUILDING, BUILDING from FLOOR, etc. The default is a [.]. This will create Qualified Locations in the form of: Campus.Building.Floor.Room.Rack.
- Elevation-Slot Delimiter The delimiter that separates the elevation numeric from the slot numeric. For example: a device located in elevation 20 at slot 5 with a delimiter of a dash [-] would be typed and 20-5.
- Enable Locations Look-up If disabled the locations field may be typed into directly. This may lead to confusion or referential issues, ie; user a calls something Rack 1 and user b calls the same thing RK 01.
- Locations Table Fields Enable those that you will use and call them what you will.
- Start Numbering at 1 Only applies if you are auto generating locations.

4.2.1.9.3.4 Delete Handling

9 Settings	
Application V User A Basic Protects List	Delete Handling How to handle deleted SysNames and Cables. The default behaviour in WireCAD for deleting SysNames and Cables is to set the Available=true and place the text "Deleted" in each field. You can override that behaviour here.
Drawing Drawing Drawing (advanced) Command Line Shortcuts	Hard Delete Removes the Cable or SysName record upon delete instead of marking available.
Expert Mode Project	Deleted Text Deleted Leave this blank to not overwrite the fields in the record. The Available field will be marked true. The remainder of the record will be untouched.
 Basic Advanced Locations 	If you are having trouble deleting something you can use the [Ctr]+[De]] function to remove the item from the drawing
 Delete Handling Project Rules 	✓ Deleting Equipment Deletes ALL Connected Cables ✓ Deleting a cable on a pointer resets the cable on the other side of the pointer
	Save Close Restore Defaults Help

Delete Handling Panel Options

- Hard Delete Overrides the default behavior which is to mark a deleted cable Available=true and place the Deleted Text in key fields. Enabled this removes the row from the table upon deletion.
- **Deleted Text** If deleted and not Hard Deleting the text to place in fields. Leave empty to leave existing text in place.
- Deleting Equipment Deletes ALL Connected Cables Works with functional blocks, concept blocks, and terminals.
- Deleting a cable on a pointer resets the cable on the other side of the pointer The other sheet will be opened and updated. This can take some time.

4.2.1.9.3.5 Enterprise CMS

9. Set	tings				x
Appl	ication ~	Cable Management	System Basics		
0	Basic	Manage Status Items	is for the CMS module		
69	Projects List	Default New Backbone Status	PROPOSED		
Þ	Drawing	Default New Circuit Status	PROPOSED		•
Þ	Drawing (advanced)				
-	Command Line Shortcuts				
-	Enterprise CMS				
Proj	ect ^				
0	Basic	Backbone Number Format	B{0}	Circuit Number Format	{0}
0	Advanced		J{0}.{1}.{2}	Horizontal Cable Number Format	
0	Locations		GENERIC -		GENERIC -
-	Delete Handling	Default H Cable Manufacturer	GENERIC -	Default H Cable P/N	GENERIC -
	Project Rules Enterprise CMS				
	Export Settings				
6	Status Behaviour				
				Save Close	Restore Defaults

Enterprise CMS Panel Options

- Manage Status Items When creating a backbone, you have the ability to mark a "status" on that backbone such as "In Use", "Proposed" ETC. The Status Behavior settings panel defines the Status Items in the list.
- Backbone Number Format The variable {0} contains the next number in the Next Numbers grid for Backbones. Define the string format of the next Backbone number.
- Jumper Number Format -
 - The variable {0} contains the Circuit base number.
 - The variable {1} contains the Strand Number of the circuit for this jumper
 - The variable {2} contains the Ordinal Number of the circuit for this jumper.
 - Define the string format of the next Jumper number.
- Default Jumper Manufacturer and P/N, Default Horizontal Cable Manufacturer and P/N
- Circuit Number Format The variable {0} contains the next number in the Next Numbers grid for Circuits. Define the string format of the next Circuit number.
- Horizontal Cable Number Format The variable {0} contains the next number in the Next Numbers grid for Horizontal Cables. Define the string format of the next Horizontal Cable number.

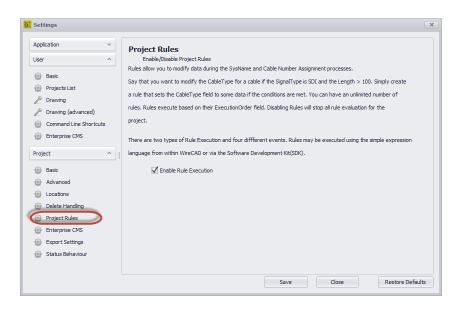
4.2.1.9.3.6 Export Settings CMS

8. Settings	x
Application ~ User ^	Ouput Settings Determines the default preview output behavior
 Basic Projects List 	□ Use Template ···· ☑ Always Ask For Filename and Path
 Drawing Drawing (advanced) 	Circuit File Name Format CKT (0) Backbone File Name Format [BB(0)
 Command Line Shortcuts Enterprise CMS 	File Format dwg ~ Path C: {Users \Public \Documents \just a test \Drawings
Project ^	✓ Create Folders For Each IT System □ Automatically Overwrite Files of Same Name
BasicAdvanced	Append Date Stamp to File Name
 Locations Enterprise CMS 	
Export Settings	Cricuit Post Process Script Badbone Post Process Script
	Save Close Restore Defaults

Project - Export Settings Panel Options

- Use Template Path to a template drawing that the output will be exported into. Your template drawings can contain any page borders or layouts and settings that you wish.
- Always Ask for FileName and Path You will be involved in the filename selection and path.
- Circuit FileName Format Sets the file name format for Circuit output. {0} = Circuit Name.
- **Backbone FileName Format** Sets the file name format for Backbone output. {0} = Backbone Number.
- File Format Presets the output format.
- Path Where do we output.
- Create Folder for Each IT Systems
- Automatically Overwrite Files of Same Name
- Append Date Stamp to FileName
- Circuit Post Process Script, Backbone Post Process Script Path to a c# file which will be run post export but pre write-to-disk. See the Post Process Scripts [286] topic for more information.

4.2.1.9.3.7 Project Rules



Project - Project Rules Panel Options

Explanation

Rules allow you to modify data during the SysName and Cable Number assignment processes. There are four events or contexts

in which rules may execute:

SysName assignment pre and post dialog show/dismiss.

Cable Number assignment pre and post dialog show/dismiss.

Related Topics <u>Project Rules</u> [233] <u>Expression Syntax</u> [235]

• Enable Rule Execution - Enable/Disable all rule and rule event execution.

4.2.1.9.3.8 Status Behaviour CMS

Application ~	A	ssigned to Circuit Co	blor		
Jser ^		SeaShell			•
💮 Basic	St	atus Item Behavio	ur		
Projects List		Context	Status Display Name	Back Ground Color	Is Blocking
🎤 Drawing	9				
🎤 Drawing (advanced)		Backbones_Status	▼ Available	255, 255, 255	
Command Line Shortcuts		Backbones_Status	DEAD	255, 165, 0	\checkmark
Enterprise CMS		Backbones_Status	In Use	245, 222, 179	\checkmark
		Backbones_Status	PROPOSED	255, 255, 255	
Project ^		Backbones_Status	Reserved	255, 192, 203	\checkmark
💮 Basic		Backbones_Status	Unknown	255, 192, 203	\checkmark
		Circuits_Status	INSERVICE	255, 255, 255	
205		Circuits_Status	PROPOSED	255, 255, 255	
Locations	*				
Delete Handling					
Project Rules					
Enterprise CMS					
Export Settings					
Status Behaviour					
	H	+++ + Record 1 of 8 →	₩ ₩ + - ▲ √ × <		+

Project - Status Behavior Panel Options

• Assigned to Circuit Color - The color to display in the Backbones grid if the record is assigned to a circuit. Here we see circuit 0232 using the backbone B000003.41.

Ck	tNo	CableType	CableType	CableNo	SrcSys	DestSys	SRCPIn	DestPin	SRCLoc	SRCE	DestLoc	DestEl	SRCConn	DestConn	MultiCore	AvailableC
																
	œ	GENERIC	48 STRAND	800003.36	AD-3	CC-R54-4	036	036	AMU.BLDG		AMU.COM		FC	SCA		
	Đ	GENERIC	48 STRAND	B00003.37	AD-3	CC-R54-4	037	037	AMU.BLDG		AMU.COM		FC	SCA		
	÷	GENERIC	48 STRAND	B00003.38	AD-3	CC-R54-4	038	038	AMU.BLDG		AMU.COM		FC	SCA		
	Ð	GENERIC	48 STRAND	B00003.39	AD-3	CC-R54-4	039	039	AMU.BLDG		AMU.COM		FC	SCA		
1		GENERALC	10 31104140	000000.40	80-0	CORDIN	040	040	AM0.0400	_	AH0.00H		FC.	308		
	0232	GENERIC	48 STRAND	B00003.41	AD-3	CC-R54-4	041	041	AMU.BLDG		AMU.COM		FC	SCA		
~	0222	CENERIC	10 070 410	000000.12	10.2	CC 051 1	0.42	0.12	MW.0100		NHU-CON		10	001	- 0	
	Œ	GENERIC	48 STRAND	B00003.43	AD-3	CC-R54-4	043	043	AMU.BLDG		AMU.COM		FC	SCA		
	æ	GENERIC	48 STRAND	B00003.44	AD-3	CC-R54-4	044	044	AMU.BLDG		AMU.COM		FC	SCA		
	0242	GENERIC	48 STRAND	B00003.45	AD-3	CC-R54-4	045	045	AMU.BLDG		AMU.COM		FC	SCA		
	0243	GENERIC	48 STRAND	B00003.46	AD-3	CC-R54-4	046	046	AMU.BLDG		AMU.COM		FC	SCA		
	œ	GENERIC	48 STRAND	B00003.47	AD-3	CC-R54-4	047	047	AMU.BLDG		AMU.COM		FC	SCA		
	Ð	GENERIC	48 STRAND	800003.48	AD-3	CC-R54-4	048	048	AMU.BLDG		AMU.COM		FC	SCA		
Ŧ	CableNol	Prefix: B00004														
	Đ	GENERIC	24 STRAND	B00004.01	AD-4	AD-5	001	001	AMU.BLDG		AMU.BLDG		ST	ST		
	Ð	GENERIC	24 STRAND	B00004.02	AD-4	AD-5	002	002	AMU.BLDG		AMU.BLDG		ST	ST		
	Ð	GENERIC	24 STRAND	B00004.03	AD-4	AD-5	003	003	AMU.BLDG		AMU.BLDG		ST	ST		
	æ	GENERIC	24 STRAND	B00004.04	AD-4	AD-5	004	004	AMU.BLDG		AMU.BLDG		ST	ST		

- **Context** Backbones_grid or Circuits_grid.
- **Display Name -** The name of our status.
- Background Color Self-explanatory.
- Is Blocking A blocking status is one that blocks operations from proceeding. For example: if we mark a backbone fiber as DEAD we would not want to use that in a Circuit. If the status item is set as Is Blocking = true then the New Circuit tool will not allow a circuit to involve that strand of fiber.

4.2.2 Drawing Dialogs

4.2.2.1 CAD Dialogs

4.2.2.1.1 New Drawing Wizard

8 New Drawing	x
New Drawing	
Select a Template Drawing	
(None) ANSI AH.dwg ANSI_A Landscape.DWG ANSI_A Portrait.DWG ANSI_B.DWG ANSI_C.DWG ANSI_D.DWG ANSI_D.DWG BLANC.DWG BLANC.DWG ISO_A11 Portrait.dwn	
🗹 Show This Again	Next > Cancel

Use Model Space Boundaries	
	Use Model Space Boundaries Model Space Text Height 25 ÷ Printed Output Text Height 4 ÷ Color ByLayer Note: If you do not create boundaries here you can use the Format>Model Space Boundaries control

Drawing > File > New Commandline: nd

Explanation

Create a new drawing for the project somewhere in the project\drawings\ folder tree.

- Select a template drawing. Template drawings are drawings that are placed in the Template Drawings <u>Support Path</u> [336]. They typically contain layouts and page borders, but may also be populated with barebones systems.
- Set whether to display Model Space Boundaries. These are bounding rectangles based on a scale factor of the Model Space text height used and the desired output text height of the viewport.

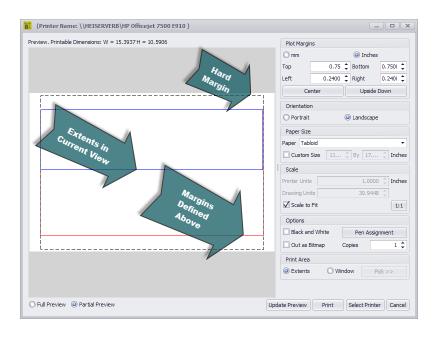
Related Topics

How To: Create a New Drawing 64 Model Space Boundaries 398

Dialog Options

- **Template Drawings List** Drawings placed in the %TEMPLATEDRAWINGS% support path. Any drawing is a candidate for saving as a template.
- **Model Space Boundaries** Your selected template may already have Model Space Boundaries in which case it is unnecessary to include them.

4.2.2.1.2 Print Preview



Drawing > File > Print Preview [Cntrl]+[P] Commandline: print

Dialog Options

• Selected Printer - Make sure that you select a printer first.



- **Plot Margins** Set the unit of measure and the Top, Bottom, Left and Right margins. NOTE: the printer driver will return the hard margins of the printer. These are represented by the black dashed line in the Partial Preview mode. Setting the margins less than the hard margin values will have no effect.
- Center Adjusts the left and top margins to center the entities in the given space.
- Upside Down Rotate the output to the plotter.
- Orientation Portrait/Landscape.
- Paper Size
- Scale Numerical scaling of the entities to the paper.
- Scale to Fit Fit the entities to the paper.
- 1:1 Scale 1:1.
- Black and White
- Out as Bitmap Render to a bitmap then output that. Has different effect on quality depending on printer/plotter.
- Copies

- **Pen Assignment** Shows the Pen Assignment dialog. You can assign a different line thickness to each of the 255 indexed colors.
- Print Area Pick a window or print the extents.
- Preview Mode Full preview or partial view to show margins.
- Update Preview Refresh the preview.
- Print
- Select Printer
- Cancel

4.2.2.1.3 PDF Export

e (Printer Name: test1.p	odf) ×
	Plot Margins ● mm inches Top: 25.4000 Botom: 25.4000 Left: 0.0000 Right: 0.0000 Upside-Down Center To Paper Orientation Potrat Landscape Number of Copies : 1 € Paper Tabloid (11x 17 in) ✓ Custom 279.40 by 431.80 mm Scale Printer Units: 1 mm Drawing Units: 1.10579 ✓ Scale to Fit Output Options Scale to Fit Output Options Ignore gradent background color Print Area © Extents Window % Pick
Preview Options Partial I Full Jupdate Save to file Save to	o file 📀 Exit

Drawing > File > PDF Export Commandline: pdf

Dialog Options

• Selected Printer - Make sure that you select a printer first.



- Plot Margins Set the unit of measure and the Top, Bottom, Left and Right margins. NOTE: the printer driver will return the hard margins of the printer. These are represented by the black dashed line in the Partial Preview mode. Setting the margins less than the hard margin values will have no effect.
- Center Adjusts the left and top margins to center the entities in the given space.
- Upside Down Rotate the output to the plotter.
- Orientation Portrait/Landscape.
- Paper Size
- Scale Numerical scaling of the entities to the paper.
- Scale to Fit Fit the entities to the paper.
- Black and White
- Out as Bitmap Render to a bitmap then output that. Has different effect on quality depending on printer/plotter.
- Copies
- Pen Assignment Shows the Pen Assignment dialog. You can assign a different line thickness to each of the 255 indexed colors.

- Print Area Pick a window or print the extents.
- Preview Mode Full preview or partial view to show margins.
- Update Preview Refresh the preview.
- Save to File
- Select Printer
- Cancel

4.2.2.1.4 Export to Visio

age Size Letter W:8.5 H: 11	▼ Landscape
Output File Name C:\Users\Public\Documents\just a	test\Drawings\test1.vsd ···· Overwrite File if Exist
Scale	Cable Routing
Scale to fit Visio page	 Allow Visio to route cables
Model Space Extents: 477.4800 , 129.3715 Scale Factor X: 1.0000 Y: 1.0000	O Attempt to keep WireCAD routes
Progress	
	Steps
	Process drawing layers
	Processing all non-cable geometry
	Processing cables

Drawing > File > Export to Visio Commandline: visio

Explanation

The WireCAD to Visio converter is an intelligent converter. It creates active working Visio drawings from you WireCAD drawings. What this means is that it is not just a dumb geometric import but rather entities are examined and functioning Visio entities are created. Cables in WireCAD become Visio Connectors allowing movement of blocks while keeping the wires attached.

Dialog Options

- Page Size Set the Visio page size.
- Output File Name
- Landscape
- Overwrite File if Exists
- Scale to Fit Fit the WireCAD dwg entities onto the selected page size.
- Scale Factor Manually scale the WireCAD entities to the Visio page size.
- **Cable Routing** Here is the magic. You can either let Vision route the cables or you can attempt to keep the appearance of your WireCAD routes.
- Convert Do IT!

4.2.2.1.5 Layers

ument Tree		New I	.ayer 🔞 Del	ete Lay	er 🔮	Set C	Current	New Lay	er Name		
Main Drawing [test1]		Status	Name	On	Fro	Lock	PenColo	or .	Line Type	Line Weight	
	9					af.					
	,		0	0		nî.		Foregro	Continuous	 0.00 mm	
			CABLES	0		if.		Foregro	Continuous	 0.00 mm	
			COMMENTS	0		af i		Foregro	Continuous	 0.00 mm	
			CONNECTORS	0		nî.		Foregro	Continuous	 0.00 mm	
			EQUIPMENT	9		nî.		Foregro	Continuous	 0.00 mm	
			LOCATION	9		nf.		Foregro	Continuous	 0.00 mm	
			MANUFACTU	. 🦿		nf.		Foregro	Continuous	 0.00 mm	
	1		SYSNAMES	9		nf.		Foregro	Continuous	 0.00 mm	
			ALIAS	9		nf.		Foregro	Continuous	 0.00 mm	
			PINNAME	9		nf.		Foregro	Continuous	 Default	_
			WC_USER1	9		nî.		Foregro	Continuous	 Default	
			WC_USER2	9		nî.		Foregro	Continuous	 Default	
			WC_USER3	9		nî.		Foregro	Continuous	 Default	
			WC_USER4	9		nî.		Foregro	Continuous	 Default	
			AES	9		nî.		Foregro	Continuous	 Default	
			AES_PIN	9		nî.		Foregro	Continuous	 Default	
			AES_NO	9		nî.		Foregro	Continuous	 Default	
			WC_DESCRI	9		nî.		Foregro	Continuous	 Default	
			WC_IPAddress			nf (Foregro	Continuous	 Default	

Drawing > Drawing > Layers Commandline: lay

Explanation

The Layers dialog controls the document Layers collection.

A Layer is the equivalent of the overlay used in paper-based drafting. It is the primary organizational tool in the WireCAD CAD space, and you can use it to group information by function and to enforce linetype, color, and other standards.

Organizing Layers and the objects on Layers make it easier to manage the information in your Drawings. When you put one layer over another the result is the complete drawing.

Having kindred objects on the same layer it is very helpful in order to organize the drawing.

When you begin a new drawing, WireCAD creates a special layer named 0. By default, layer 0 is assigned color number 7 (white or black depending upon your background color), the CONTINUOUS linetype and a lineweight of Default (the default setting is .01 inch or .25 mm). Layer 0 cannot be deleted or renamed.

All new objects are added to the active layer if no layer is specified.

Using the Layers editor you can Freeze (Hide), Thaw (Show) and Lock layers.

By controlling whether a Layer's state is Thaw or Frozen you can change the appearance of your drawing to display only the information on the Layers that are visible. Freezing unused Layers will help the performance of WireCAD.

Dialog Options

• **Document Tree** - Lists the document's external references. By selecting an item in the document tree you can control the layers of XREF drawings within the current drawing.

- New Layer
- Delete Layer Deletes the selected layer as long as it is not the current layer or layer 0.
- Set Current Set's the current layer. All entities added to the drawing are added to the current layer.
- Status The one and only current layer.
- Name
- On Is it visible.
- Frozen Is it visible. The difference between Thawed/Frozen and On/Off is a very subtle distinction. Turning a layer off using the ON/OFF setting makes the objects on that layer hidden, but these objects will still be considered part of the drawing. For example, objects that have been turned off are still selectable in the drawing. Selecting it directly on screen of course still isn't possible, as you've nothing to click on. But other ways of selecting objects will still pick it up try a SELECTALL for example, and your objects that are turned off will be selected. Frozen layers on the other hand are completely off. They are not considered part of the drawing at all, and are therefore not selectable.
- Lock Make the layer unselectable.
- **Pen Color** Set the pen color for the layer. Only entities that have their PenColor property set to ByLayer will receive this value.
- Line Type Set the Line Type for the layer. Only entities that have their Line Type property set to ByLayer will receive this value.
- Line Weight Set the Line Weight for the layer. Only entities that have their Line Weight property set to ByLayer will receive this value.
- OK
- Cancel

4.2.2.1.6 Layouts

Set Current
New
Remove
Rename
Сору
Move Up
Move Down
Exit

Drawing > Drawing > Layouts Commandline: layouts

Explanation

A Layout is used to compose or lay out your model drawing for printing. A layout may consist of a title block, one or more viewports, and annotations. As you create a layout, you can design floating Viewport configurations to visualize different details in your drawing.

A layout is a paper space environment that simulates a sheet of paper. In a layout, you can create and position viewport objects, and you can add a title block or other geometry. You can create multiple layouts in a drawing to display various views. Each layout displays the drawing as it will be printed on the sheet of paper.

Typically, when you begin designing a layout environment, you step through the following process:

- 1. Create a model drawing.
- 2. Activate or create a layout.
- 3. Insert a title block.
- 4. Create floating viewports and position them in the layout.
- 5. Set the view scale of the floating viewports.
- 6. Print your layout.

Dialog Options

- Layout List
- Set Current Set the selected item to be the current view.
- New, Remove, Rename
- Copy Copy all entities from the selected layout to a new layout with the name of your choosing.
- Move Up/Down Reorder the list.

4.2.2.1.7 Point Styles

nt Style Format	
Point Properties	
Dot None Cross X Mark Line	Point Size: 0.2500 🗘 Units
Add Circle	Relative to Screen
Add Square	Absolute Units
	OK Cancel

Drawing > Drawing > Point Styles Commandline: pointstyles

Explanation

All point entities inserted into the drawings space will render based on the settings here. NOTE: if you are using the Rack Builder tool WireCAD uses point entities to generate the positioning grids and sets this value programmatically.

4.2.2.1.8 Text Styles



Drawing > Drawing > Text Styles Commandline: ts

Explanation

TextStyle is a named, saved collection of settings that determines the appearance of text strings.

You can create your own text styles which can have specific fonts and text height. You can also specify if the text will be underlined, bold etc.

There is no limit to the number of text styles you can create in your drawing.

The active text style determines the appearance of new text created in the drawing. StyleName of text object will get the value of ActiveTextStyle property.

When you enter text, it uses the current text style, which sets the font, size, and other text characteristics. If you want to create text using a different text style, you can make another text style active.

Dialog Options

- Style Name, Add, Rename, Delete
- Font Set the font family of the Text Style.
- Style Style attributes.
- Preview, Preview Text Edit Preview of Text Style applied to the Preview Text Edit.
- Advance Settings The advance tab displays a property grid with all of the basic settings and a few more.
- CodePage Sets the character set used to display text.
- DrawOutline -
- Flag LeftToRight, Backwards, UpsideDown, etc.
- ObliqueAngle in degrees.
- WidthFactor Value used to stretch text by changing its width.

4.2.2.1.9 Dimension Styles

andard	🝷 🕂 New 😒 Rename 🔀 De	lete
Collections	,	
XProperties	0 Items	
Misc	/	
ArrowBlock	VDDIM_DEFAULT	
ArrowSize	0.2000	,
DecimalPrecision	4	
DiameterSymbol	D	
DimAdec	0	
DimAunit	au_Decdegrees	4.00
DimaZin	None	4.0000
DimLineColor	ByBlock	5: kg
DimLunit	lu_Decimal	D1.9404
DimTm	0.0000	$ \langle \cdot \rangle \rangle \rangle \rangle \langle \cdot \rangle \rangle \rangle \rangle \langle \cdot \rangle \rangle \rangle \langle \cdot \rangle \rangle \langle \cdot \rangle \rangle \langle \cdot \rangle \rangle \langle \cdot \rangle \langle \cdot \rangle \rangle \langle \cdot \rangle \langle \cdot \rangle \langle \cdot \rangle \langle \cdot \rangle \rangle \langle \cdot \rangle $
DimTol	False	
DimTp	0.0000	
DimZin	Feet	
ExtLineColor	ByLayer	
ExtLineDist1	0.2000	
ExtLineDist2	0.0500	
Ext in a Visible	Тицо	

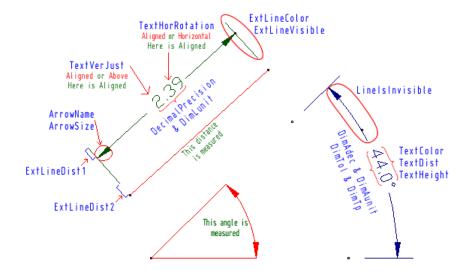
Drawing > Drawing > Dimension Styles Commandline: dimstyles

Explanation

A **Dimension Style** is a group of dimension settings that determines the appearance of a dimension . The active **Dimension Style** determines the appearance of new dimensions created in the drawing. To change the style of an existing dimension, use the StyleName property found on the dimension. When you create a dimension, the current dimension style is associated with that dimension. The dimension retains this dimension style unless you apply a new dimension style to it.

Dialog Options

- Style Name, Add, Rename, Delete
- Preview Pane Displays the results of the current settings.
- Settings -



4.2.2.1.10 Model Space Boundaries

Model Space Boundaries			x
	Unit of measure 1/100 DU or Printer Unit Layout Text Height that you used in the Model Space Height of the text that you want to print out Color Model space boundaries provide guidelines for A rectangle will be placed in the Model Space in O	4 ByLayer the selected layout's viepor dicating the bounds	 ▼ ▲ ▼ ▲ ▼ Tts.

Drawing > Drawing > Model Space Boundaries Commandline: bo

Explanation

It's a big model space in there. We can, if we are not careful, create a drawing that is so big that it can't be effectively printed or plotted. In order to have some Idea of where the fences are WireCAD can place boundaries in the model space. The boundary is created from the viewport. We use the text height as the terms for our equation. We do this because a drawing is considered readable if we can read the text. If we can't read the text the drawing becomes useless.

Each boundary will be placed on its own layer an named bound_layout_name where layout_name is replaced with the name of the layout.

- Layout Select the layout from which we will create the boundary.
- Text Height that you used in Model Space The default is .25 DU or as given in 1/100th of a Drawing Unit: 25.
- Height of the text that you want to print Here we want the printed output height in 1/100th of a printer unit.
- Color

4.2.2.1.11 Groups

āroups			X	c	
Ignore Groups					
Name	Description	Selectable	Item Count		
e0f79e03-b53	9-4feb-a7 Two servers	\checkmark	2		
		Edit Entities Apply Pr	operties Delete		
Group Properties	s				E
Name: e0	f79e03-b539-4feb-a783-b3f0b115274b				
Description: Tw	/o servers			╘╼╴┙	- <u></u>
Selectable	New				
			Close		

Drawing > Drawing > Groups Commandline: formatgroups

Explanation

Create groups of entities in order to better organize your drawings. Groups can be named and described as well as disabled and edited later.

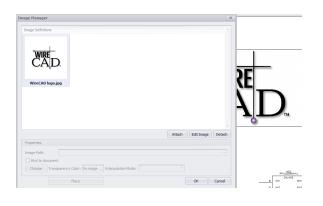
To create a Group select some entities and right-click then click Group

_	=		
Ξ	<u> </u>		
		Done	
		Repeat Command:	FormatGroups
		Modify	۰.
Г		View	•
L	۶	Сору	
	•>	Move	
		Rectangular Array	
	T	Offset	
		Select All	Ctrl+A
	S	Undo ZOOM	Ctrl+Z
	ÌΪ.	Group	
	••••	UnGroup	
	*	Add to Favorites	

- Ignore Groups Disable grouping.
- Name The default Group name will be a GUID. You can rename it if you like.
- Description
- **Selectable** Is the group selectable as a group. If selectable = true then when one object in the group is selected all objects are selected.
- Item Count
- Edit Entities Add or remove entities to the group.

- Apply Properties Send the value of the Group Properties fields to the group.
- Delete Deleting the Group does not delete the entities.
- New New from the Group Properties.

4.2.2.1.12 Images



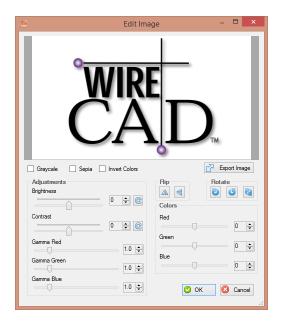
Drawing > Drawing > Images Commandline: formatimages

Explanation

Embed images in the drawing as well as to edit the properties of those images. The document now contains and Images collection from which images may be inherited throughout the drawing. Using the Images collection you may now either link or embed an image.

- Images Gallery
- Attach Browse to an image file to attach to the document.
- Edit Image Display the Image Editor 402 dialog for the selected image.
- Detach Remove the selected image if no instances exist in the drawing.
- Image Path Path to the linked file.
- Bind to Document Check this box to embed the image in the document.
- Choose Transparency Color
- Place Place an instance of the image in the drawing space.

4.2.2.1.13 Image Editor



Double-click an Image Commandline: none

Explanation

Image editor. You are editing the Image Definition of the document images collection not the instance. All instances will follow the definition.

4.2.2.1.14 Rectangular Array

ectangular Array	
Row/Columns:	Spacing:
Rows = : 32. ↓ Columns : 1 ↓	Row Spacing: -1 🛟 Column Spacing: 0 🛟 Pick >>
	OK Cancel

Drawing > Drawing > Rectangular Array Commandline: ar

Explanation

Creates multiple copies of objects in a pattern.

With the rectangular array you can create an array defined by a number of rows and columns of copies of the selected object.

First you have to select the objects. Then you have to define number of rows and number of columns of the rectangle, the distance between rows and the distance between columns.

- Rows The number of rows in the array including the source elements.
- Columns The number of columns in the array including the source elements.
- Row Spacing Row spacing in DU.
- Column Spacing Column spacing in DU.
- Pick >> Momentarily dismiss this dialog so you can pick the spacing out of the drawing.

4.2.2.1.15 Purge

urge	
Items Not Used in Document(121 items)	Collections Colle
	Purge Cancel

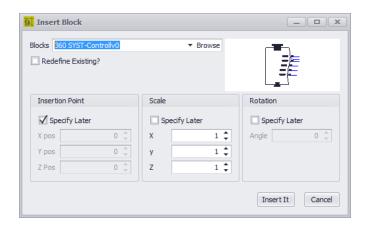
Drawing > File > Purge Commandline: purge

Explanation

Remove unused entities from the drawing. Only unused entities and object appear here. For an item to be purgable it must not appear in any drawing space or by used by another other entity or object.

- Collection Tree The document collections.
- Collection to Purge The collections to purge.

4.2.2.1.16 Inserts Dialog



Drawing > CAD Tools > Insert Block into Drawing Commandline: insert

Explanation

Insert blocks in to the drawing. This is the collection of Blocks in the drawing. You may also browse to any .dwg file and insert it into the file.

Dialog Options

- Blocks Select an existing block or browse to a dwg file and add it to the drawing.
- Preview -



The selected block

• Insertion Point, Scale, Rotation - Pick here or on the drawing.

4.2.2.1.17 XREF Manager

	Detach	Reload	Bind	Unload	
Reference N	ame	File Name			

Drawing > CAD Tools > XREF Manager Commandline: xref

Explanation

Manage externally referenced drawings. These are drawings that are visible in the current Model space but maintained in separate files. They are linked here until action is taken to bind them to the current drawing.

Dialog Options

• Attach - Browse to the file. After which you will be presented with the standard Insert dialog to position the incoming file on the screen.

ocks 360 SYST		▼ Bro	owse	
Redefine Exis	ting?			
Insertion Point		Scale		Rotation
Specify Lat	er	Specify Later		Specify Later
X pos	0 ‡	x	1 🗘	Angle 0 🌲
Y pos	0 ‡	У	1 🗘	
Z Pos	0 🐥	z	1 🗘	
Z Pos	0 ‡	Z	1 🗘	

- Detach Remove the XREF.
- **Reload** Get any changes to the XREF file and display them.
- Bind Make it a Block in this drawing file.
- Unload Get rid of it.

4.2.2.1.18 Swap Equipment

utch From: SRVR-11 @ Li nufacturer 3COMM	ocation.Elevation-[360 SYSTEMS-Imag			kj Jipment Name 2928-SFP	
	Outpoine Toronto	· · ·			Incoming Only the
Incoming Inputs	Outgoing Inputs		Ŀ	Outgoing Outputs	Incoming Outputs
	AUD - MXLR - AUD		•	SDI - BNC - SDI	
	AES 1,2 - MXLR - AES 1,2	_		AUD - FXLR - AUD	
	GENLOCK - BNC - VID			ETHERNET - RJ45 - ETHERNET	
	AUD-01 - MXLR - AUD			AES - FXLR - AES	
	RS-422 - 9DMale - CNTL			AUD-01 - FXLR - AUD	
	VIDEO - BNC - VID			MOUSE - PS-2 - DATA	
	AES 3,4zdfa - MXLR - AES			VIDEO.01 - BNC - VID	
	SDI - BNC - SDI	1		VIDEO.03 - BNC - VID	
	SDI-001 - BNC - SDI			AES 3,4 - FXLR - AES	
	SDI-002 - BNC - SDI			VIDEO.02 - BNC - VID	
	SDI-003 - BNC - SDI			SDI.03 - BNC - SDI	
	SDI-004 - BNC - SDI			KB - PS-2 - DATA	
	HD SDI - RJ45 - HD SDI			VGA - 15D HD - VGA	
				SDI.01 - BNC - SDI	
				SDI-001 - BNC - SDI	
			F	SDI-002 - BNC - SDI	

Context Menu with Equipment Insert Selected>Equipment Functions>Swap Equipment Default command line shortcut: none

The Swap Equipment function allows you to swap Manufacturer, Model, and port data on an existing functional block or concept block.

Applies To:

Functional Blocks Concept (High Detail) Blocks.

Used For:

Switching from one make/model to another.

- Manufacturer Select the Manufacturer to replace the outgoing device with.
- Equipment Name Select the Equipment Name / Model / PN to replace the outgoing device with.
- Inputs grid, Outputs grid Select the ports to replace.
- Find Matches Matches incoming ports to outgoing ports.
- OK Do it!

4.2.2.1.19 Edit Attributes

liting [EVERTZ-7720ADv4] A	Value
CP_OUT-1	AESO1 B AES
ОЛТРИТ-1	AESO1
OUTCONN-1	B
CP OUT-2	AES02 B AES
ОЛТРИТ-2	AES02
OUTCONN-2	ACSU2 B
SysName	DMBDR-01
Location	109.1.1-1
Manufacturer	109.1.1-1 EVERTZ
	EVER12 7720AD
EquipmentName	
7 4100	SDI-AES DE-EMBEDDER
Description	SDI De-Embedder
USER 1	
USER2	
USER3	
USER4	
IPAddress	IPAddress
SubnetMask	SubnetMask
CreatedWith	WireCAD7
Read Only EquipID	6714cf2d-4754-4346-9e99-e87bdb89cca6

CAD Tools > Edit Attributes

Default command line shortcut: EditAttributes

If an insert has Attributes they can be edited using this tool.

Be careful using this on WireCAD generated blocks as there is usually a tool that will update the attributes and the database concurrently.

Applies To:

Standard CAD Blocks.

Used For:

Editing text in a Insert entity.

- Tag Descriptive text.
- Value The data that renders as text in the insert.

4.2.2.1.20 Add Attribute Definition

🗕 Add Attribute	2		? X
Tag:		Properties	
Value:		Height:	1.0000 🗘
Insertion Point		Rotation:	0.0000 -
Х:	0 🗘	Horizontal Justify:	Left 🔹
Y:	0 🜲	Vertical Justify:	Baseline 🔻
Z:	0 🜲	Style:	Standard 🔹
		Invisible	
	Pick	C Locked Position	I
			OK Cancel

CAD Tools > Create Attribute Definitions

Default command line shortcut: none

Used to create an Attribute Definition. Attributes exist in two states.

- 1. Before a block is created an Attribute is referred to as an Attribute Definition or AttribDef.
- 2. After a block is created with and AttribDef it becomes an Attribute.
- 3. AttribDefs are editable and easily modified. Once added to a block they are harder to change.

Blocks do not limit the number of AttribDefs.

Applies To:

Standard CAD Blocks.

Used For:

Creating editable text in a Insert entity.

- Tag Descriptive text. This is what renders when not included in a block.
- Value The data that renders as text in the insert.

4.2.2.1.21 X Properties Grid

Type	Name	Value
STRING	Entity_Type	EquipmentBlock
STRING	DB_Ref_1	
STRING	DB_Ref_2	
STRING	DB_Ref_3	
STRING	DB_Ref_4	BodyColor ~0;BodyPenWidth~10;BodyWidth~500;BottomBulgeFactor~15
STRING	Assoc	
STRING	SRC	
STRING	DST	
STRING	WireCADVersion	WireCAD7

Not directly callable.

Default command line shortcut: none

This dialog allows you to add edit and delete extended properties on an entity. This is generally done in code.

This dialog can be shown by clicking the [...] button on the **XProperties** row of the drawing Properties Tool Panel.

Dra	wing Properties		0	щ	х
12	🖭 🧧 🔍				
vd	Insert YAMAHA-O2Rv1				•
	Collections		_	~	*
C	XProperties	9 Items		_	
	Geometry			^	
	ExtrusionVector	0.0000,0.0000	,1.00	00	
	InsertionPoint	19.2826,40.49	21,0.	0	

We recommend that you not edit any of this data.

Applies To: All entities.

- Type Variable type.
- Name Descriptive text.
- Value The data.
- Add, Edit Delete obvious.

4.2.2.1.22 Edit X Properties

9 Exte	nded Property (XProperty)	X S
Type:	String	•
Name:	Entity_Type	
Prope	rty Value	
Value	: EquipmentBlock	
X:		0 🌲
Y:		0 🌲
Z:		0 🌲
	Update	Cancel

Not directly callable.

Default command line shortcut: none

This dialog allows you to edit existing extended properties on an entity. This is generally done in code. This dialog can be shown by clicking the **[Edit]** button on the **Extended Properties** [410] grid.

We recommend that you not edit any of this data.

Applies To:

Select Extended Property of the selected item(s).

- **Type** Variable type.
- Name Descriptive text.
- Value The data.
- X, Y, Z If the data one of the point types.

4.2.2.1.23 Text Editor

G Edit Text	? X
· · · · · · · · · · · · · · · · · · ·	
Text Style WC_CABLENO \checkmark Text Height 0.25 \clubsuit ByLayer \checkmark B I U S \bigcirc 0 \checkmark	-
Some Text to Edit	
Accept Can	cel

Double-click text entity

Default command line shortcut: none

This dialog allows you to edit existing single line text entities.

Applies To: Selected Single Line Text entity

Related Topics <u>Text Styles</u> জেট Layers জিলী

- Save Write this out to an rtf file.
- Quick Print Send to default printer.
- Print Select the printer then print.
- Preview Preview the printed output before printing.
- Undo, Redo
- Justification
- Text Style Text entities do not have fonts but rather document based TextStyles. The TextStyle associates the font.
- Text Height In drawing units.
- Layer The Layer on which the entity resides.
- Bold, Italics, Underline, Strikethrough
- Rotation Angle in degrees.

4.2.2.1.24 Sync Insert Decision

E SPK-01 109.1 SPK-01 KRK	6000s		User 1	User2	User3	User4	
					USEI J	User4	
Sysname Location Alias Manu	nufacturer Equipment	IP Address Subnet	t Mask User 1	User2	User3	User4	
SPK-01 109.1 SPK-01 KRK			4654	User2	User3	User4	

Right-click a Functional Block then Equipment > Sync with Database Default command line shortcut: **none**

If the block information does not match the database information you are presented with this choice. Yellow background cells represent fields that do not match. You must choose which data to use.

Applies To: Selected Functional or Concept Block.

Related Topics None

4.2.2.1.25 Validate Deletion



Delete or Erase

Default command line shortcut: e

When deleting an entity in the **Applies To** list you will be presented with this decision. This indicates that the entity you are deleting has an matching record in one of the databases. It is your choice as to whether to keep or delete the associated database record.

Example

Assume you have a device called SRVR-01. Further that SRVR-01 has appearances in the video drawing and the audio drawing.

When you decide to delete the instance that is in the video drawing, you will be shown this dialog and need to decide whether to delete the database entry as well.

The appropriate response in this case is not to delete the database record since we still have the instance in the audio drawing.

Applies To: Blocks with SysNames Terminals with SysNames Cables with Cable Numbers.

Related Topics Delete Handling Setting 377

4.2.2.1.26 Zoom Scale

Zoom Scale	x
Relative to active view	or viewport
Scale Factor:	1. 🗘
ОК	Cancel
	Cancer

View > Zoom Scale

Default command line shortcut: ZoomScale

This function is used to numerically zoom the currently active viewport to the underlying Model Space.

Usage

- 1. Open a drawing.
- 2. Switch to a layout with a viewport.
- 3. Double-click the viewport to activate it. You will see the crosshair is constrained to the viewport.
- 4. Click View>Zoom Scale ...
- 5. Enter a scale factor.
- 6. Click [OK].

Applies To:

A layout with an activated Viewport.

4.2.2.2 Advanced Tools Dialogs

The following is a set of dialogs that may be presented while using the advance tools in the drawing environment.

4.2.2.2.1 Equipment Library

Udda To Community In rai Al Community Server Test Carrents Community Community service with 82225 devices sope Mondificational mage Saper Trained Sectors Saper Trained Sectors Saper Trained Sectors right-disk tadd mage Saper Trained Sectors Saper Trained Sectors Saper Trained Sectors Saper Trained Sectors right-disk tadd mage Saper Trained Sectors Major Sectors Saper Trained Sectors Saper Trained Sectors Saper Trained Sectors right-disk tadd mage Saper Trained Sectors Major Sectors Saper Trained Sectors <t< th=""><th>ind Detail I/O Display Preferences</th><th></th><th></th><th></th><th></th><th></th></t<>	ind Detail I/O Display Preferences					
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	 Community Rating System 					Attach Document
	<	Record(s) 1 to 1583 of 1583	> Results Page	Size 10	Rate This	Exit

Database > Equipment Library Drawing > Advanced Tools > Equipment Library Commandline: le Several Others

Explanation

The WireCAD **Equipment Library** is where you will spend a fair amount of time as you define equipment that you will use in your designs. The Equipment Library is a presentation of the global Manufacturers table and its hierarchy. The Equipment Library contains no CAD blocks just equipment definitions. These equipment definitions describe a piece of equipment its make, model, and IO.

This is also where we come to create CAD blocks in our drawings. There are many settings here that let you customize appearance.

The interface is tabbed. The **[Find]** tab sets the current item. The current item will be enumerated in the **[Detail]** and **[I/O]** tabs. This topic covers the right-hand column of controls that is visible from all tabs.

Dialog Options

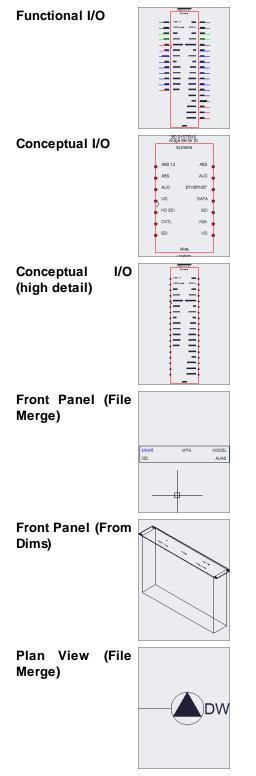
- Big Preview 🤇 😁 😁
- Refresh Preview -

Preview

- Preview Displays the currently selected equipment definition based on the Display As: setting.
- Display As:

Setting

WireCAD v9 User Manual



Plan View (From Not yet implemented. Dims)

- Add Manufacturer Shows the Add Manufacturer dialog.
- Add Equipment Shows the Add Equipment Wizard.

- Delete Equipment Deletes the selected record.
- Add to Drawing Add the selected item to the drawing based on the current preview.
- Add to Project Database Only (Assign SysName) Shows the SysName Assignment dialog.
- Attach Document Attach any document to the current record. This is useful for storing data sheets or specification documents with the equipment definition.

4.2.2.2.1.1 Find

nd:				Find
) Local			Upload To Community	Find All
Community Server		Test Connection	Download From Community	Community is online with 82025 devices
Image	ManufacturerName	EquipmentName	EquipmentDescription	Equipment Type (SysName Prefix)
right-click to add image				
right-click to add image	0000	1234567	asdf	SRVR
I right-click to add image	360 SYSTEMS	FRED	Automatically added from drawing. Please edit.	MAT
⊞ right-click to add image	360 SYSTEMS	Image Server 2K	Mpeg 2 Video Server	SRVR
right-click to add image	360 SYSTEMS	Imager Server	SERVER	SERVER
In the second	360 SYSTEMS	IMAGESVR_v1	SERVER	SERVER
inght-click to add image	360 SYSTEMS	Instant Replay	Audio Sampler	IR
In right-click to add image	360 SYSTEMS	Router	Router	RTR
right-click to add image	360SYSTEMS	DL-810	HD/SD Serial Digital Legalizer	SDL
In right-dick to add image	3COMM	2928-SFP	24-PORT 4-SFP	SW
right-click to add image	3COMM	3C16702A	EQUIP	EQUIP
It right-dick to add image	3COMM	MADIINPUT	MADI	BOX
right-click to add image	3COMM	55113300	NETSW	NETSW
In right-click to add image	3COMM	SSII3300_v1	NETSW	NETSW
right-click to add image	3COMM	XP 490	Router	RTR
right-dick to add image	ACCOM	Attache	Digital Disk Recorder	DDR
right-click to add image	ACCOM	Axial 3000	Editing Controller	EDITOR
right-click to add image	ACCOM	DVeous	Digital Video Effects	DVE
If right-click to add image	ACTIVE STORAGE	ActiveRAID	ACTIVE STORAGE	RAID
I right-click to add image	ADC	PP12232R5-MV3	2032 AES Patchbay 2U	DAJ
I right-click to add image	ADC	PP12232RS-MVJ-DV	2K32 SDI Patchbay 2U	DVJ
I right-dick to add image	ADC	PP1224HD	HD VIDEO PATCHBAY	VPB
It right-click to add image	ADC	PPI1224H	2K24 VIDEO	HDPB
right-click to add image	ADC	PPI1224N	2x24 Video Patchbay 1U	VPB
right-click to add image	ADC	PPI2232RS-MVJ	2x24 2RU Patch Panel	Patch Panel
iii right-click to add image	ADC	RGB	RGB PatchBay	Patch
right-click to add image	ADC	TRP-2	TRIAX PATCH PANEL	PP
 Community Rating System 				

Database > Equipment Library Drawing > Advanced Tools > Equipment Library [Find] Commandline: le Several Others

Explanation

The **[Find]** tab allows you to search the local global database as well as the **Community Server**. When searching locally all records are returned by default. When searching the **Community Server** you will need to enter a search term. The results will be returned in pages based on your **Results Page Size** value.

Search Term Hints:

When searching the databases for items less is more. You want to enter a value than can be found in a single field. For

Search: sony - Result: All Sony products and any products from other manufacturers that have Sony in their description fields.

Search: DVW - Result: All products with DVW somewhere in the name or description.

Search: SONY DVW - Result: None. There are no products with the manufacturer name and the product name in a single field.

Find Tab Options

- Find Enter the search term here.
- Find button Do the search.
- Find All button Clear and find all records. (Local only).
- Local / Community Server Switch between your local database and the Community server.
- **Test Connection button** Test your connection to the Community. If this fails you may need to open your firewall to community.wirecad.com port: 1433.
- **Download From Community** Before any edits can be made to the device you will need to download it to your local database.
- Upload to Community You can upload manually by clicking this button.
- Grid found items.
- **Community Rating System** The Community Server is completely open. All device definitions have been created by your peers. If something is wildly inaccurate then post your opinion. Conversely if something is wildly brilliant then do the same.
- Results Paging You can navigate the page results with these controls.

<	Record(s) 1 to 10 of 2215	>	Results Page Size	10 🗘

4.2.2.2.1.2 Detail

EquipmentName	Image Server 2K
labreviation	
front Panel File	%BLOCKS%\2D_ELEVATIONS\2U_2D_EL.DWG
Plan View File	%BLOCK5%/plan view/av lv/pushbutton station.dwg
Accessory Of	EditValue is null
Equipment Description	Mpeg 2 Video Server
Manufacturer ID	360 SYST
Equipment Type (SysName Prefix)	SRVR
Equipment Weight	2.25
Equipment Weight Unit of Measure (UOM)	Pounds
Equipment Height	2
Equipment Height UOM	Rack Units(RU)
Equipment Width	19
Equipment Width UOM	Inches
Equipment Depth	12
Equipment Depth UOM	Inches
Equipment Power	50
Equipment Power UOM	Watts
Equipment Voltage	120
Equipment Voltage UOM	VAC
EquipmentVendor 1	a
EquipmentVendor2	b
EquipmentCost1	20.01
EquipmentCost2	30.98
Image	right-click to add image
Image File Path	%JMAGES % (mageser ver 200x 70.g)f
Document File Path	
DWG Icon File Path	%iCONS%/dwg_con_pc_workstation.dwg
Sku	
Approved	
Category	
Industry Sectors	
Synonyms	
DisplayParams	BodyColor ~0;BodyPenWidth ~0;BodyWidth ~500;BottomBulgeFactor ~15;CreationMode ~FunctionaBlock;DescriptorLocations ~SysName
Some Custom Field	
EquipmentUser2	
EquipmentUser3	
EquipmentUser4	
FKManufacturer	c8808081-308b-4cc1-b965-537dba376b9d
EquipmentGUID ModifiedOn	dc48b475-acb0-46d4-8ef1-1a61e8ef1b71 7/1/2015

Database > Equipment Library Drawing > Advanced Tools > Equipment Library [Detail] Commandline: le Several Others

Explanation

This is the detail page for the currently selection record. The fields are self explanatory.

NOTE: Be sure to save your changes if you edit this grid manually by clicking File>Save.

4.2.2.2.1.3 Inputs/Outputs

Name	Signal	ଟ୍ରହି	0; 10	2	Order	IsS		Select All			Name	Signal	ନ୍ତୁ	5	Pin	150	Order	
10	12	(Cable End) Connector	play p		9	IsSelected		Clear				. <u>2</u>	(Cable End) Connector	play	Type	IsSelected	9	
	Type	98	Display Order			a.	Al Inpu	uts A	Il Outputs			Type *	98	Display Order		а.		
• . AES 1.2	AES 1,2	MXLR	5 No	ormal	0	1	Select By	Signal Type		١,	AES	AES	FXLR	7	Normal	1		
· AES 3,		MXLR	10 No	ormal	1	1		AES			· AES 3,4	AES	FXLR	12	Normal	1		
. AUD	AUD	MXLR	4 No	ormal	2	1		AES 1.2			aud 🗉	AUD	FXLR	5	Normal	1		
· AUD-01	AUD	MXLR	7 No	ormal	3	×		AUD			AUD-01	AUD	FXLR	8	Normal	×		
GENLOO	< VID	BNC	6 Lo	op	4	×		ONTL			ETHERNET	ETHERNET	R345	6	Normal	×		
HD SDI	HD SDI	RJ45	12 No	ormal	5	1					вкв	DATA	PS-2	15	Normal	1		
RS-422	CNTL.	90Male	8 No	ormal	6	1		HD SDI			MOUSE	DATA	PS-2	9	Normal	1		
🗉 SDI	SDI	BNC	11 No	ormal	7	1		SDI			🗄 SDI	SDI	BNC	4	Normal	1		
SDI-001	SDI	BNC	0 No	ormal	8	×		VID			SDI.01	SDI	BNC	17	Normal	×		
3 SDI-002	SDI	BNC	1 No	ormal	9	×		DATA			SDI.03	SDI	BNC	14	Normal	×		
SDI-003	SDI	BNC	2 No	ormal	10	×		ETHERNET			SDI-001	SDI	BNC	0	Normal	×		1
SDI-004	SDI	BNC	3 No	ormal	11	V		VGA			SDI-002	SDI	BNC	1	Normal	1		1
UIDEO	VID	BNC	9 No	ormal	12	1					SDI-003	SDI	BNC	2	Normal	1		1
							Reorder	Сору	Reorder		301-004	SDI	BNC	3	Normal	1		1
							1	• •	-		🗉 VGA	VGA	15D HD	16	Normal	1		1
											VIDEO.01	VID	BNC	10	Normal	1		1
											VIDEO.02	VID	BNC	13	Normal	×		1
											VIDEO.03	VID	BNC	11	Normal	1		1
							Add/Dele Del	te Ports Add Ports lete Selected F	Ports									
							Refresh B	Nock Preview	Refresh									
							Display O	a dan										
							oupuy o	(UE)										

Database > Equipment Library [I/O] Drawing > Advanced Tools > Equipment Library [I/O] Commandline: le Several Others

Explanation

This is the Inputs and Outputs page. It represents the I/O of the currently selected device. Inputs are displayed in the left-hand grid and outputs are displayed in the right-hand grid. This is by convention only. You are free to place inputs on the right-hand side and vice-versa. Each port record consists of a Name, Type, Connector and a Pin Type. Selected records will be included in the preview of any Function I/O and Concept blocks that you create.

If you are using connector genders be sure to enter the cable-end gender not the chassis side.

I/O Tab Options

- Inputs Grid, Outputs Grid NOTE: Be sure to save your changes if you edit these grids manually by clicking File>Save.
- Select All, Clear Selection, All Inputs, All Outputs Manipulate the selection.
- Select by Signal Type Ten buttons in this frame will populate with the first ten signal types from the I/O records. Clicking the button will select all records in both grids of that signal type.
- Reorder Move selection up/down.
- Copy Copy side-to-side.
- Add Ports <u>Show the Add Ports dialog</u> 431.
- Delete Ports Delete the selected ports. You will be prompted for each grid. No save is necessary.
- Refresh Refresh the preview.
- **Display Order** Set and sort by the **Display Order** column. This allows you to rearrange the lists and be able to return later to your work.

4.2.2.2.1.4 Display Preferences

	Defined Shapes Mechanical Forms		Î
A standard functional block appears	A standard DA appearance	Functional Block with a torn bottom edge	Functional Block with a torn left edge
A standard functional block appears	A standard DA appearance	Functional Block with a torn bottom edge	Functional Block with a torn left edge
z			Edit Filter
X splay Properties	A standard DA appearance Set Current Display Properties as Project Default		Edit Filer
2 Isplay Properties Besic			Edit Filter
X splay Properties			Edit Filer
Salay Properties Basic Basic		Reset Project Default	Edit Filer
/ play Properties Basic Body Color Body Color Body Per Width		Rest Project Default	Edit Filer
2 polay Properties Basic Body Color Body Fen Width Body Width		RestProjectDefault	Edit Filer
A properties Basic Basic Basic Color Body Fren Width Body Width Creation Mode		RestProjectDefault	Edit Filer
Searching States		Reset Project Default 2 1 500 FunctionalBick Systame: 13] Hasufacturer: 11 [quipmentName: 12] Ala	Edit Filer

Database > Equipment Library Drawing > Advanced Tools > Equipment Library Commandline: le Several Others

Explanation

This is where we determine the look of the block we are about to add to the drawing.

There are four tabs in this view that allow you to customize the appearance of the block you are about to create.

- 1. Stock Shapes 428
- 2. <u>Mappable Terminals</u> 429
- 3. User Defined Shapes 429
- 4. Mechanical Forms 430

		Stock Shapes	Mappable Terminals	User Defined Shapes	Mechanical Forms
--	--	--------------	--------------------	---------------------	------------------

Understanding the Settings Mechanism

Settings store the appearance and display mode of the Equipment Library. These settings determine the look of the created block. You can tell which settings were used to create the block by looking at the **Equipment Library** status bar:

CDA5 has 1 inputs and 4 outputs. Preview created from Project settings.

WireCAD stores the settings used to create blocks in three different locations:

- 1. **Device** settings. If you create a block in a drawing we store the settings used to make the block with the device definition in the **Equipment Library**. These settings have priority.
- 2. **Project** settings. If you like the display of a block you can click the:

11110		
Set Current Display Properties as Project Default	Reset Project Default	Reset Device Settings

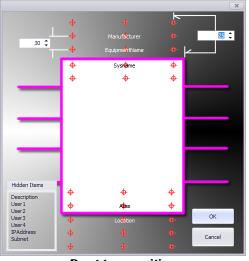
Doing so will set the current display settings as the **Project** default. All devices that do not currently have stored settings will then use the **Project** defaults.

3. **Default** settings. When no other settings are found we use the defaults.

Several controls are common to all tabs. We will go into those first.

Common Controls Options

- **Body Color** Sets the color of Functional I/O and Concept block bodies. Has no effect on User Defined Shapes or Terminals. The geometry of the file determines the look.
- Creation Mode Set by the UI. Leave it alone.
- **Descriptor Locations** Shows the Descriptor Locations Map. Applies to Functional, Concept, and User Defined Shapes.



Drag to reposition

• Image Display Mode - Applies to Applies to Functional and Concept blocks.

None - no image or cad block is inserted in the created block.

Image - insert the image that is pointed to in the Image File Path of the Details tab for this device.

DWGIcon - insert the DWG lcon in the DWG lcon File Path of the Details tab for this device.

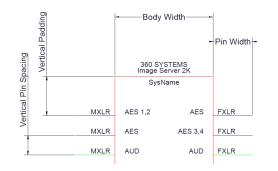
• Image Position, Image Scale Factor

360 SYSTEMS Image Server 2K						
	Sysna	me				
MKLR	AES 1,2	AES	FXLR			
MCLR	AES 3,4zdfa	AES 3,4	FXLR			
MXLR	AUD	AUD	FXLR			
MKLR	AUD-01	AUD-01	FXLR			
BNC	GENLOCK E	THERNET	RJ45			
RJ45	HD SDI	КВ	PS-2			
BDMain	DD 400	HOUDE	00.0			
BNC	SDI	SDI	BNC			
BNC	SDI-001	SDI.01	BNC			
BNC	SDI-002	SDI.03	BNC			
BNC	SDI-003	SDI-001	BNC			
0110	001001	001.000	0110			
BNC	VIDEO	SDI-003	BNC			
		SDI-004	BNC			
		VGA	15D HD			
		VIDEO.01	BNC			
		VIDEO.02	BNC			
		VIDEO.03	BNC			
	Alia					
	Location					
	Image inserted and					
mag	C 1113		u anu			
scaled a	at Mi	iddl	eCenter			

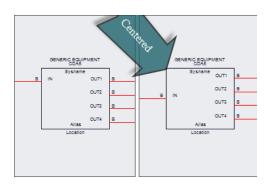
• Merge and Center - Centers identical text in the block. Applies to Functional and Concept blocks.

B Assirt Assirt rin B Assirt RTRI B Assirt RTRI	
B AESIRTR GAESIRTRO B AESIRTR GAESIRTRO B AESIRTRO B Centered B AESIRTRO B Centered B AESIRTRO	
B AESI RTR QAESI RTR O B AES2 RTR I AES2 RTR I B Centered B AES2 RTR I B Centered B AES2 RTR I B	
Centered	
Centered	
B AES2RTR O B B AES2RTR O B	
The second se	
Elco AUD IN-01 AUD IN-01 Elco Elco AUD IN-01 Elco	0
Elco AUD IN-02 AUD IN-02 Elco Elco AUD IN-02 Elco	0
Elco AUD IN-03 AUD IN-03 Elco Elco AUD IN-03 Elco	0
Elco AUD IN-04 AUD IN-04 ElcoElco AUD IN-04 Elco	0

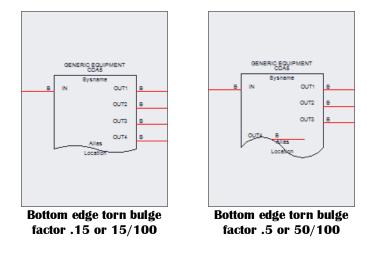
- Text Height The height of all generated text.
- Spacing and other dimensional info:



• Vertically Center Pins

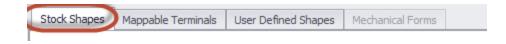


- Body Pen Width The thickness of the line that represents the block body.
- Nudge Positions Use to nudge the various text around.
- Tears and Bulge Factors Tears are visual elements that represent to the reader of the document that the device does not display all of its available I/O. Tears use bulges. The greater the bulge factor the more dramatic the tear.



- Set Current Display Properties as Project Default
- Reset Project Default
- Reset Device Settings

Stock Shapes Options



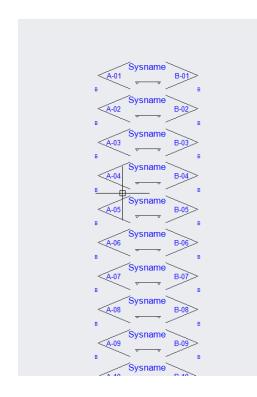
Here you choose from 18 stock shapes. We will not enumerate them here. Try clicking on them to see what they do.

Mappable Terminals Options



Here you can map the selected I/O on to terminals. Terminals are one or two port inline devices. If you select more that one record in the I/O tables we will continue to add terminals to accommodate the selection. If you select a terminal that has only an input port then any selected output records will be ignored.

Example showing multiple I/O selected and mapped on to a terminal that represents a full normal jack:

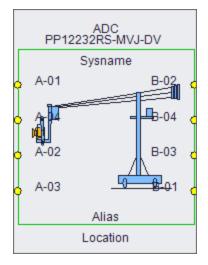


User Defined Shapes Options



Any CAD file can be used as a **User Defined Shape**. It just needs to be placed in the **Shape Files** folder: **%BLOCKS%\Shapes Files**

The **Display Properties** with then scale and stretch the object while applying port data. Example showing **User Defined Shape** with four ports applied:



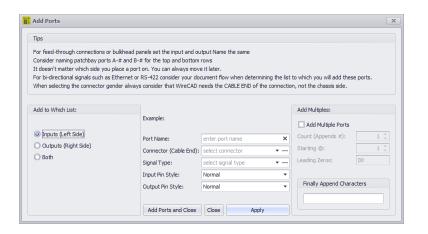
Mechanical Forms Options

-	L		
Stock Shapes	Mappable Terminals	User Defined Shape	Mechanical Forms

Mechanical Forms are hard-coded objects that get their dimensional data from the device definition and use it to render objects.

Item Description	
Rack Enclosure	
Rack Tray	
Cube Select a form	. Only available when Front Panel (from Dims) is selected.
Half Rack Left	
Half Rack Right	

4.2.2.2.1.5 Add Ports



Database > Equipment Library [I/O] [Add Ports] Drawing > Advanced Tools > Equipment Library [I/O] [Add Ports] Commandline: le Several Others

Related Topics <u>How To: Add Some Inputs and Outputs</u> 57 <u>How To: Add Ports</u> 433

Explanation

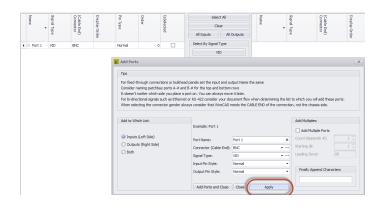
This is the Port Adder dialog. With it you add a single record, two records, or multiple records to the I/O grids. Here are some things to consider when naming your ports:

- 1. For feed-through connections or bulkhead panels set the input and output Name the same.
- 2. Consider naming patchbay ports A-# and B-# for the top and bottom rows.
- 3. It doesn't matter which side you place a port on. You can always move it later.
- 4. For bi-directional signals such as Ethernet or RS-422 consider your document flow when determining the list to which you will add these ports.
- 5. When selecting the connector gender always consider that WireCAD needs the CABLE END of the connection, not the chassis side.

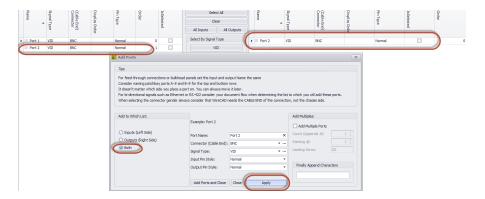
- Add to Which List
- **Port Name** Enter the port name here. This may be a partial name if the Add I/O dialog is set to append either multiple records or the Finally Append field contains the remainder of the string.
- Connector (Cable End) From the global Connectors table.
- Signal Type From the Project Signal Types table.
- Input Pin Style Straight pin (Normal) or looped (two connection points).
- Output Pin Style Straight pin (Normal) or bridged (two connection points).
- Add Multiples If checked a record will be created for each Count. The number will be appended to the Port Name info and formatted based on the Leading Zeros format.
- Finally Append Characters Useful if you want to add characters after the multiple count number has been appended. See the <u>How to Add Ports</u> [433] topic for more info.

4.2.2.1.6 How To: Add Ports

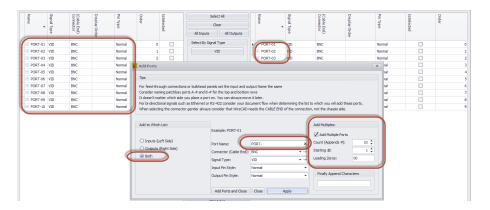
- 1. Open the Equipment Library.
- 2. Find an equipment definition to which we will add ports.
- 3. Select the I/O tab.
- 4. Click [Add Ports] button.
- 5. Add a single port to the **Inputs** table.



6. Add a single port to the **Inputs** and **Outputs** list at the same time.



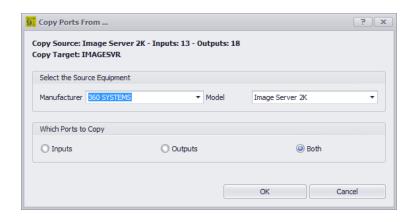
7. Add 10 ports to each grid appending a port number to each record.



8. Now let's create the 8 left line inputs of a stereo mixer. We will use the **Finally Append Characters** field to append the characters -LEFT after the number is created and appended to the **Port Name**.

Name		Signal Type	(Cable End) Connector	Display Order	Pin Type	Order	IsSelected	d	ect All	Name
		a	-	der				All Inputs	All Outputs	ļ
ΞĽ	INE-01-LEFT	AUD	MXLR		Normal	0		Select By Signal	Туре	
± Ľ	INE-02-LEFT	AUD	MXLR		Normal	1		A	UD	
⊞ Ľ	INE-03-LEFT	AUD	MXLR		Normal	2		V	ID	
E L	INE-04-LEFT	AUD	MXLR		Normal	3				
± Ľ	INE-05-LEFT	AUD	MXLR		Normal	4				
⊞ Ľ	INE-06-LEFT	AUD	MXLR		Normal	5				
⊕ Ľ	INE-07-LEFT	AUD	MXLR		Normal	6				
E L	INE-08-LEFT	AUD	MXLR		Normal	7				
	Consider r	naming patch	bay ports A	-# and B-# fo	or the top and	t and output N bottom rows iys move it late				
	For feed-t Consider r It doesn't For bi-dire	naming patch matter which ectional signa	nbay ports A n side you pl Ils such as El	-# and B-# fo lace a port on. thernet or RS-	or the top and You can alwa	bottom rows lys move it late your document	er. t flow when det	termining the list to w of the connection, no		se ports.
	For feed-t Consider r It doesn't For bi-dire When sele	naming patch matter which ectional signa ecting the co nich List:	nbay ports A n side you pl Ils such as El	-# and B-# fo lace a port on thernet or RS- der always co	or the top and You can alwa	bottom rows ays move it late your document reCAD needs t	er. t flow when det	of the connection, no		se ports.
	For feed-t Consider r It doesn't For bi-dire When sele Add to Wh	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	-# and B-# fo lace a port on. thernet or RS- der always co	or the top and You can alwa 422 consider Insider that Wi	bottom rows ays move it late your document reCAD needs t	er. t flow when def he CABLE END	of the connection, no	dd Multiples:	se ports.
	For feed-t Consider r It doesn't For bi-dire When sele Add to Wh O Inputs	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	-# and B-# fo lace a port on. thernet or RS- der always co Ex Po	or the top and . You can alwa -422 consider y nsider that Wi cample: LINE-0 ort Name:	bottom rows nys move it late your document reCAD needs t	er. t flow when det he CABLE END	of the connection, no	dd Multiples:	
	For feed-t Consider r It doesn't For bi-dire When sele Add to Wh	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	-# and B-# fo lace a port on. thernet or RS- der always co Ex Po Co	or the top and . You can alwa -422 consider y nsider that Wi cample: LINE-0 ort Name:	bottom rows ays move it late your document reCAD needs t 11-LEFT	er. t flow when det he CABLE END	of the connection, nr Ac	dd Multiples: Add Multiple Ports punt (Appends #):	8 ‡
(For feed-t Consider r It doesn't For bi-dire When sele Add to Wh O Inputs	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	-# and B-# fo lace a port on. thernet or RS- der always co Ex Po Co Sig	or the top and . You can alwa -422 consider y insider that Wi cample: LINE-0 ort Name: onnector (Cabl gnal Type:	bottom rows sys move it late your document reCAD needs t 11-LEFT LINE- e End): MXLR AUD	er. flow when det he CABLE END	of the connection, nr Ac	dd Multiples: dd Multiples: Add Multiple Ports punt (Appends #): arting @:	8 ¢
	For feed-t Consider r It doesn't For bi-dire When sele Add to Wh O Inputs	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	# and B-# fo lace a port on. thernet or RS- der always co Ex Po Co Sig Ing	or the top and . You can alwa .422 consider y nsider that Wi cample: LINE-0 ort Name: onnector (Cabl gnal Type: put Pin Style:	bottom rows hys move it late your document reCAD needs t 11-LEFT LINE- e End): MALR AUD Norm	er. t flow when det he CABLE END	of the connection, no Ac	dd Multiples: dd Multiples: Add Multiple Ports punt (Appends #): arting @:	8 ¢ 1 ¢ 00
	For feed-t Consider r It doesn't For bi-dire When sele Add to Wh O Inputs	naming patch matter which ectional signa ecting the co nich List:	abay ports A n side you pl lls such as Ei nnector gen	# and B-# fo lace a port on. thernet or RS- der always co Ex Po Co Sig Ing	or the top and . You can alwa -422 consider y insider that Wi cample: LINE-0 ort Name: onnector (Cabl gnal Type:	bottom rows hys move it late your document reCAD needs t 11-LEFT LINE- e End): MALR AUD Norm	er. t flow when det he CABLE END	of the connection, no Active States Control of the connection of t	dd Multiples: dd Multiples: Add Multiple Ports bunt (Appends #): arting @: ading Zeros:	8 ¢ 1 ¢ 00

4.2.2.2.1.7 Copy Port Data



Database > Equipment Library [Edit > Copy Port Data] Commandline: le Several Others

Related Topics none

Explanation

Allows you to copy port data from another device definition into the currently selected device definition.

- Select Manufacturer and Model to copy from.
- Which Ports to Copy obvious.

4.2.2.2.1.8 Incoming Signal Types Map

6 Changes Incoming Si	Changes Incoming Signal Types						
Rename From This	To This						
HDSDI	HDSDI						
REF	REF						
RS422	RS422						
OK	Cance	el					

Database > Equipment Library [Download From Community] Commandline: le Several Others

Related Topics none

Explanation

When downloading from the community server you will use this dialog to map from the Signal Types used in the incoming device definition to your Signal Types.

- Rename From This Incoming Signal Types.
- To This Map to your Signal Types.

4.2.2.1.9 Save Equipment As

Save DL-810 As:	×
Manufacturer: Equipment Model, Name, or Part Number	B60SYSTEMS UL-810
	OK Cancel

Database > Equipment Library [File > Save As] Commandline: le Several Others

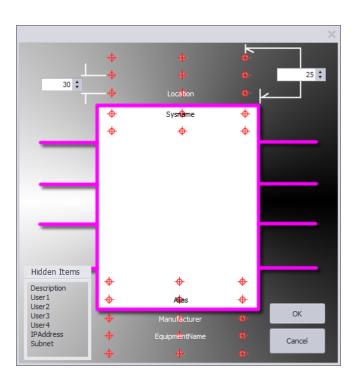
Related Topics none

Explanation

Allows you to copy the current device definition as a new device definition with a new **Manufacturer** and **Model**.

- Manufacturer Select Manufacturer.
- Equipment Model The new name.

4.2.2.2.1.10 Descriptor Map



Database > Equipment Library [Display Preferences] Descriptor Locations Commandline: le Several Others

Related Topics How To: Add Equipment to Drawings

Explanation

Change the locations and visibility of the various block descriptors:

- SysName
- Manufacturer
- EquipmentName
- Location
- Alias
- Description
- User1 4
- IPAddress
- Subnet Mask

Operation

Drag the named descriptor to the target on the map. To hide a descriptor drag it to the Hidden Items frame.

4.2.2.2.2 Rack Builder Tool

Basic Advanced				
Add Location 00 01 01 09 109 109 110 110 112 112 112 112 112 112 112 Celeted EDIT 1 EDIT 2 Location RK-01 RK-01 RK-01 RK-01 RK-01 RK-01 RK-01 RX-01 RK-01 RX-10 RX-01 RX-10 RX	Which to Build Rack Elevations		Systems Involved	
ROOM 110.4 ROOM 110.5 Check All	Clear All Check Selected Uncheck	* Selected		

Drawing > Advanced Tools > Rack Builder Commandline: rb *Explanation*

For more information see <u>How the Rack Builder Works</u> [105].

Automatically generate rack layout. Technically speaking we are populating rack locator grids. They may or may not display an actual rack depending on whether you have assigned a SysName to a rack. The **[Basic]** tab allows you to select the locations to include in the Rack Building function. As you select each location, the Systems Involved list will populate.

Dialog Options

• Advanced tab - exposes properties that control the behavior of the utility.

Chassis Width	19 🗧 Height in RU		45	\$ Slot Count	11 :
Slot Delimiter -			Insertion Point		
Attribute Height		25 🛟	View Rule	ShowDwginPath	-
Place Text if Item Can	not Be Created			-	
Spacing (DU)		24 🕻	1		

- Chassis Width Sets the width of the chassis in DU.
- Height in RU Sets the height of the locator grid in Rack Units (RU = 1.75 inches or 4.445cm).
- Slot Count Sets the number of slots per locator grid. This is used to position items that may not be located at the insertion point of the rack unit.
- Slot Delimiter WireCAD searches the Elevation field for numeric values first then for the slot delimiter if found it parses the data into two values the elevation and the slot, or in other words how far up in the rack and how far over.
- **Insertion Point** Where to start the whole process. Clicking the [...] ellipsis button will temporarily dismiss the dialog so you can pick a point from the active drawing.
- Attribute Height If view rule is not Front Panel (file merge), sets the attribute height of the displayed text.
- Create As -

Front Panel (file merge) = use the dwg file found in the equipment definition BlockRef (Front Panel File).

Front Panel (from dims) = use the dimension data from the equipment definition to create a 3D rack block.

From Dims if file not found = Use dimension data if the BlockRef is not found.

- Place Text If Item Cannot Be Created If the item cannot be created due to lacking data, place a text marker in the drawing at the location.
- Include Grid Hash Marks This will normally be checked unless you are rebuilding a drawing that already has the locator grids.
- Spacing DU Sets the location grid spacing in Drawing Units. Measures from left edge to left edge.

4.2.2.2.3 Assign Sysname

New Sysname for 360	SYSTEMS-Image Server 2K		3
Manufacturer	360 SYSTEMS	✓ Equipment Name	Image Server 2K 🔹
Sysname	SRVR-40		▼ New
Alias	SRVR-40		
Location	Location	▼ + Elevation	Elevation -
User 1		User2	
User3		User4	
IP Address		Subnet Mask	
Power Consumption	50	Power Consumption Unit	Watts
Weight	2.25	Weight Unit	Pounds
Flags		▼ BTU	100 🗘
			OK Cancel
Status			

Drawing > Advanced Tools > Equipment Library [Add to Project Database Only (Assign SysName)] Double-click WireCAD Block Commandline: le

Explanation

This dialog is presented when assigning a **SysName**. The **SysName** field is automatically generated based on the project **SysName Format** and the **Next Numbers** table.

Prerequisites

This dialog is only shown when Verbose SysName Assignment is checked.

Related Topics

How To: Assign a SysName 92

- Manufacturer and Model Filled automatically in most cases.
- SysName This number is automatically generated based on the project SysName Format and the Next Numbers table. WireCAD will always present the next number though you do not have to use it. In fact, there are times when you should select the existing SysName from the dropdown list. For example say you have shown the video ports of VTR-01 in one drawing and the audio ports of VTR-01 in another drawing. When you assign the first instance you will get VTR-01 as the suggested SysName. The second instance will suggest VTR-02. You will then click the dropdown and select VTR-01 thus ensuring that the two representations of the same device have the same name.
- Alias Friendly, functional, or descriptive name for the device.
- Location of the device. For more information see the Locations Grid 538. Clicking the [+] button shows the <u>New Locations</u> 388 dialog.
- Elevation If numeric then WireCAD assumes RU. If not numeric it does not matter. There is one special circumstance where the data will be non-numeric but WireCAD will understand how to parse it. That is the situation when we want to locate something in a slot in a frame in a rack. We will need to use the form [elevation][slot delimiter][slot]. For example let's say that I have a DA that needs to go in slot 5 of a frame located at elevation 20 and my project slot delimiter]³⁷⁶ is a dash [-]. I would type into the Elevation field 20-5.

- User Fields 50 characters max. You can define these captions in the Translation Manager Plugins > Translation Manager. Search for SysNameUser in the key field.
- IP Address Subnet Mask Masked to either IPv4 or IPv6 based on the Project Settings 352 dialog.
- Power Consumption Pulled from the global Equipment definition or typed manually here.
- Weight Pulled from the global Equipment definition or typed manually here.
- Flags Sort, query, filter flags. You can define these flags in the Translation Manager Plugins > Translation Manager. Search for SysNameFlagItem in the key field.
- **BTU** Heat load in British Thermal Units. Pulled from the global Equipment definition or typed manually here.

4.2.2.2.4 Assign Cable Number

8. Assign Cable	Number - [WireCAD Default]		X
[B-11 B-11 DAJ-024 DAJ-024 DA-11322	DA-1132-	SRVR-004 VIDEO SRVR-004 Location
CableTypeManu SignalType	BELDEN	CableType	1505A 003 ORG 👻
NamedPath	Select a Named Path	 Length 	0 •
Integrator			
User 1		User2	
User3		User4	
Sheet	test1.dwg	ReplacedBY	If this cable is to be replaced by another \bullet
Pinout Calc time = 00:00	0:00.0000007		OK Cancel
Care anne - ooroo			Cancer

Double-click WireCAD Cable Commandline: ac

Explanation

This dialog is presented when assigning a Cable number if the **Verbose Cable Assignment** is checked. The **Cable Number** field is automatically generated based on the project **Cable Number Format** and the **Next Numbers** table.

Prerequisites

This dialog is show only when the **Verbose Cable Assignment** option is checked on the **Advanced Tools** ribbon tab.

Related Topics

How to Assign a Cable Number 1001 How to Assign Multiple Cable Numbers 1001

- CableNo This number is automatically generated based on the project Cable Number Format and the Next Numbers table. WireCAD will always present the next number though you do not have to use it.
- Cable Type Manu, Cable Type*, Signal Type*
- Named Path List of <u>Named Paths</u> 53³. See the documentation on the **Named Paths** table. Selecting a **Named Path** will cause the **Length** field to change.
- Length Manually enter the cable length or select a Named Path.
- Integrator Who is responsible for the installation of this cable.
- User Fields You can define these captions in the Translation Manager Plugins > Translation Manager. Search for CableUser in the key field.
- Sheet Automatically filled with the current drawing name.
- Replaced By A housekeeping field that you may choose to use.

• **Pinout** - If the Enable Pinouts setting is checked then select the Pinout to apply to this cable.

* changes to these fields may cause the number to recalculate.

4.2.2.2.5 Assign Terminals

t a SysName: am just chan		e (all existing p	orts stay the same)					
emember this		i next assignme outs	nt] Outputs Track		ching) t puts	
Name	Туре	Conn	Source In		Name	Туре	Conn	Destinatio
🗄 A-14	VID	В	DV-10 🔶		🗄 B-13	VID	В	Unassig 🔺
🗄 A-15	VID	в	DV-10		🕀 B-14	VID	В	Unassig
🗄 A-16	VID	в	DV-10		🕀 B-15	VID	В	Unassig
🗄 A-17	VID	в	Unass		🕀 B-16	VID	В	Unassig
🗄 A-18	VID	в			🗄 B-17	VID	В	
🗄 A-19	VID	в			🗄 B-18	VID	В	
🗄 A-20	VID	в			🗄 B-19	VID	В	
🗄 A-21	VID	В			🗄 B-20	VID	В	
🗄 A-22	VID	в			🗄 B-21	VID	В	
🗄 A-23	VID	В			🗄 B-22	VID	В	
🗄 A-24	VID	в			🗄 B-23	VID	В	
			-		⊞ B-24	VID	В	
					4			
				Ē	OK			ancel

Double-click Terminal or Select Terminal and Click Advanced Tools > Assign Terminal(s) Commandline: ats

Explanation

This dialog is presented when assigning a terminal or a selection of terminals. The process is to first select the SysName to use, then select the Inputs and Outputs port.

Note that the **Inputs** or **Outputs** grid may be disabled if the terminal to which we are assigning this information does not have a CP_IN or CP_OUT to receive the data.

Record Highlighting

Red - Port assigned to a cable. The Source Info and Destination Info contains the CableNo : SysName>Port info.

Yellow - A cable has been attached to this port somewhere in the project. The Source Info and Destination Info contains the SysName>Port info.

Prerequisites

In order to assign a terminal you must first assign a **SysName** from which you will select ports.

Related Topics Understanding Terminals

- Select a SysName The SysName from which we will select ports.
- I am just changing a SysName (all existing ports stay the same) Use this if you have already assigned a SysName to a terminal but you want to switch with another SysName.
- Remember this equipment on next assignment Persist the selected SysName on next Terminal Assignment.
- Outputs Track Inputs (if matching) Select a matching record from the Outputs list if the string matches the record in the Inputs Name field. The Names must match exactly.

4.2.2.2.6 Assign Terminal No Database Reference

mal Terminal /		le-clicking a terminal or u	: Systems database. Otherwize use the sing the menu command Advanced					
NOT ALL FIELDS ARE DISPLAYED IN ALL TERMINALS								
5ysname								
Sysname	VPB-01	Manufacturer	ADC					
Alias	VPB-01	Model/PN/Name	PPI1224N					
ocation	ROOM 110.4.30	Description	Description					
SheetRef	SheetRef							
Input		Output						
Name	A-01	Name	B-01					
Connector	В	▼ Connector	B 🔻					
Signal Type	SDI	 Signal Type 	SDI 🔻					

[Ctrl] + Double-click Terminal Commandline: none

Explanation

Occasionally you will need to land a cable on a device that is not your responsibility. The cable is yours but the equipment is not.

You can use a **Terminal** to do this.

Using this method the data in the Terminal will not have a matching entry in the Equipment List.

Note that the **Inputs** or **Outputs** section may be disabled if the terminal to which we are assigning this information does not have a CP_IN or CP_OUT to receive the data.

Prerequisites None.

Related Topics <u>Understanding Terminals</u>

4.2.2.2.7 Assign Splice

in the wire/ca Splice points a Applying a Sp new cable and Hint: Using th object from d	apter Info n WireCAD allow you to create a junction ble and track the location of that junction. are not tracked in the project Equipment List lice Point terminates a cable run. The other d have a separate record and number in the e text ""Splice"" in SysName field with hide t uplicate error checks. Thus allowing you to b points all named ""Splice"" without causing	side will start a Cables table. his		X.		
SysName	SPLICE					
Left		Right				
Name	Name	Name	Name			
Connector	Conn 👻	Connector	Conn	•		
Signnal Type	Туре			•		
Location	Location	+ +	Elevation	Elevation		
			ОК	Cancel		

Double-click Splice Point Terminal Commandline: none

Explanation

Occasionally you will need to splice a cable through a connection point of some sort such as:

- Terminal blocks.
- Punch downs.
- Butt splices.

You can use a **Splice** to do this. Using this method the data in the **Splice** will not have a matching entry in the **Equipment List**.

Note that the **Inputs** or **Outputs** section may be disabled if the terminal to which we are assigning this information does not have a CP_IN or CP_OUT to receive the data.

Using the string "SPLICE" in the SysName will cause the cable assignment function to ignore duplicate port checks.

Prerequisites None.

Related Topics <u>Understanding Terminals</u>

4.2.2.2.8 SysName Error Check

	Hand	le	Sysname	Location	Elevation	Alias	Manufacturer	EquipmentName	DBRef	
P										4
	Q	Show Me	DAJ-019	Location	Elevation	DAJ-019	ADC	PP12232RS-MVJ	cbf89ba8-7315-4	
	Q	Show Me	DAJ-020	Location	Elevation	DAJ-020	ADC	PP12232RS-MVJ	228ad612-f192-4	
	Q	Show Me	DAJ-021	Location	Elevation	DAJ-021	ADC	PP12232RS-MVJ	b88aa704-476f-4	
	Q	Show Me	DAJ-023	Location	Elevation	DAJ-023	ADC	PP12232RS-MVJ	b7ebcbe6-0c8e-4	
	Q	Show Me	DAJ-024	Location	Elevation	DAJ-024	ADC	PP12232RS-MVJ	501449c2-e56c-4	ſ
	Q	Show Me	SysName	Location		Alias	ManufacturerName	EquipmentName		
	Q	Show Me	SRVR-004	Location	**Elevation**	SRVR-004	360 SYSTEMS	Image Server 2K	802a7ec4-e516-4	
	Q	Show Me	SysName	Location		Alias	360 SYSTEMS	Image Server 2K		
	Q	Show Me	SysName	Location		Alias	360 SYSTEMS	Image Server 2K		
	Q	Show Me	SysName	Location		Alias	360 SYSTEMS	Image Server 2K		

Drawing > Advanced Tools > Drawing SysName Error Check Commandline: drawingsysnameerrorcheck

Explanation

Check the drawing against the database. Checks the following:

- Retrieves all equipment from the drawing.
- Checks the drawing SysName against the database.
- If matched the record is shown normally. If orphaned or not assigned the background color will be changed.

- Show Me Zooms to the selected entity.
- Check for Errors Scans then fills the grid.

4.2.2.2.9 Add Multi-core Cable

Add Multicore Cable	Add Multicore Cable (All Cores)							
Create an Available cable entry for each core in the selected Cable Type appending the Pair Color Code to the Number Base. You may then choose from the available cable records on subsequent cable assignments.								
Number Base	•	Core Data						
Cable Manufacturer Signal Type	▼ Cable Type	•						
		OK Cancel						

Drawing > Advanced Tools > Add Multi-core Cable Commandline: mc Several Others

Explanation

Often times we install bundled cables - cables with multiple cores. The outside jacket gets a number and each inner core an extension identifier like: A-1001-RED. Where A-1001 is the number that goes on the outer jacket and A-1001-RED goes on the RED core. Use the **Add Multi-core Cable** tool to create a record in the database for each core in the **Cable Type**. The **CableNo** field will have the full number and the **CableNoPrefix** field will have the number base. All cores will be marked Available for use. You can then assign one or all or any of them during the normal **Cable Number** Assignment process. You must have **Verbose Cable Assignment** checked in order to assign cores in a multi-core cable. Otherwise you will get the next number default.

- Number Base This is the part that goes into the Cable No Prefix field.
- Cable Type Only Cable Types that are flagged as Multi-core will show here.
- Signal Type

4.2.2.2.10 Cable Error Check

	Hand	dle	CableNo	Src SysName	SRCPin	SRCLoc	SRCConn	DestSys	DestPin	DestLoc	DestConn
	Q	Show Me	V-1002-	SRVR-009	VIDEO.03	Location	BNC	SRVR-010	VIDEO	Location	BNC
	Q	Show Me	V-1001-	SRVR-009	VIDEO.02	Location	BNC	SRVR-010	SDI-004	Location	BNC
	Q	Show Me	Not Assigned	SRVR-009	VGA	Location	15D HD	SRVR-010	SDI-002	Location	BNC
e	cord	1of3 ∢ ⊂									

Drawing > Advanced Tools > Drawing Error Check Commandline: dec Explanation

Check the drawing against the database. Checks the following:

- Retrieves all cables from the drawing.
- Checks the drawing Cable against the database.
- If matched the record is shown normally. If orphaned or not assigned the background color will be changed.

Item	Description
Show Me	Zooms to the selected entity
Check for Errors	Scans then fills the grid.

4.2.2.2.11 Auto Block

Played SysNames. On the [Adva wwing etc.		the the Equipment List. Yo n adjust the signal types to		
nsertion Point 0,0				
lorizontal Spacing (DU)	24 🗘	Maximum Column Count		10 🗘
isplay As:		Signal Types to Display		
Functional Block Concept (Low Detail) Concept (High Detail) Front Panel (From File) Front Panel (From Dims) Plan View (From File) Plan View (From Dims)		 ✓ AUD R ✓ Out ✓ ? ✓		Ô
Display Preferences (1/100 DU) Body Width Pin Spacing Pin Width	500 ¢ 100 ¢ 200 ¢	 ✓ AC-3 ✓ ADAT ✓ AES ✓ AES 1,2 ✓ AES 3,4 ✓ AREF 		Ŧ
Sort by Display Order		Clear Selection	s	elect All

Drawing > Advanced Tools > Auto Block Commandline: ab *Explanation*

The Auto Block tool automatically places functional blocks in the drawing. This tool requires that the Project Systems table be populated.

Possible Uses

- Add functional blocks after creating SysNames from Rack Builder drawings.
- Create overall systems views.
- Create drawings from imported data.

Related Topics Auto Block tool. 118

Dialog Options

• The [Basic] tab allows you to determine which systems to add to the drawing.

			I can adjuct the cignal	types to display, where	to start in the
	ig etc.	c [Advanced] tab you	i can aujuse ene signar	cypes to display, where	
asic	Advanced				
- Ce	et All Data From Cables Da	tabace			
- Ge Filter	All Data From Cables Da	labase			
X					Ed
	XL-01 @ ROOM 110.2.26	COLASS VALLEY 10 VI.1			20
	MU-01 @ ROOM 110.2.26				
	VID-01 @ 01.28-[AVID-BO	• •			=
	C-01 @ ROOM 110.5.11-				
		T-IGENERIC EOUIPMENT-C	Second Second Second		
		T-[GENERIC EQUIPMENT-C			
		-IGENERIC EQUIPMENT-Co			
		-[GENERIC EQUIPMENT-CO T-[GENERIC EQUIPMENT-C			
		• •	.omputer Monitorj		
	PU-01 @ 109.DESK-[APPLE	- COMPUTERS-G5]			
	PU-02 @ 112.UNDER DESK TLR-01 @ Deleted.Deleted				
		•			
	MBDR-01 @ 109.1.1-1-[EV				
	MBDR-02 @ 112.1.1-1-[EV				
	0MON-01 @ ROOM 110.2. nbedder-01 @ 109.1.1-2-				
	mbedder-01 @ 109.1.1-2- mbedder-02 @ 112 1 1-2-				-
	Check All				
		Clear All	Check Selected	Uncheck Selected	

• Filter - Filters the list by your criteria.

The Advanced Tab

s function places functional block			
upment Library (shows all avaiilat e you will be presented with the			
played SysNames. On the [Advance)			
wing etc.			
asic Advanced			
nsertion Point 0,0			
orizontal Spacing (DU)	24 🛟	Maximum Column Count	10
isplay As:		Signal Types to Display	
Functional Block			
0		AUD R	<u>^</u>
🔘 Concept (Low Detail)		Out	=
Concept (High Detail)		Inull_	
Concept (riigh betail)		▼ 1394b	
🔘 Front Panel		310	
		✓ 4fSC	
Display Preferences (1/100 DU)		AC-3	
- 1		✓ ADAT	
Body Width	500 🛟	✓ AES 1,2	
Pin Spacing	100 ‡	✓ AES 3,4	
Pin Width	200 🛟	AREF	•
Sort by Display Order		Clear Selection	Select All

• Insertion Point - The point we start from.

- Horizontal Spacing DU How far apart horizontally. The vertical spacing is defined by the height of the highest block in the row.
- Maximum Column Count How many columns horizontally.
- Get Port Data From Cables Database Select this option to search the cables database for port info instead of the global equipment database. This will effectively show only those ports to which we have attached cables.
- **Display As -** How to display the blocks.
- **Display Preferences** If Functional Block or Concept block is selected then set basic display parameters.
- Signal Types to Display Filter ports by the selected signal types.

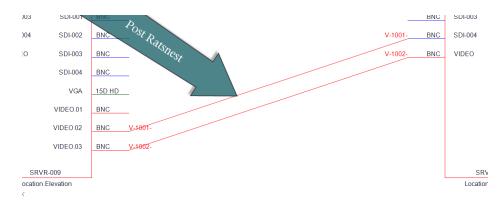
4.2.2.2.12 Ratsnest

bles will be rerouted and	better display the data. You cleaned up. Alternately you o at to each corner of every cab	an use the [Cleanup]	and in so doing the
Rats Nest	Cleanup Cables	Fillet All Cables	
Ratsnest	Cleanup		Fillet
Show Cable Numbers	Avoid Other Cables	Radius	0.25 🗘
Clear All Cables			

Drawing > Advanced Tools > Ratsnest Commandline: rn *Explanation*

The Ratsnest tool works in conjunction with the Auto Block tool. How it works:

- Get the cables collection.
- Get the SysName>Port info from the drawing.
- Find matches.
- Drawing straight-line cables.



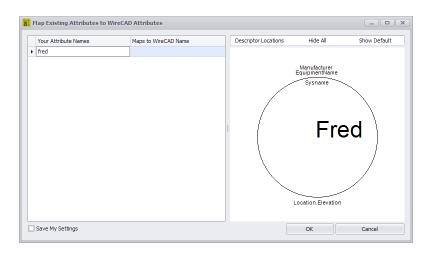
Possible Uses

- Create overall systems views.
- Create drawings from imported data.

lats Nest	Cleanup Cables	Filet All Cables
Ratsnest	Cleanup	Filet
Show Cable Numbers	Avoid Other Cables	Distance 0.25
Clear All Cables		
		Cancel

- This tool has three sections. The Rats Nest section does the work of placing the cables in the drawing as defined in the Cables database.
- [Ratsnest] Run the utility to place the cables.
- Show Cable Numbers With or without cable numbers.
- [Clear All Cables] Removes ALL cables from the drawing. Not just ratsnested cables. This will remove ALL.
- [Cleanup] Applies the auto-router to all cables in the drawing.
- Avoid Other Cables Auto-router avoids other cables on cleanup.
- [Fillet] Applies fillets to ALL cables in the drawing.
- Distance Fillet distance in 100/DU.

4.2.2.13 WireCADify Block



Drawing > Advanced Tools > WireCADify Block Commandline: wirecadifyblock *Explanation*

Occasionally you will want to use the geometry of a non-WireCAD generated CAD block. In order to do this you will need to give the necessary attribute set to the CAD block so that it can function in WireCAD as a working assignable entity.

Steps

- Start the command.
- Select a standard CAD block. It must be a block and not exploded entities.
- Follow the directions in the dialog to complete the process of adding the WireCAD attribute set to the CAD block.

Possible Uses

- Use existing CAD drawings and work with WireCAD to move the drawing forward.
- Create custom appearance.

- Attribute Map Grid Map your attribute to WireCAD's.
- Descriptor Locations Reposition the base WireCAD attributes using the Descriptor Locations map.
- Hide All Add all the WireCAD attributes but hide them from view.
- Show Default Show the default attribute set.
- Preview Preview of the merged block.

4.2.2.2.14 Add Connection Point

Add Connection Point	to Existing Block (Insert)
Port Name	My Port Name
Signal Type	VID -
Connector (Cable End)	BNC 👻
V Port Is Input	Label Text Height (1/100 DU) 0 🗘
Show Labels	
V Port Name	Connector Signal Type
🗹 Include Geometry	
Oircle O Square	◯ Triangle ◯ X
Geometry Size X (1/100 DU)	10 🗘 Geometry Size Y (1/100 DU) 10 🗘
Line Width	1 🔹
	OK Cancel

Drawing > Advanced Tools > Add Connection Point Commandline: addconnectionpoint *Explanation*

If you need to place a connection point (a point to which you can connect a WireCAD cable). You can use this tool.

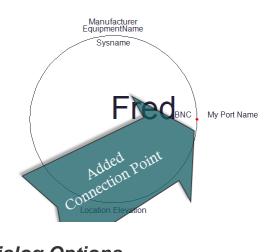
You must use this tool on blocks that have the WireCAD attribute set.

Steps

- Start the command.
- Select a WireCAD block or a block that you have run the WireCADify command on.
- Select the geometric point at which the connection point will appear. This should be something that is easy to snap a WireCAD wire to.
- Follow the directions in the dialog to complete the process of adding the WireCAD attribute set to the CAD block.

Possible Uses

- Use existing CAD drawings and work with WireCAD to move the drawing forward.
- Create custom appearance.



- Port Name, Signal Type, Connector (Cable End), Label Text Height, Show Labels
- Port is Input This will determine which side the label appears on.
- Include Geometry Display something to snap to.

4.2.2.2.15 Cable Connection Exists

Cable/Ports	Already Exist				70
he source [out his could be le	tput] you are trying gitimate (like a Y co st with this port set	nnection) or it cou			arrants scrutiny.
CableNo	SrcSys	SrcPort	DstSys	DstPort	CableErrorS
DA-1007-	O2R-01	AES 1,2	Embedder-01	AES 101	SourceExists
					New Number 🥥
			Allow	Duplicate (Inclue	New Number 🍥 ding Number) 🔘

Not directly callable Commandline: none

Explanation

The standard cable number assignment process is a multi-step process. One of the checks that is performed is to see if the ports to which we have attached our cable are already assigned to some other cable in the database. If they are found to exist in the database this dialog is shown indicating whether it is the source or the destination that is in question. Bear in mind that multiple records might meet this criteria; hence the grid.

There are legitimate instances where this dialog will be shown and your choice requested:

- Y cable The first assignment will proceed without error. The second will show this dialog indicating that the source exists. As it should. You have a choice regarding numbering in this case. Do you duplicate the existing number with a new record in the database or request the new number.
- One-To-Many see above.
- Many-To-One Inverse of above. You will see the destination exists.
- If you land multiple cable on the same port to parallel the connection.

Pay close attention if you are presented with this dialog. It is catching a common mistake before it gets to your run sheet.

Prerequisites

At least one cable record in the **Cables** database.

Related Topics

<u>How To: Assign a Cable</u>โ๗ <u>How To: Assign Multiple Cables</u>โ๗

4.2.2.2.16 Spare Cable

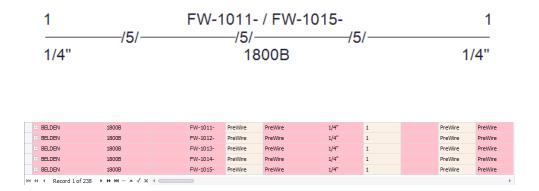
Add Spare	(s)				?
able Type: E	BELDEN-1800B	+ +	Signal Type:	1394b	+ +
Left Side			Right Side		
Location:	1	* +	Location:	1	* +
Connector:	1/4"	+ +	Connector:	1/4"	- +
ount:					5 (
ount: Geometry Show Lo	cation		Show Con	nector	5
Geometry			Show Conr		5 5
Geometry	ble Type				5 \$

Advanced Tools > Add Spare Cable(s) Commandline: AddSpareCables

Explanation

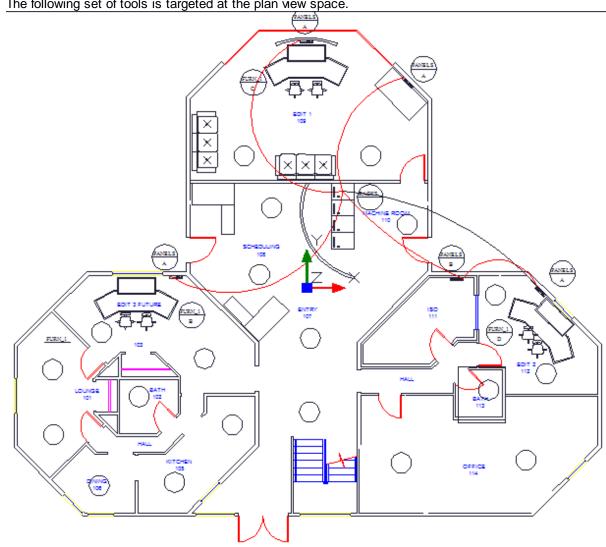
Place geometry in the drawing and cable(s) in the Cables database that represent spare cables.

The following images represent the above settings in both drawing and the Cables database.



Prerequisites At least one drawing Related Topics How To: Add a Spare Cable 145

4.2.2.3 Plan View and Layout Tools Dialogs



The following set of tools is targeted at the plan view space.

4.2.2.3.1 Take Offs

rin [:]	REED XML REED XLS	0		Inserts Lines Cirdes	Closed Polylines Points Dimensions	Generate	Count
ile	⊿ Export ⊿		Layer 🦼	En	tity Types 🦼	Function	S _i
	ItemHandle	_	Block Name or Entity Type	Ignorel	nCount		equipment12x12=4
۲	1707C	٩	equipment12x12			<u>^</u>	4-Way Switch=1 B-Size Plotter 3D View=4
Î	1708A	ø	equipment12x12				Commercial Systems Sound=4
	17098	¢	equipment12x12				Commercial Systems Phone Public=1 3-Way Switch=4
	170A6	¢	equipment12x12				Annunciator=4 Blank Ceiling Outlet=2
	17669	ø	4-Way Switch				Diank Centry Oudet=2
	176BE	ø	B-Size Plotter 3D View				
	17C80	¢	Commercial Systems Sound				8
	17C8E	¢	Commercial Systems Sound			U	8
	17C9C	¢	Commercial Systems Sound				
	17CAA	¢	Commercial Systems Sound				
	17CCC	<u></u>	Commercial Systems Phone Public				
	18298	<u>v</u>	3-Way Switch				
	182A6	<u>v</u>	3-Way Switch				
	18284	w	3-Way Switch				

Drawing > Plan View and Layout Tools > Take Offs Commandline: showtakeoffs

Explanation

Often we need to count items in the plan view space for quoting or other purposes. The Take Offs tool facilitates this process by filtering the drawing for specific entity types on specific layers then counting those instances.

Possible Uses

- Quote preparation.
- Trouble-shooting.

Related Topics How to Pull a Take-off 150

- Print Print the grid.
- **Export** Export the grid.
- Layer What layer are we searching for the selected entity type(s).
- Entity Types What entity type(s) are we searching for.
- Generate Do It! The results will be displayed in the grid.
- Count Count the items in the list. The results will be displayed in the right-hand list.
- ItemHandle ShowMe Zooms to show the item in the drawing.
- IgnoreInCount Ignore me when counting.

4.2.2.3.2 Location Boundary

lame:				•
ocation Kind	Adv	vanced		
a		Misc		^
None		Automatically Nest Locations	True	
Campus		Boundary Entity	Rectangle	
U campus		Show Name In LineType	True	
O Building				
Floor	1			
O Room	-			
O Room				
🔘 Rack				
Elevation				
🔘 Slot				

Drawing > PlanView and Layout Tools > Location Boundary Commandline: pw

Explanation

Define geometric boundaries for locations important to the design. For example we would want to know where on the drawing the Machine Room is but not necessarily the kitchen (unless part of our cable ends up in the kitchen).

Prerequisites

1. Source and destination Location Boundaries placed in the Plan View space.

Related Topics How To: Place a Location Boundary 154

Operation

- 1. Start the tool.
- 2. Select a text entity with the name of the location to pre populate the dialog.
- 3. Set the location type and geometry type.
- 4. Draw the boundary
- 5. Done. Lather , rinse, repeat.

Related Topics

- Name The location name. Either from the selected entity or entered directly or selected.
- Location Kind Select the level of the location that you are drawing a boundary for.
- Automatically Nest Locations Searches the drawing for containing boundaries and formats a nested location string. The creates an entry in the Locations table if not found.
- Boundary Entity Boundaries must be a closed polyline of some sort.
- Show Name in LineType Creates a new LineType with the name of the location and renders boundary entity with the new LineType.

4.2.2.3.3 Draw Backbone (ENT Only)

	Geometry								
Mode									
New Backbo	ne Backbon	e ID 100	1 🗘 B01001	O Use Existing Ava	ailable Sel	ect Existing Back	bone Star	ting Number	Select 🔻
From				Cable Type	* +	То			
ocation Filter			•	Cable Type Info Label		Location Filter			-
Patch Panel ID			+ + ↔			Patch Panel ID			+ + ∂
Available Ports						Available Ports			
Name	Туре	Conn	From/To			Name	Туре	Conn	From/To

Drawing > PlanView and Layout Tools > Draw Backbone Commandline: none

Explanation

Backbones are collections of cable/fiber that are contained in a single jacket that run from one location to another and are typically sized for growth. An example might be a fiber optic cable that contains 288 fiber cores that runs from building A to building B. We know that initially we will not use all 288 fibers and have planned for growth. As the facility needs change the usage of the backbone's fibers change.

WireCAD maintains backbones just like any multi-core cable with the exception that the Cables table record is flagged IsBackBone = true.

WireCAD will create a cable record for every core in the Cable Type used.

Prerequisites

- 1. SysNames assigned to the panels/equipment to which you will attach the ends of the Backbone.
- 2. Multi-core Cable Type representative of the Backbone.

Operation

This tool allows you to draw geometry in the Plan View space that represents the path of the Backbone. The process requires the following steps:

- 1. Draw the polyline that represents the backbone.
- 2. If locations boundaries are found in the drawing the source and destination locations will be used. Otherwise you will be prompted to define a location for each end.
- 3. Next you will be presented with the New Backbone tool where you will select the source and destination panels/ports and the cable type.
- 4. Clicking [OK] will build a record in the Cables table for each core in the multi-core cable type.
- 5. The polyline length populate the cable record Length field.

Related Topics

How To: Create a New Backbone 245

- New Backbone Select whether we are creating a new number or assigning existing unused core.
- Backbone ID The Backbone number. This will be formatted based on the Project Backbone Format setting.
- Use Existing Available Pick a Backbone that has available cores.
- Location Filter Filter the list by location if the list is long and noisy.
- From Panel Info, To Panel Info Select the panel. The ports will be shown in the list.
- Cable Type Select the Cable Type.

4.2.2.3.4 Draw Cable

able Type Manu	1	 Cable Type 	
Source Inform	ation	Destination Ir	nformation
SRC Sys	DAJ-001		DAJ-002 • +
SRC Pin		▼ Dest Pin	-
SRC Loc	Location	Dest Loc	Location
SRC Conn		Dest Conn	
SRC Alias		DST Alias	
tegrator		Sheet	
gnal Type		▼ Length	
ser 1		User2	
ser3		User4	
able No			

Drawing > PlanView and Layout Tools > Draw Backbone Commandline: pwdc *Explanation*

This tool allows you to draw a cable in Plan View space that is assigned to the Cables table.

Prerequisites

- 1. SysNamed source and destination equipment placed in the Plan View space or:
- 2. Source and destination Location Boundaries placed in the Plan View space.

Operation

This tool allows you to draw geometry in the Plan View space that represents the path of the cable. The process requires the following steps:

- 1. Start the tool.
- 2. Select the source SysNamed equipment.
- 3. Select the destination SysNamed equipment.
- 4. Place the points in the polyline to finalize the appearance.

Related Topics

Dialog Options

• Cable No - Click the [...] button to generate a cable number.

4.2.2.3.5 Populate Cables

Populate Cables		X
Must connect to e	/to same location into a single line xisting equipment in the drawing t come and go to the same location s not found	
Polyline Bulge Factor		0.2 🜲
	OK	Cancel

Drawing > PlanView and Layout Tools > Populate Cables Commandline: popc

Explanation

This tool pulls the cables from the Cables table into the drawing. The assumption with this tool is that you will use it after you have done your functional drawings and assigned cable numbers and SysNames.

Prerequisites

- 1. SysNamed source and destination equipment placed in the Plan View space or:
- 2. Source and destination Location Boundaries placed in the Plan View space.
- 3. Cable data in the Cables table that matches the placed equipment or locations.

Operation

- 1. Start the tool.
- 2. Select options.
- 3. Click [OK] to run.

Related Topics How To: Populate Cables in Plan View 162

- Group Cables Collapse cables that go from the same source and destination SysName or Location into a single polyline with hash marks to indicate how many cables are represented by the one polyline.
- Must connect to equipment in the drawing Only connect to plan view SysNamed equipment.
- Ignore cables that come and go to the same location
- Flag if other is not found Draw a pointer out to the un-found equipment.
- Polyline Bulge Factor Non zero for arced cables.

4.2.2.3.6 Draw Prewire

rewire Info		X
Prewire cables works only if you have added location	Cable Type:	Select a Cable Type
boundaries to your plan vie drawing. If you have addee	/ Signal Type:	Select a Signal Type 🔹
SysNames you can use them as well but the locations are	How Many?	
not optional.	Count:	1 🔹
	Group count a	as one
	Length Divisor:	12 🛟
	Add Path to Name	ed Paths Table
	Make Named	Path
	Named Path Nam	e:
		OK Cancel

Drawing > PlanView and Layout Tools > Draw Prewire Cable Commandline: pw

Explanation

This tool allows you to draw geometry in the drawing that represents cables that have not yet had their functions assigned. The only thing we know about these cables is the locations from which they start and end and the Cable Type. A record will be added to the Cables table based on the count defined. The record is marked Available and PreWIRE. Prewire cables can be automatically consumed later if the

Prerequisites

1. Source and destination Location Boundaries placed in the Plan View space.

Operation

- 1. Start the tool.
- 2. Fill in the form.
- 3. Draw the cable path.

Related Topics How To: Draw a Prewire Cable in PlanView 164

- Cable Type Select the Cable Type.
- Signal Type Select the Signal Type.

- How Many How many wires of this type take this path. A record will be created for each.
- Length Divisor We will divide the length of the polyline by this value and place that info in the Length field of the record. For example, say your Drawing Unit = 1 inch and you want the length in the Length field to be displayed in feet. Your Length Divisor would be 12.
- Create Named Path Create an entry in the Named Paths table with the name provided and length of the polyline.

4.2.2.3.7 Populate Equipment

There is no UI for this function

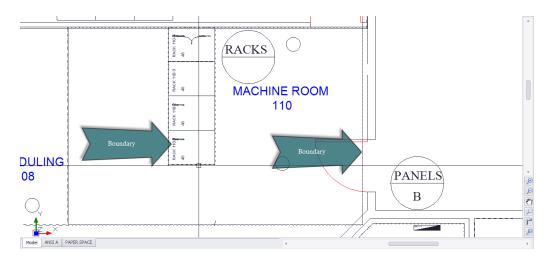
Drawing > PlanView and Layout Tools > Populate Equipment Commandline: pope *Explanation*

This tool pulls the Plan View version of the equipment from the Equipment List. The assumption with this tool is that you will use it after you have done your functional drawings and assigned cable numbers and SysNames.

This tool relies on the Plan View File in the device definition to know what to place.

Image Server 2K
%BLOCKS%/2D_ELEVATIONS/2U_2D_EL.DWG ····
%BLOCKS%\plan view\av lv\pushbutton station.dwg
[FditValue is null -
Mpeg 2 Video Server
360 SYST
SRVR
2.25
Pounds *
2
Rack Units(RU) -
19
Inches •
12

It relies on Location Boundaries in the drawing to know where to place it.



If the Plan View File is blank the Project Default Plan View File will be placed if the Location Boundary is found:

Application Menu > Settings [Project][Basic][Default Plan View Block File]

Default Plan View Block File:	%BLOCKS%\Plan View\equipment12x12.dwg	

Prerequisites

- 1. SysNamed equipment preferably with an associated Plan View File in the global Equipment Library.
- 2. Location Boundaries placed in the drawing.

Operation

- 1. Start the tool.
- 2. A message box will explain the operation of the function. Click [OK]. The tool will run.
- 3. At completion the tool will report the number of placed items.

Related Topics

4.2.3 Data Dialogs

The following is a collection of dialogs that may be presented while in the Data or Grid environment.

4.2.3.1 New Location

8 Add Loc	ation(s)		x
Campus		Count	1 ‡
Building		Count	1 🔹
Floor		Count	1 🗘
Room		Count	1 🔹
Rack		Count	1 🔹
Description			
Qualified		Add	Cancel
Qualified Lo	cation	400	Cancel
Status			

Database > Locations [New] Commandline: none

Explanation

This tool is used to create entries in the project Locations look-up table.

Prerequisites

1. None

Operation

- 1. Start the tool.
- 2. Enter the data in the fields as desired.
- 3. Verify the Qualified Location looks acceptable (its the part that the rest of WireCAD uses).
- 4. Click [Add].

Related Topics

Locations Look-up table Locations form reference Defining Locations ⁸⁸

- **Campus** Enter the **Campus** name if applicable. If there are multiple numbered campuses you can increment the **Count** field to append a number and create multiple records for each.
- **Building** Enter the **Building** name if applicable. If there are multiple numbered buildings you can increment the **Count** field to append a number and create multiple records for each.
- Floor Enter the Floor name if applicable. If there are multiple numbered Floors you can increment the **Count** field to append a number and create multiple records for each.
- Room Enter the Room name if applicable. If there are multiple numbered Rooms you can increment the Count field to append a number and create multiple records for each.

- Rack Enter the Rack name if applicable. If there are multiple numbered Racks you can increment the **Count** field to append a number and create multiple records for each.
- Qualified Location This is the important part. The Qualified Location is a concatenation of all the used fields. The fields are merely and organizational construct for you. WireCAD will use the Qualified Location throughout the application.

Example

In the following example we will add two locations using different approaches to achieve the same result. • Enter the data across all fields:

8 Add Lo	ocation(s)		x
Campus	LA	▼ Count	1 🗘
Building	THE FACTORY	▼ Count	1 🗘
Floor	Main	▼ Count	1 🗘
Room	MR	▼ Count	1 🗘
Rack	RK-10	Count	1 🗘
Descriptio	n		
	d Location ACTORY.Main.MR.RK-10	Add	Cancel
Status			

• Enter the data in a single field:

8 Add Loca	ation(s)		x
Campus		Count	1 🛊
Building		Count	1 🔹
Floor		Count	1 🔹
Room	•	Count	1 🔹
Rack	LA.THE FACTORY.Main.MR.RK-10	Count	1 🔹
Description			
Qualified LA.THE FAC Status		Add	Cancel

As you can see from the above examples the Qualified Location is the same for both. It does not matter which approach you take.

4.2.3.2 New Cable

8. New Cable				_ – ×
Cable Type Manu		•	Cable Type	•
Source Information		Destination Info	formation	
SRC Sys	DAJ-001	* +	Dest Sys	DAJ-002 🔻 🕇
SRC Pin		•	Dest Pin	•
SRC Loc	Location		Dest Loc	Location
SRC Conn			Dest Conn	
SRC Alias			DST Alias	
Integrator			Sheet	
Signal Type		•	Length	
User 1			User2	
User3			User4	
Cable No				
				OK Cancel

Database > Cables Commandline: cg

Explanation

This tool allows you to manually create a Cable in the Cables table.

Prerequisites

1. SysNamed source and destination equipment in the Equipment List.

Operation

- 1. Start the tool.
- 2. Select the source SysNamed equipment.
- 3. Select the destination SysNamed equipment.
- 4. Click the [...] button on the Cable No field to generate a Cable Number.

- Cable Type
- Source Information Set the source info.
- Destination Information Set the destination info.
- Cable No Click the [...] button to generate a cable number.

4.2.3.3 Save Cable Type As

9. Save 1828A	As:	? X
Manufacturer:	BELDEN	-
New Cable Type	1828A	
	ОК	Cancel

Database > Cable Type - File > Save As Commandline: showcabletypesgrid

Explanation

Create another entry in the **CableTypes** database record by copying the source record into a new destination record with a new **Manufacturer** and **Cable Type**.

Controls

- Manufacturer Select a Manufacturer.
- New Cable Type Name the new Cable Type.

4.2.3.4 New Manufacturer

File	Add Manufacturer
Save.	
File ⊿	
ManufacturerName	[
ManufacturerID	
DisplayInEquipment	
DisplayInCableTypes	
ManfacturerWebSite	
ManufacturerImage	No image data
Information:	

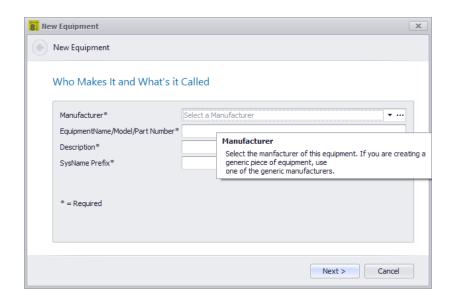
Database > Manufacturers [File > New] Commandline: none

Explanation

This tool allows you to create a new Manufacturer in the Global Equipment database.

- Manufacturer Name
- ManufacturerID Should match the Manufacturer Name field.
- DisplayInEquipment Show this Manufacturer in the Equipment Library.
- DisplayInCableTypes Show this Manufacturer in the Cable Types grid.
- Website
- Image Right-click and select Load from the context menu to add a Manufacturer logo.

4.2.3.5 New Equipment Wizard



Database > Equipment [File > New] Commandline: none

Explanation

This tool allows you to create a new Equipment definition in the Global Equipment database.

Related Topics <u>How to Add Equipment</u> 5ियो

- Manufacturer Select the Manufacturer. Clicking the [...] button opens the <u>New Manufacturer</u> (484) dialog.
- EquipmentName/Model/Part Number Name it.
- Description Describe it.
- SysName Prefix Be brief.
- Front Panel File Pointer to the front panel file. Must reside in the %BLOCKS% support path.
- Plan View File Pointer to the Plan View file. Must reside in the %BLOCKS% support path.
- Image Right-click and select Load from the context menu to add a image.
- Categories, Synonyms This is for you. Create categories and synonyms.
- Abbreviation, Accessory Of Not really used yet.

4.2.3.6 New Cable Type

₹ File	New Cable	туре	
Save Exit			
File 🔺			
Manufacturer ID Select N	lanufacturer C	able Type or P/N	
Description			
Cable Char Z	c	able OD	
Cable Guage	c	able Rating	
Cable Weight	‡ st	tandard Length	
Core/Conductor Configurati	on		
Shielding		Core Count	1 -
Conductors Per Core	1 💂	Conductor Count Including Shield(s)	1 🗘
		Default Core/Fiber Mode	•
Color Code Applies To:			
Conductors	O Cores	None	
Color Code			Ŧ
information:			

Database > Cable Types [File > New] Commandline: showcabletypesgrid

Explanation

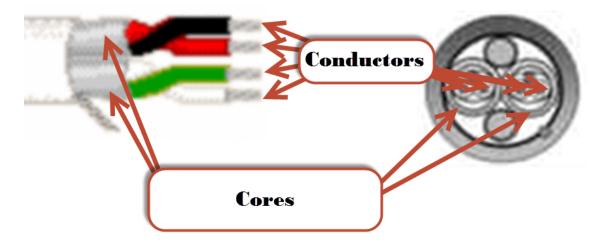
This tool adds a new **Cable Type** to the **Global Equipment** database. **Cable Types** may be either single or multi-core and have different shielding configurations. WireCAD projects use the multi-core core color code if any as the descriptor when identifying multi-core cables. The **Cable Type** Name and Manufacturer are used in the Cable record. All other fields are maintained for reference of the designing engineer.

More About Multi-core Cable Types

WireCAD can create multi-core cable types at two different levels of detail:

- Core level.
- Conductor level.

Cores have conductors. Conductors being the base unit. Most people using WireCAD will not document down to the conductor level but rather the Core level.



Prerequisites

1. None

Related Topics Create a New Cable Type 47

Dialog Options

- Save
- ManufactureID Select a manufacturer. Only Manufacturers that are flagged as DisplayInCabletypes appear in this list.
- Cable Type or P/N The name by which this cable type shall be known.
- **Description** A description for posterity.
- Cable Char Z Characteristic Impedance.
- Cable OD Outside Diameter.
- Cable Gauge Gauge.
- Cable Rating Rating.
- Cable Weight, Standard Length Standard put up length and weight.

Core/Conductor Configuration

- Shielding Shielding determines how many conductors.
- Is Multi-core Flag this Cable Type as multi-core.
- Core Count How many cores.
- Conductors per Core Usually one.
- Conductor Count Including Shield(s) Set automatically based on the core/conductor counts and the Shielding configuration.
- Default Core/Fiber Mode SM/MM.
- Color Code Applies To Apply a color code to the conductors, cores or not.

4.2.3.7 Synchronize Global Databases

	Database Location				
Host:	WireCADGlobalEquipment		indows Authentic	ation	
	Test Connection	User Name Password			
Import	t 🔘 E	kport	O Bidirecti	onal	
Domombo	r Settings			Sync	Cancel

Database > Sync Global Database .. Commandline: sync

Explanation

This tool allows you to sync two **Global** Databases. The current **Global** Database will be synchronized with the database you select in this dialog. The local and remote database may be either SQL Server of VISTADB. You may import, export or sync with respect to the **current Global** Database. An Import would collect data from the remote database and import it to the local Global Database.

Prerequisites

1. Two Global Databases. The currently active one and a remote one.

Related Topics

Sync Basics 195

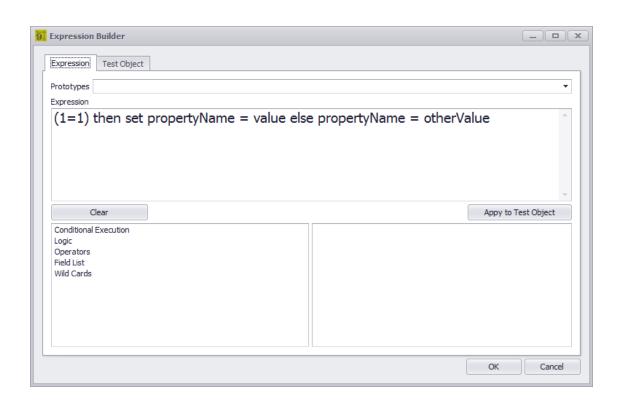
Dialog Options

- External Database Location
- Database is Server Based Enter the host information and login. Else browse to the location of the WireCADGlobalEquipment.vdb3 file.
- Import With respect to the current Global Database. This would import data into the current Global Database.
- Export With respect to the current Global Database. This would export data into the external Global Database.
- Bidirectional Sync the two.

Advanced Settings

• Which collections to include - By default you would want to sync all collections.

4.2.3.8 Expression Builder



Database > Any Commandline: varies

Explanation

This tool allows you to manipulate data using the Expression Engine.

For more information on Expression Syntax 2351.

Expression Tab

- **Prototypes** Select from a number of pre-formatted expressions. Then replace the variables as appropriate.
- Expression Enter your expression to evaluate here.
- [Clear] Clears the Expression.
- [Apply to Test Object] A prototype collection object is loaded into the property window of the Test Object tab. Clicking this button applies the Expression to the test object data. You will want to edit the Test Object data before executing this command so that you have a meaningful test.
- Left List Variables, operators and fields to apply to the expression.
- **Right List** Detail variables, operators and fields. Double-clicking a item here will insert it into the **Expression** window at the caret.
- [OK] Do it to the data in the grid.

Test Object Tab

• **Property Window** - Displays a prototype of the grid collection item. Edit this to have test data on which to apply your **Expression** when the **[Apply to Test Object]** button is clicked.

4.2.3.9 Find and Replace

9 Find and Rep	lace	? X
	ace tool will searchs the current selecti h no selection the entire grid is searche	
Find:		
Find Options	Contains 🔻 🗹 Ignore Read	Only Columns
Replace With:		
Find Nex	t Replace Find and Replace All	Cancel

Database > Any Commandline: varies

Explanation

This tool allows you to find and replace string within the open grid. Searches the current selection if any. If not, searches the whole grid.

Related Topics

Grid Basics 38

Controls

- Find Search Text.
- Find Options -

Contains - Any or whole Find string exists. **MatchCase** - Any or whole Find string matches case sensitive. **Exact** - Whole string matches exactly.

- Ignore Read Only Columns Searches only columns that can be edited.
- Replace With Replace the found part with this.
- Find Search and highlight the first found instance.
- Replace Do the replace the found instance.
- Find and Replace All Do it to all found instances.

4.2.3.10 New Next Number

9. New Next Number			? X
Sequence Key	Next Number	1 🔹 Context	All 🔻
		ОК	Cancel

Database > Next Numbers - File > New Commandline: nn

Explanation

Add a new Next Number item. Next Numbers are normally added automatically but if you need to take control and add your own.

Next Numbers use a Sequence Key and an integer within a context.

Example

Say our cable number is V-1001. V is the **Sequence Key** and 1001 is the integer **Next Number** in the **Context** of Cables.

or:

Our SysName is SRVR-101. SRVR becomes the **Sequence Key** and 101 the **Next Number** in the **Context** of SysNames.

Related Topics

<u>Grid Basics</u> 38 <u>Next Numbers</u> 108

Controls

- Sequence Key What is the part we are sequencing on.
- Next Number Integer next number.
- Context -
 - All Backbones Circuits Cables SysNames

4.2.3.11 Attach Document

Attach Document	× ?
File	
Description	
	OK Cancel

Database > Most Commandline: varies

Explanation

Many of the grids in WireCAD support Attached Documents. The document can be of any file type. The document is stored in the database as a Binary Large Object (BLOB). Attached document can be launched from the grid by clicking the hyperlink. The document will be opened by the system reader of the stored file type.

► 🗆 A	۹D-	-01		Location		Elevation	MSTCAM 1	BLACKMAGIC	TERRANEX		
	Documents Collection										
	File Name winwin.jpg			Description	escription DocumentSize		CreatedBy		CreatedOn	ModifiedOn	
				Some Descriptive Text	112 KB		chris_000		12/16/2016	12/16/2016	
E A	<u>۱</u>	۵ŋ		Location		Flevation	MSTCAM 0	BLACKMAGIC	TEDDANIEY		

Related Topics Grid Basics 38 Next Numbers 108

Controls

- File Browse to the file to attach by clicking the [...] button.
- **Description -** More words.

4.2.3.12 Database Host Settings

9 Database H	lost Login Info	? X					
Database server responded with: Login failed for user							
Host Name	l\sqlexpress						
Schema Name							
Use Window	ws Security						
User Name							
Password							
Test Conn	ection OK C	ancel					

Project > Open Project Fails Commandline: op

Explanation

The only reason you will see this dialog is that you have attempted to open a SQL project where the database server is unreachable or has actively refused our connection. Here you have a chance to fix **Host** and **User** login Info.

• **[Test Connection]** - make sure that this returns that you can successfully connect to the database before clicking **[OK]**.

4.2.3.13 Filter Editor

lter Equipment			
And O			
User 1] Equals Use Me	0		
		Apply	Cancel

Various Commandline: none

Explanation

The filter editor allows you to create filter criteria base on the collection fields combined with a logical operator and a value.

Click the [+] button to add another complex condition.

Related Topic BOM Generator 563 AutoBlock 118 How To: Filter Reports 170

4.2.3.14 New Todo

9. New Todo List Item	? x
Item	
Description	*
Assigned To	
Priority	•
Status	•
Expected Completion Date	•
Completed Date	•
	OK Cancel

Database > Project > Todo - File > New Database > Project > Equipment List - Todo Database > Project > Cables - Todo Database > Project > Drawings - Todo Commandline: varies

Explanation

Create a new Todo List item. When launched from the following grids it will associate the Todo List item with the selected record(s):

- Equipment List.
- Cables.
- Drawings.

Related Topics <u>Todo List</u> [362] Settings <u>Todo List Grid</u> [540] <u>Grid Basics</u> [38]

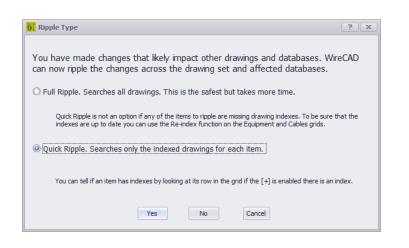
Controls

- Item Words.
- **Description** More words.
- Assigned To Who is to do it.
- **Priority** Set the urgency.
- Status Where are we at in the process.
- Expected Completion Date When are we expecting this done by.
- Completed Date When did we get it done.

You can see the Todo List items in the Todo List grid and in the associated grids:

E		g a column header here to group by that column																	
	S	ysname 🔺	Available	Location			Elevat	tion /	Alias		Manufact	urer	Equip	omentName		Flags	SysNam	eUser 1	
٩	•																	â	
1	▶ 🖽 11:07:51 PM			sdfad	fad 9		999		11:07:5	1 PM	360 SYSTEMS		Image Server 2K				user 1	0	
		Assigned Cables	Todo List Iter	ns by Equipment	\geq														
		۹ Item	Description	AssignedTo	Priority	Expected	dCo Comple		mpletedDate Stati		edDate Status 0		CreatedBy		CreatedOn	Modif	iedBy	ModifiedOn	
		Do Something	Do Something	Fred Flins 🔻	•	12/26/20	16 🔻		-		-	chris_000		12/01/2016	hris_	000	12/16/2016	-	
	11:08:03 PM mv location from the plugin						999		11:08:0	3 PM	360 SYST	FMS	Imac	e Server 2K			Fred		

4.2.3.15 Ripple Choice



Post Save - Rackbuilder Drawings, Equipment List, Cables table, Locations table Commandline: varies

Explanation

Something has changed that potentially effects data in other drawings and databases. This is your chance to update those other entities in other places.

Controls

- Full Ripple Search all drawings for the changed items and update.
- Quick Ripple Search only indexed drawings. If the indexes are up to date this can significantly reduce ripple time.
- Yes Do it!
- No Don't Do It!
- Cancel Do nothing.

4.2.4 Report Dialogs

4.2.4.1 New Report Wizard

Report Wizard						
3%	Welcome to the Reports Wizard					
	This wizard will create a new report with data-bound controls to display information from the dataset you specify.					
And and an one of the second	Click Next to co	ntinue.				
A Jacks		&Report Type				
		Standard Report				
		🔘 Label Report				
Later Later						
	Cancel	< Back Next >	Finish			

Reports > New with Wizard ... Commandline: rw

Explanation

Create a new report using the New Report Wizard.

NOTE: We recommend that you find an existing report that is close to what you are looking for and modify that after saving it with your name. It will save you time and effort.

Prerequisites

1. Open Project

Operation

- 1. Start the tool.
- 2. Step through the wizard
- 3. Finish the wizard.
- 4. Edit the report in the designer to finalize it.

Related Topics Creating Reports 176

4.2.4.2 Scan for Discrepancies

Scan For Discrepancies		×
Scan for project discrepencies		
🔘 Reset All Data	Append Discrepency Records	
☑ Disconnected Pin (noisy)		
☑ Duplicate Ports in Database		
🗹 Duplicate Cable Numbers in Database		
🗹 Duplicate SysNames in Database		
Forgotten SysNames (assigned yet not	displayed in any Drawing)	
		_
Clear All Discrepancy Data	OK Cance	el
Status		

Reports > Scan Project for Discrepancies ... Commandline: dr

Explanation

Scan for common issues.

This tool will generate data in the project Discrepancies table. You can view it by double-clicking the item in the Project Explorer.

Prerequisites

1. Open Project

Operation

- 1. Start the tool.
- 2. Select items to scan for.
- 3. Open the project Discrepancy report from the Project Explorer.

- **Disconnected Pins** This is really noisy as it shows all available ports (from the global database) that do not have connections to them in the **Cable** table.
- Duplicate Ports If you duplicated a port in two places you will be warned on cable number assignment this will warn you again.
- Duplicate Cable Numbers If you duplicated a number here it is.
- Duplicate SysNames If you duplicated a SysName here it is.
- Forgotten SysNames If the SysName appears in the Equipment List but not in any drawing.
- Append/Reset Keep the discrepancy list intact or reset and start over.
- Clear All Data Reset and start over.

4.2.4.3 Report Manifest Editor

Project File View Database Plugin C New with Wizard G Generate Bil of Materials C Scan Project For Discrepandes Reports Project Explorer C a x Ttem	Report Manifest Creato	your custom report with popup ptions	
Optional Report Manifest Creator Report Manifest creator tool. Create one per report. To be screen grabs: one small 323:23 and one large 1282:128. The report. Place the xml manifest file in the same folder as the File Name Caption	n caption and describe your repx file.	all the second sec	Image: Section 2 Image: Section 2<
New	Open Save Cancel		

Report > Smart Tag Commandline: none

Explanation

If your Report Show Mode = Gallery the gallery items will display:

- Preview bitmap.
- Large bitmap when hovering over the gallery item.
- Caption text.
- Descriptive text.
- Tooltip text.

When the gallery loads it searches for a manifest file with the same name as the report file. **Example**:

MyReport.repx - report file. MyReport.xml - manifest file.

Make sure that the manifest file name matches the report name and that they are in the same directory.

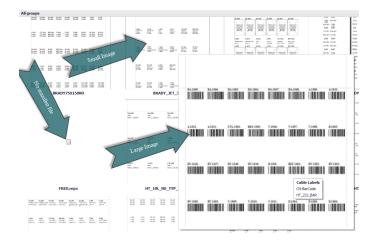
If the manifest file does not exist the stock bitmap is shown and the file name is used as a caption.

Prerequisites

A custom report.

Related Topics Report Show Mode = Gallery 364

- File Name the name of the report repx file.
- Caption gallery item caption.
- **Description** gallery item description.
- Tooltip text when hovering over the gallery item.
- Small Image -
- Large Image displayed when the gallery is expanded and the item is hovered.



4.2.5 Plugins Dialogs

4.2.5.1 Plugin Manager

6 L	oaded Plugins (these	plugins have all regist	ered at least one but	ton on the gui):		Load
7	Name	Description	Copyright	Website	Author	Unload
	All Block Extractor	Extracts All Bloc	Copyright 2009	www.wirecad.com	Holbrook Enterpr	
	Batch Plotter	Batch Plotter Utility	Copyright 2009	www.wirecad.com	WireCAD	Rescan and Reload All
	Block File Fixer	Changes entities	Copyright 2009	www.wirecad.com	Holbrook Enterpr	Plugin Creation:
	BrotherPTouch	Brother P-Touch	Copyright 2009	www.wirecad.com	Holbrook Enterpr	
	DWG Diff	Drawing Diff Tool	Copyright 2004	www.wirecad.com	Holbrook Enterpr	Add/Edit PI Info (*.wpi file
	PatchVerx	Patchbay Design	Copyright 2009	www.wirecad.com	Holbrook Enterpr	Edit Plugin Code
	WireCAD.Pinouts	Pinout creation t	Convright 2009-	www.wirecad.com	Holbrook Enterpr	·
	Name	Description	Author	Website	Copyright	
	Name	Description	Author	Website	Copyright	
	Name Auto Discovered Plugi	· ·	mm		Copyright	
		ns (Silent load - may d	or may not have gui		Copyright	
	Auto Discovered Plugi	ns (Silent load - may d Path	or may not have gui (NameSj	elements)	Copyright	

Plugins>Plugin Manager Commandline: pim

Explanation

The WireCAD Plugin Manager shows:

- Loaded plugins.
- Unloaded plugins.
- Automatically Discovered plugins.

Only Enabled plugins are eligible to load/unload. Disabled plugins will not show here.

WireCAD Plugin Types

WireCAD has facility for two types of plugin:

- 1. Auto-discovered plugins. These plugins register themselves on application startup. They may or may not include a graphical user interface element.
- Registered plugins. These plugins register themselves via a plugin manifest file located in the C: \users\public\documents\WireCAD\WireCAD9\Plugins\Active Plugins*.wpi. Registered plugins may place a button somewhere in the WireCAD workspace, register a corresponding Commandline shortcut, and may respond to WireCAD events.

Related Topics

Included Plugins 2021 WireCAD Software Development Kit (SDK) 5801 Enable/Disable Plugins 361

Dialog Options

- Load Loads the selected plugin from the Unloaded Plugins grid. This function does not apply to the Automatically Discovered plugins.
- Unload Unloads the selected plugin from the Loaded Plugins grid. This function does not apply to the Automatically Discovered plugins.
- Rescan and Reload All Unloads then rescans and reloads all plugins. Applies to all plugins.

Plugin Creation

• Add/Edit PI info (*.wpi) - Show the Add or Edit Plugins dialog to work with WireCAD Plugin Info files (wpi).

File	Add Or E	dit Plugins	- - x
New Open Save	Exit		
File	4		
Name		Description	
Author	Holbrook Enterprises, Inc.	Website	www.wirecad.com
Copyright	Copyright 2000-2015 Holbrook Enterprises, In	c. All Rights Reserved	
Button Info			
Tool Tip		Caption	
Ribbon Page	-	Ribbon Page Group	_
Button Bitmap		No image data	
Command Line and Assem	bly Info		
Command Line Long Name		Command Line Short Name	
Command Line Alt		Assembly Name And Path	
Name Space Dot Class		Static Method Name	•
Information:			

• Edit Plugin Code - Open your IDE to edit code. You will be prompted to enter a path to the IDE exe file.

4.2.5.2 Script Editor/Runner

Script	_ – ×
File Edit Format	*
🗋 🥁 🖶 🖄 🖏 🖏 🕫 🥫 🥵 😇 🐨 🖡 🔹 👘 Window on Top	
<pre>1</pre>	^
Error List Compiler Output	
Line Column Description	
WireCAD Script.cs	Column: 90 //

Explanation

Often times there are operations that you find yourself repeating some thing or process endlessly. Scripts are a good way to automate those processes. There are many example scripts to browse through and see how they work. Example scripts can be found at: c:\users\public\documents\WireCAD\WireCAD9\scripts*.cs

NOTE: Scripts that run in WireCAD MUST have the following method signature or they will not execute:

```
using System;
using System.Data;
using System.Text;
using System.Windows.Forms;
using System.Diagnostics;
using System.Reflection;
using WireCAD;
using WireCAD.Interfaces;
//You may add additional using statements as needed but the listed ones are the
minimum.
public class Script
{
      public static void Run(Workspace ws)
       {
              //do your stuff here
       }
}
```

Possible Uses

- 1. Title block filling.
- 2. New Drawing creation.
- 3. Database cleanup.

Usages

- 1. Launch the tool.
- 2. File>Open an example script. (c:\users\public\documents\WireCAD\WireCADx\Scripts\).
- 3. Read the comments (they are the ones proceeded by //).
- 4. Tweak the script to suit your needs.
- 5. Run it by clicking the [RUN] button



6. Fix any compiler errors. Lather, rinse, repeat.

Dialog Options

- New Creates a new script with the necessary method signature.
- **Open -** Opens a .cs file to run.
- Comment Comment out your selection. Useful for hiding code from the compiler without deleting it.
- Un Comment Un comment your selection.
- Indent, Out dent
- Run If the Error List is empty then Do It. If if fails it will tell you why in the Compiler Output window.



- Window On Top Make this the topmost window always.
- Error List Design time scripting syntax errors.
- Compiler Output Run time compiler and script execution errors, as well as Trace messages.

4.2.6 PDF Viewer Dialogs

4.2.6.1 **PDF** Print Preview

t			
	Printer name:	HP Officejet 7500 E910 on HEISERVER8 •	Preferences
	Status:	The printer is ready.	
	Location:		
	Comment:		
	Document(s) in queue:	0	
So	Printing DPI:	600 ‡	
S	Number of copies:	1 \$	Collate
. משפט המערכים היו	Page range:	(i) All	
		Current page	
· •		O Pages: 1-1	For example, 5-12
	Page sizing:	@ Fit	
		Actual size	
		Custom scale: 100 %	
	Orientation:	 Auto portrait / landscape 	
		O Portrait	
		○ Landscape	
	Paper source:	Automatically Select	
	File path:		Print to file
ale: 63.27 % H4 ⊀ Page 1 of 1 ≯ H4			
		Print	Cancel

Project Explorer > Double-click PDF File [Print] Commandline: None

Explanation

This is the **Print Preview Dialog** for the **PDF Viewer**. It's pretty standard so we won't enumerate all the controls here.

Prerequisites

1. At least one pdf file saved in the project drawings path.

4.3 Forms

Forms differ from dialogs in that they occupy the full client docking area of the main window. Only one form may be active at a time. That form may host other dialogs.

4.3.1 Application Menu Forms

The forms in this section are specific to the **Application Menu**.

4.3.1.1 Project Information

me W	ireCAD Edit Suite Project	Description							
rrentProjectRevision		 DateCreated 	11/02/2016 12:00:00 AM		DateModified	11/02/2016 12:00:00 AM			
stModifiedBy			TotalEditTime	1.03:04:29.57553					
eckedOut	Check Out Project	CheckedOutBy		 ExpectedReturnD 	ate				
ijectInfoUser1		ProjectInfoUser2							
ojectInfoUser3		ProjectInfoUser4							
ojectInfoUser5		Project Lead Person							
Related Projects Proj	ect File Info								
File Name	WireCAD Edit Suite Project.wc6plf		Full Name	C: \Users\Public\D	cuments\WireCAD\	WreCAD9\WreCAD Demo Project\WreCAD Edit Suite Pr			
Project Path	C:\Users\Public\Documents\WireCAD\WireCAD9\Wire	eCAD Demo Project	Project Name	WireCAD Edit Suit	e Project				
Description									
GUID	a3061247-2d48-4cc2-933a-5142702c0c05		File Version	6.0	6.0				
Database Name	WireCAD Edit Suite Project								
Database Path	C:\Users\Public\Documents\WireCAD\WireCAD9\Wire	eCAD Demo Project\Project (Databases						
Database Host			Schema						
Database User	WireCADUser		Database Passwo	rd ******					
Database File Name	WireCAD Edit Suite Project.vdb3		Provider Meta Da	ta Key					
🗹 Use File Based Da	tabase								
Use Windows Sec									

Application Menu > Project Info Commandline: Project Info

Explanation

This form contains the basic project information and status. Project name and description here will show up in the reporting engine and can be used elsewhere. The CurrentProjectRevision field populates the Cables and SysNames grid when an edit is made or a new record added the value here will populate there.

The Project Checked-out status can be shown modified here.

Project File Info Tab

Read only look at the PROJECT_NAME.wc6plf file.

Related Projects Tab

Here you can Add/Edit/Remove related projects. Related projects show in the Project Explorer (readonly) and can warn if duplicate SysNames and Cable Numbers are about to be used.

4.3.1.2 Permissions Grid

Name	AllowEdit	AllowDelete	AllowAddNew	GroupName
CableTypes	×		×	Administrators
ColorCodes	×		×	Administrators
Connectors	×	\checkmark	\checkmark	Administrators
Kits		\checkmark	\checkmark	Administrators
Manufacturers	×	\checkmark	\checkmark	Administrators
Equipment	×	×	\checkmark	Administrators
Inputs	~	\checkmark	\checkmark	Administrators
Outputs	~	\checkmark	\checkmark	Administrators
PinOutProfiles	×	\checkmark	×	Administrators
Pins	\checkmark	\checkmark	×	Administrators
Preferences	×	\checkmark	\checkmark	Administrators
SignalTypes	×	\checkmark	\checkmark	Administrators
Accountinfo	×	\checkmark	\checkmark	Administrators
BOMMaster	×	\checkmark	\checkmark	Administrators
BOMDetail	×	\checkmark	2	Administrators
CableNoFormatMaster	×.	×	×	Administrators
Cables	×	\checkmark	\checkmark	Administrators
Chases	×	\checkmark	\checkmark	Administrators
Circuits	×	\checkmark	\checkmark	Administrators
DefaultDisplaySettings	×	×	×	Administrators
DiscrepancyReport	2	×	×	Administrators
DrawingRevisions	×	\checkmark	2	Administrators

Application Menu > Security Tools > Permissions Viewer Commandline: none

Explanation

This grid shows the different permissions groups and collection permissions. This grid is read only and only visible if you are a member of a group with administrator privileges.

4.3.2 Global Data Forms

The forms in this section are specific to the Global Equipment Database.

4.3.2.1 Manufacturers Grid

ManufacturerID	 ManufacturerName 	DisplayInE	DisplayInC	Ma	ManufacturerImage	Mo	Mo	Crea
		E			No image data			
⊞ 0000	0000				No image data		11/	11/2
⊞ 360 SYST	360 SYSTEMS	×		<u></u>	36 Systems BROADCAST		7/1	11/2
360SYSTE	360SYSTEMS	1			No image data		10/	10/1
E 3COMM	3COMM	×			لا عcom		2/1	11/2
🖽 AA	AUDIO AUTHORITY	×.			No image data		11/	11/2
E ACCOM	ACCOM	\checkmark			No image data		2/1	11/2
ACTIVE STORAGE	ACTIVE STORAGE	E			No image data		11/	11/2
⊞ ADC	ADC	×			ADC		2/1	11/2
ADTEC DIGITAL	ADTEC DIGITAL	1		<u>htt</u>	No image data		8/1	8/14
E AIR TOOLS	AIR TOOLS	\checkmark			diclose		8/1	8/27

Database > Manufacturers Commandline: man

Explanation

This tool provides access to the **Manufacturers** table of the **Global Equipment** database. The grid is hierarchical. The **[+]** buttons may be expanded to show related equipment. Deletes here cascade, deleting any equipment that is associated with the **Manufacturer**.

Prerequisites

1. There is at least one Manufacturer added to the Global Equipment database.

Related Topics

<u>Grid Basics</u> 38 <u>How To: Add Manufacturers</u> 484

Form Options

- New Show the New Manufacturers dialog [484]
- Attach Document ... Any document may be attached to any record. This is a handy place to store manufacturer data sheets, images and such.
- **Remove Duplicates** This function scans the table for duplicate Manufacturer Names. If found the following occurs:
 - All equipment is rolled up under the top instance of the manufacturer.
 - All other instances are deleted.
 - The collection is saved.

NOTE: a safety valve exists where if the Manufacturer is flagged to DisplayInCableTypes the function is ignored.

4.3.2.2 Equipment Grid

Equipment	FKManufac	ManufacturerID	EquipmentName	 Accessory Of 	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment
۴													
▶ ⊞ 854081	7a0279ac	BLON	ZCM-48-550		RF Distribu	RF Amp	0		0		0		
⊞ b09220c	b76c09bb	THOMSON	XtenDD		Production	Production	75		15	Inches	19		
⊞ 8c5cf05	7df89ef4	APPL	XRAID 5_6		DRIVE	DRIVE	0		0		0		
⊞ 6ded25	7df89ef4	APPL	XRAID 2-8TB		DRIVE RAID 5	DRIVE	0		0		0		
⊞ 492adb	a16a5015	AVID	XPress DV		NLE	Avid	0		0		0		
⊞ 1048eb	b4efdc5f-5	LEIT	XPR 12VA2		ROUTING S	SWITCHER	0		0		0		
⊞ 851def7	5b208bce	3COMM	XP 490		Router	RTR	0		0		0		
⊞ 56cb879	29029658	AMP	XL-1		AES Patch	Patch	0		0		0		
⊞ c1bb385	e711e9bb	EVERTZ	X-9504		4X1 ROUTER	ROUTER	0		1	Rack Units(0		
⊞ 1e0ac41	0aaf1726	PANA	WV-52038		3 UP Mono	MON							
⊞ 87308e	6346bcb8	CISCO	WS-C2950T		ETHERNET	DATA SW	0		0		0		
⊞ fefa969	9a354944	TEK	WFM1740		Waveform	WEM	0		0		0		
⊞ c6fc4e0	2354b4d5	HARRIS	WESTRONICS		INTERFACE	INT	0		0		0		
⊞ 23ba99	99770629+	WAVETECH	WAVE1000		12X1 RF R	RTR	0		0		0		
⊞ 020decc	2354b4d5	HARRIS	Watchdog		Transport	DTV	0		0		5	Rack Units(
⊞ 8b8a4b	e0fa2923	CUSTOM P	WALL PANNEL		WALL PAN	TERM	0		0		0		
⊞ 38d1f7f	8a8a56d6	GNRC	VU METER.		AUDIO ME	AUD	0		0		0		
⊞ 3cf1b0f	8a8a56d6	GNRC	VTR SPARE		VTR	VTR	0		0		0		
⊞ 92cc551	e44b8613	GENERIC	VTR		VTR	VTR	0		0		0		
⊞ ee1701f	b35be399	VTEK	VTM-440		Scope	VTM	0		0		0		

Database > Equipment Commandline: eg

Explanation

This tool provides access to the **Equipment** table of the **Global Equipment** database. The grid is hierarchical. The **[+]** buttons may be expanded to show related **Inputs** and **Outputs**. Deletes here cascade, deleting any **I/O** associated with the **Equipment**.

Prerequisites

- 1. There is at least one Manufacturer added to the Global Equipment database.
- 2. There is at least one Equipment definition added to the Equipment table.

Related Topics

<u>Grid Basics</u> 38 <u>How To: Add Equipment</u> 5ि4ी

Form Options

- New Show the <u>New Equipment Wizard</u> [485].
- Attach Document ... Any document may be attached to any record. This is a handy place to store manufacturer data sheets, images and such.
- Clean This function scans the table for Equipment with no I/O. If found the following occurs: The Equipment definition is deleted. The collection is saved.
- Transfer to Different Manufacturer Allows movement of the selected device to a different Manufacturer.

Select Manufacturer		x
Select Manufacturer to move selected equipment to		
Please select a Manufacturer	ОК	Cancel

4.3.2.3 Default Signal Types Grid

olanation						
Type	Color	SignalType	OnLayer	CableManu	CableType	CableNoPrefix
			Click here to add a	new row		
AUD R	2	AUD R				A
Out	3	Out				OUT
2	4	?				HUH
_nul	5	_nul_				
1394b	Foreground	1394b				FW
310	7	310				310
4fsc	8	4fSC				v
AC-3	1	AC-3		BELDEN	1505A 003 ORG	DA
ADAT	ByLayer	ADAT		BELDEN	1505A 003 ORG	DA
AES	ByLayer	AES		BELDEN	1505A 003 ORG	DA
AES 1,2	Foreground	AES 1,2		BELDEN	1506A-002 Red	DA
AES 3,4	Foreground	AES 3,4		BELDEN	1506A-002 Red	DA
AREF	2	AREF				DA
ASI	Foreground	ASI		BELDEN	1505A 003 ORG	DA
AUD	2	AUD		BELDEN	1801A	AA
AUD L	2	AUD L		BELDEN	1801A	AA
AUD M	2	AUD M		BELDEN	1801A	AA
AUD R	19					AA
AUDIO AES	Foreground	AUDIO AES		BELDEN	1506A-002 Red	AA
AUDIO ANALOG	3	AUDIO ANALOG		BELDEN	1503A - Black	AA

Database > Default Signal Types Commandline: st

Explanation

This tool provides access to the Default Signal Types table of the Global Equipment database. Many of the default display behaviors originate here, for instance:

- The color of pins on a block.
- The color of cables.
- The Cable Type associated with the Signal Type.
- The Cable Number prefix.

These values are preempted by the Project Signal Types grid which has priority. If signal type information is required by the application it first looks to the project, then to the default.

Prerequisites

1. None

Related Topics Grid Basics 38

Form Options

• New - There is no New button on this grid. The New Record Row appears at the top of the grid:

Type	Color	SignalType	OnLayer	CableManu	CableType	CableNoPrefix
			Click here to add a new row			

- Rename I/O Signal Types Rename the Signal Type in this grid and all I/O in the global database.
- **Rebuild Signal Types from I/O** This function scans the Inputs and Output for Signal Types then: Checks existing in this grid.
 - Add if not found. Collection is saved.

4.3.2.4 Connectors Grid

Connector ·	Description	DefaultPinOut	Manufacturer	PartNumber	TerminationMet	ConnVendor1	ConnVendor2	ConnCost1	ConnCost2	ModifiedBy	ModifiedOn	CreatedOn
					ci	ck here to add a r	iew row					
e ?	Not Sure	[?] To [?] - 234							0	0	11/23/2008 10	11/23/2008 10:01
1.5MM	Audio Connector								0	0	1/30/2010 1:3	11/23/2008 10:01
⊞ 1/4*	UNBALANCED										8/9/2013 12:1	8/9/2013 12:16:2
⊞ 1/4°	BALANCED										8/9/2013 12:1	8/9/2013 12:13:4
⊞ 1/4°	MONO										8/9/2013 12:1	8/9/2013 12:13:5
⊞ 1/4°	BAL/UNBAL										8/9/2013 12:1	8/9/2013 12:17:2
1/4" TRS	Stereo or balan										7/26/2012 11:	7/26/2012 11:45:
1/4" TS	Instrument Level										7/26/2012 11:	7/26/2012 11:41:
⊡ 1/4"M	Mono 1/4" Phone								0	0	11/23/2008 10	11/23/2008 10:01
⊞ 1/4"S	Stereo 1/4" Ph								0	0	11/23/2008 10	11/23/2008 10:01
1/8" mini	1/8" mini headp								0	0	2/14/2012 11:	11/23/2008 10:01
🗉 1/8" Mini St	Audio Connector								0	0	9/24/2012 7:0	11/23/2008 10:01
1394	Firewire								0	0	7/7/2012 12:1	11/23/2008 10:01
15D	15 PIN D SUB								0	0	11/23/2008 10	11/23/2008 10:01
150 HD	15 PIN D SUB H								0	0	11/23/2008 10	11/23/2008 10:01
25D	25 Pin Dim								0	0	11/23/2008 10	11/23/2008 10:01
3.5mm	Standard 3.5m										7/7/2012 12:0	7/7/2012 12:07:4
36 ELCO	36 Pin Elco								0	0	11/23/2008 10	11/23/2008 10:01
1 36D	36 Pin D Sub								0	0	11/23/2008 10	11/23/2008 10:01
III 37D	37-Pin D-Sub C										1/24/2013 1:3	1/24/2013 1:38:1
3mPHX	3Pin Mini Phoenix								0	0	11/23/2008 10	11/23/2008 10:01

Database > Connectors Commandline: cn

Explanation

This tool provides access to the **Connectors** table of the **Global Equipment** database.

Prerequisites

1. None

Related Topics Grid Basics 38

Form Options

• New - There is no New button on this grid. The New Record Row appears at the top of the grid:



• Rename I/O Connector Types - Rename the Connector in this grid and all I/O in the database.

4.3.2.5 Cable Types Grid

ination																
Aanufactu	CableType	CableDescr	CableMulti	CableCore	CableCore	CableRating	CableCond	CableStand	CableWeight	CableOD	CableCharZ	CableGuage	CableVendor 1	CableVendor2	CableCost1	CableC
			8													
GENERIC	48 STRAND	48 STRAND	V		Numbered		48									
Conduc	tors Collection															
Cond	uctor Color		Cor	nductor Number		P	air Number			Pair Color Co	de		Fiber Mode			
17			17						17	17			MM			*
15			15										MM			
23			23													
28			28													
_																
										-						*
B GENERIC		36 STRAND	× ×		Numbered		36									
	a column he 4anufactu Conduc Conduc Conduc Conduc Conduc Conduc S 23 28 43 13 45 19 25 31 25 31 25 31 25 31 28 43 13 45 19 25 31 28 43 13 45 19 28 31 28 53 28 43 13 45 19 28 53 19 28 10 10 10 10 10 10 10 10 10 10	a catach holder hard to gate CableType dranufletum CableType a careaction 41 STRANDOLL a careaction 41 STRANDOLL Conductors Cabletion 10 Conductors Cabletion 11 20 20 3 3 4 </td <td>a calcular house have to group by that calcular house have to group by that calcular tearrificitum. Calcular house have have have have have have have hav</td> <td>a nicon header here to group by that culour ternificha</td> <td>a calcular hords for to grapp by that calcular terrifications (Calcular Calcular) Calcular (Calcular Calcular) Conductor Calcular (Calcular Funder</td> <td>a calcular handler hare to group by that calcular Harmfantun Calcitry Calcular (Calcular (Calc</td> <td>aranam Madar har E grada by har sakar Harnfatuu Gelerige Calebrae CaleCore CaleCor</td> <td>andam Mader hers to group by fait calour terrifictus</td> <td>aranim Maxime Varie II grade for Stat calami Harmforkun Zelekting Calektoren, Calektoren</td> <td>andami handar fare ta grado br Stat calami terrafication Calestone - Calesto</td> <td>andam Mader hart Egnac be hat scher terrifictus</td> <td>andam Mader fare Egyna for fair color: terrifet</td> <td>andam Mader fare is grade for fait calore terreficie Calefinge: Calefing</td> <td>andam Mader fare ta grade for fait calant terreficience calantime face for fait calantime cala</td> <td>andami Mader fair E grap for Set claim family family fam</td> <td>arakam Makah Iwat Sayada Iya Ada Sayada Iwa Ada Ada Ada Ada Ada Ada Ada Ada Ada Ad</td>	a calcular house have to group by that calcular house have to group by that calcular tearrificitum. Calcular house have have have have have have have hav	a nicon header here to group by that culour ternificha	a calcular hords for to grapp by that calcular terrifications (Calcular Calcular) Calcular (Calcular Calcular) Conductor Calcular (Calcular Funder	a calcular handler hare to group by that calcular Harmfantun Calcitry Calcular (Calcular (Calc	aranam Madar har E grada by har sakar Harnfatuu Gelerige Calebrae CaleCore CaleCor	andam Mader hers to group by fait calour terrifictus	aranim Maxime Varie II grade for Stat calami Harmforkun Zelekting Calektoren, Calektoren	andami handar fare ta grado br Stat calami terrafication Calestone - Calesto	andam Mader hart Egnac be hat scher terrifictus	andam Mader fare Egyna for fair color: terrifet	andam Mader fare is grade for fait calore terreficie Calefinge: Calefing	andam Mader fare ta grade for fait calant terreficience calantime face for fait calantime cala	andami Mader fair E grap for Set claim family family fam	arakam Makah Iwat Sayada Iya Ada Sayada Iwa Ada Ada Ada Ada Ada Ada Ada Ada Ada Ad

Database > Cable Types Commandline: ShowCableTypesGrid

Explanation

This tool provides access to the **Cable Types** table of the **Global Equipment** database. The grid is hierarchical. Clicking the [+] button will display a child grid of the **ConductorsCollection** for that record if any.

Prerequisites

1. None

Related Topics

<u>Grid Basics</u> 38 How to Add a New Cable Type 4िग

Form Options

• New - Shows the <u>New Cable Type</u> [486] dialog.

4.3.2.6 Color Codes Grid

t +	ColorCode	Notes	ModifiedBy	ModifiedOn	CreatedOn
		Click here	to add a new row		
lame	Belden Charl	15			
CCDe	scription: Bel	den Standa	ard Color Code 1	5	
01	Black			11/23/200	11/23/2008
02	Red			11/23/200	11/23/2008
03	White			11/23/200	11/23/2008
04	Green			11/23/200	11/23/2008
05	Brown			11/23/200	11/23/2008
06	Blue			11/23/200	11/23/2
07	Orange			11/23/200	11/23/2008
08	Yellow			11/23/200	11/23/2008
09	Purple			11/23/200	11/23/2008
10	Gray			11/23/200	11/23/2008
11	Pink			11/23/200	11/23/2008
12	Tan			11/23/200	11/23/2008
13	White/Black			11/23/200	11/23/2008
14	White/Red			11/23/200	11/23/2008
15	White/Green			11/23/200	11/23/2008
16	White/Ora			11/23/200	11/23/2008
17	White/Blue			11/23/200	11/23/2008
18	White/Brown			11/23/200	11/23/2008
19	White/Yellow			11/23/200	11/23/2008
20	White/Purple			11/23/200	11/23/2008
24	rd 6 of 216			++100/000	**/102/0000

Project Explorer > Color Codes Commandline: showcolorcodesgrid

Explanation

This tool provides access to the **Color Codes** table of the **Global Equipment** database.

Prerequisites

1. None

Related Topics Grid Basics 38

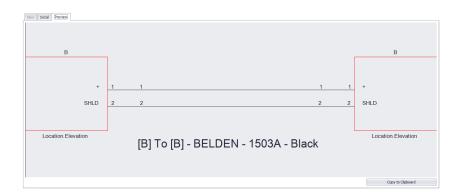
4.3.2.7 Pinouts

With Recent • * * Set: Lange Productive (B) To B) • * * Set: Lange Productive (B) To B) • * * If Consider is • * * * * * If Consider is • * * * * * * *	Sta	rt Page X	Global Fo	uioment X	Signal Types (Global) 🗙	Connectors X	Cable Typ	es X Color Codes X Pinouts X			
Unit were Chail Other Second and Seco											
Unit were Chail Other Second and Seco	Se	ect Existing P	Pinout Prof	ie [B] To [B] - I	BELDEN - 1503A - Black						• X
ILeftmed connector Obb Type Bightmed Connector mee III Connector L L Hinducon Bightmed Connector III Connector L III IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII						V Pr	eserve Pi	Order When Creating Preview	Ortho	Conductors	
1 + 1 8 1 + • 0 2 94D 2 8 2 94D m Accord 1of 2 m + - + √ × . . .					Cable Type						
W ← Record lof2 → WI +		LH Connect	or L	LH Function	Conductor Number	RH Connector	RH Pin	RH Function			
M ← Record lof2 + M + - + √ X,	,	E B	1	+	1	в	1	+			
		🗄 B	2	SHLD	2	B	2	SHLD			
nformation	H	< Record	1of2 →	HH + - +	√ x <						
nformabon											
	Info	rmation	_								

Database > Pinouts Commandline: po

Explanation

This tool provides access to the **Pinouts** table of the **Global Equipment** database. The concept of the **Pinouts** tool is to create a data set that describes two connectors and the conductors between them. The **Cable Type** data needs to have conductor level data. The data *may* be attached at the project level to a cable. The data can also be churned into a preview.



Prerequisites

1. None

Related Topics Grid Basics 38

Form Detail Tab Options

- Select Existing Pinout Profile Select a named pinout to fill the grid and subsequent preview.
- Show More Detail

- Preserve Pin Order When Creating Preview, Ortho Conductors How is the Preview created.
- Pinout Grid

Clicking the **File > New** button enables the **New** tab. From here you enter the overall data for the pinout. The Left-hand and Right-hand connectors conductor counts, etc. Once the pinout is created you can edit the detail in the **Detail** tab.

Form New Tab Options

- Left hand Connector Info -Enter the connector type, pin profile (if any) and count.
- Cable Type Select the Cable Type. Remember this type must have conductor level data. Core Level data alone will not suffice here.
- Right hand Connector Info Enter the connector type, pin profile (if any) and count.

Click File > Save to commit your changes and switch back to the grid view.

4.3.3 Project Data Forms

The forms in this section are specific to the **Project Database**.

4.3.3.1 Backbone Grid (ENT ONLY)

100	ines Visu	alization Setting	gs Visualize													
		Select a SysNa	ame													•
	ines tNo	CableType	CableTune	CableNo	Src SysName	DeetFue	SRCPin	DestPin	SRCLoc	SRCE	DestLoc	DestEl	SRCConn	DestConn	MultiCore	AvailableC
ľ		coner (peri	CableType	Cablento	are ayoridine	Destays	akorin	Destrait	SKCLOC	akco	Desicoc	UESILI	akocomi	Destoarti	I	Avoidurec
	CableNo	Prefix: B0000	1													
		GENERIC	6 STRAND	800001.01	AD-1	CC-R59-5	001	057	AMU.BLDG		AMU.COM		SCA	SCB		
		GENERIC	6 STRAND		AD-1	CC-R59-5	002	068	AMU.BLDG		AMU.COM		SCA	SCB		
	Đ	GENERIC	6 STRAND	800001.03	AD-1	CC-R59-5	003	069	AMU.BLDG		AMU.COM		SCA	SCB		
	æ	GENERIC	6 STRAND	800001.04	AD-1	CC-R59-5	004	070	AMU.BLDG		AMU.COM		SCA	SCB		
	÷	GENERIC	6 STRAND	800001.05	AD-1	CC-R59-5	005	071	AMU.BLDG		AMU.COM		SCA	SCB		
	÷	GENERIC	6 STRAND	800001.06	AD-1	CC-R59-5	006	072	AMU.BLDG		AMU.COM		SCA	SCB		
•	CableNo	Prefix: B00002	2													
	0474	GENERIC	6 STRAND	B00002.01	AD-1	CC-R59-4	007	067	AMU.BLDG		AMU.COM		SCA	SCA		
	0474	GENERIC	6 STRAND	800002.02	AD-1	CC-R59-4	008	068	AMU.BLDG		AMU.COM		SCA	SCA		
	÷	GENERIC	6 STRAND	800002.03	AD-1	CC-R59-4	009	069	AMU.BLDG		AMU.COM		SCA	SCA		
	Đ	GENERIC	6 STRAND	800002.04	AD-1	CC-R59-4	010	070	AMU.BLDG		AMU.COM		SCA	SCA		
	Ð	GENERIC	6 STRAND	800002.05	AD-1	CC-R59-4	011	071	AMU.BLDG		AMU.COM		SCA	SCA		
	Ð	GENERIC	6 STRAND	800002.06	AD-1	CC-R59-4	012	072	AMU.BLDG		AMU.COM		SCA	SCA		
•	CableNo	Prefix: B00003	3													
	Œ	GENERIC	48 STRAND		AD-3	CC-R54-4	001	001	AMU.BLDG		AMU.COM		FC	SCA		
	œ	GENERIC	48 STRAND		AD-3	CC-R54-4	002	002	AMU.BLDG		AMU.COM		FC	SCA		
	æ	GENERIC	48 STRAND	800003.03	AD-3	CC-R54-4	003	003	AMU.BLDG		AMU.COM		FC	SCA		
+	+ Rec	ord 1 of 10786	F HF HH 1													÷

Databases > Backbones Commandline: bbg

Explanation

This is the Backbones view and includes a visualizer that can produce both ladder diagrams and riser diagrams.

Here you can view and search Backbone data. You can also set the Status of a Backbone.

Prerequisites

Backbones created in the project database.

Related Topics

New Backbone 245 Backbone Preview Settings 249 Backbones 241 Grid Basics 38

Controls

4.3.3.2 Circuits Grid (ENT ONLY)

cuits	Visualiza	ition Settings	Visualize										
Ckt	No	CktSrc	CktDst	IT System	CktStrandC	IPAddress	SubnetMask	CktSrcLoca	CktDstLoca	Owner	Status	InServiceDate	
ŧ١	0001	ACMB-2	[CFE~IT E	FIBER CIR	1					ASHLEE	PROPOSED	4/26/2013	
ŧ١	0002	ACMB-2	[CFE~IT E	FIBER CIR	1					ASHLEE	PROPOSED	4/26/2013	
E١	0003	ACMB-2	[CFE~IT E	FIBER CIR	1					ASHLEE	PROPOSED	4/26/2013	
œ I	0004	[CFE~IT E	[CFE~IT E	FIBER CIR	2					ASHLEE	PROPOSED	4/26/2013	
œ I	0005	[CFE~IT E	[CFE~IT E	FIBER CIR	4					ASHLEE	PROPOSED	4/26/2013	
±	0010	[CFE~CCT	[CFE~IT E	FIBER CIR	4					ASHLEE	PROPOSED	4/26/2013	
ŧ	0012	[CFE~EQU	[CFE~EQU	FIBER CIR	2					ASHLEE	PROPOSED	4/26/2013	
۰	0013	[CFE~EQU	[CFE~EQU	FIBER CIR	4					ASHLEE	PROPOSED	4/26/2013	
ŧ١	0015	[CFE~CCT	[CFE~EQU	FIBER CIR	4					ASHLEE	PROPOSED	4/26/2013	
۰.	0017	[CFE~EQU	[CFE~CCT	FIBER CIR	4					ASHLEE	PROPOSED	4/26/2013	
Œ١	0020	[CFE~EQU	[CFE~EQU	FIBER CIR	2					ASHLEE	PROPOSED	4/26/2013	
œ I	0022	[CFE~EQU	[CFE~EQU	FIBER CIR	6					ASHLEE	PROPOSED	4/26/2013	
±	0024	[CFE~IT E	[CFE~IT E	FIBER CIR	2					ASHLEE	PROPOSED	4/26/2013	
±١	0027	[CFE~EQU	[CFE~EQU	FIBER CIR	2					TARA	PROPOSED	4/26/2013	
Ð	0028	[CFE~EQU	[CFE+EQU	FIBER CIR	2					TARA	PROPOSED	4/26/2013	
Ð	0029	[CFE~EQU	[CFE~EQU	FIBER CIR	2					TARA	PROPOSED	4/26/2013	
ŧ.	0030	[CFE~IT E	[CFE~IT E	FIBER CIR	2					TARA	PROPOSED	4/26/2013	
œ,	0031	[CFE~EQU	[CFE~EQU	FIBER CIR	2					ASHLEE	PROPOSED	4/26/2013	
				CTOCD CTD	•					TADA	nnonocen	A /26 /2012	
. +1	1 Record	d 1 of 299 🔸	10 10 C										

Databases > Circuits Commandline: circ

Explanation

This is the Circuits view. Circuits are collections of cables. In most cases they include jumpers between panels and Backbones. Circuits consist of a set of ordered elements and a strand count. This grid contains a Visualizer that lets you see the data in graphical form. The Visualizer associated with this grid will create a functional diagram of the selected Circuit.



Prerequisites Creation of at least one Circuit

Related Topics <u>Circuits</u> 256 <u>Circuits Preview Settings</u> 259 <u>Combine Circuits</u> 274 <u>Grid Basics</u> 38

4.3.3.3 New Circuit (ENT ONLY)

Circuit Number/Name* 🛛 😢 1001				IT System*		▼ + - Customer	chris_000	* +
trand Count*				2 🌲 In Service D	ate 7/6/2015			
Origin* (named equipment)	First Ente	r the Originating Equipment		🔹 🔸 🐟 🥥 Final De	stination* (named equipment)	Then Me		+ +
) Origin* CFE				 Final De 	stination* CFE			
Build Circuit Path Finder Pre	view							
Jumper From Equipment			Length	0 ‡	Jumper to Equipment	[EditValue is null]		* + e
From Ports		Show All Outputs			To Ports			
		Name			Name			

			- The second sec)		
Prev	Remove	Add Horizontal Segme	ent)	Add Jumper	Add Virtual Segment	t Add Backbone Segment	Next	Last
	Remove Src Port	Add Horizontal Segme Dist Equip Dist Port	ent SRCLoc		Add Virtual Segment	t Add Badbone Segment CittStrandtumber ClaOrdinal	Next IsSDReversed	Last
Proposed Cables in Circuit				Add Jumper				

Database > Circuits [File > New] Commandline: none

Explanation

This tool provides a means but which to create a new circuit. **Circuits** can either be assembled manually by follow the paths of panels through **Backbones** and jumpering to the next element of the first and last elements may be defined and then handed to the **Path Finder** tool which will find and present candidate routes.

Prerequisites

1. Backbones added.

Related Topics

New Circuit 266

4.3.3.4 New Backbone (ENT ONLY)

interconnect Mode										
New Backbone	Backbone ID		1001 🗘 B01001	O Use	Existing Available	Sel	ect Existing Backbone	Starting Number S	elect an available cable	a
From	000001010			Cable Type	initial grandere	· +	То	o tar ang Hamber [o		
ocation Filter				Cable Type Cable Type Info Lab	2	• •	Location Filter			
tch Panel ID			++0				Patch Panel ID			* +
vailable Ports							Available Ports			
Name	Туре	Conn	From/To				Name	Туре	Conn	From/To
				Hee			8444			
				Add and Clos	e Apply	Cancel				

Database > Backbones [File > New] Commandline: none

Explanation

Create a new Backbone.

Prerequisites

1. None

Related Topics

Backbones Grid 528 Backbones 241 Grid Basics 38

4.3.3.5 Equipment List

Description Partial Partia Partial Partial								Search	Find All		
BICT											Changes to Ripple Across Project
BIOTJULAdreg A-1012* PAO1 SPAO1 IC PA SPAO1 IC PA SPAO1 IC PA SPAO1 IC PA SPAO1	Sheet	CableNo	 Src SysName 	DestSys	9 SRCPin	DestPin	SRCLoc	DestLoc	SRCConn	DestConn	
BIOTJULAdreg A-1012* PAO1 SPAO1 IC PA SPAO1 IC PA SPAO1 IC PA SPAO1 IC PA SPAO1											
DICT_2ADAdreg A-1015- PA-02 SPA-04 R N 12.12 12.120HT 12.120HT X Brin DICT_2ADAdreg A-1015- PA-02 SPA-02 L N 12.112 11.20FT X Brin DICT_2ADAdreg A-1015- PA-02 SPA-02 N 12.112 11.20FT X Brin DICT_2ADAdreg CT-1002- VF-01 SPA-02 SPA-02 12.02 SPA-02 EDT_2ADAdreg DITA PA-02 SPA-02 SPA-02 SPA-02 EDT_2ADAdreg EDT_2ADAdreg DITA PA-02 SPA-02 SPA-02 <td< td=""><td>EDIT_1_AUD.dwg</td><td>A-1011-</td><td>PA-01</td><td>SPK-02</td><td>R</td><td>IN</td><td>109.1.12</td><td>109.RIGHT</td><td>x</td><td>Ban</td><td></td></td<>	EDIT_1_AUD.dwg	A-1011-	PA-01	SPK-02	R	IN	109.1.12	109.RIGHT	x	Ban	
BIOTI,2.AUAdreg A-1015- RA02 SR-04 R N 12.12 12.120HT 12.12 12.10HT X Ban BIOTI,2.AUAdreg A-1015- R402 SR-03 L N 12.12 12.12FT K SR-03 BIOTI,2.AUAdreg A-1015- R402 SR-03 L N 12.12 12.12FT K SR-03 BIOTI,2.AUAdreg K-01 SR-03 SR-02 SR-02 SR-02 BIOTI,2.AUAGREG DITI MALL		A-1012-	PA-01	SPK-01	L	IN	109.1	109	x	Ban	
D GDT_1_CTL_deg CTL_1001- UH-01 SP-02 SP-222 <	E EDIT_2_AUD.dwg	A-1015-	PA-02	SPK-04	R	IN	112.1.12	112.RIGHT	x	Ban	
Bit DTL_2_CTL_dmg CTL-1002. IF-02 IF-02<	EDIT_2_AUD.dwg	A-1016-	PA-02	SPK-03	L	IN	112.1.12	112.LEFT	x	Ban	
B ADUTER-dwg DP-1041- VM-04 SP-01 S0.4 S0.RTR-0 ADOM EDIT 1.VNALL B B B ADUTER-dwg DP-1042- VM-04 SP-02 S0.RTR-0 ADOM 110.4.30 EDIT 2.VNALL B B B ADUTER-dwg DP-1042- SP-02 S0.RTR-0 ADOM 110.4.30 EDIT 2.VNALL B B B OT_1.VTD-dwg DP-04- SP-04 S0.VNA/dwg S0.VNA/dwg STR.T1 199.1.12 EDIT 1.VNALL B B	EDIT_1_CTL.dwg	CTL-1001-	I/F-01	SP-01	RS 422	RS422-2	109.DESK	EDIT 1.WALL	D9	9D	
B ADUTER-dwg DP-1041- VM-04 SP-01 S0.4 S0.RTR-0 ADOM EDIT 1.VNALL B B B ADUTER-dwg DP-1042- VM-04 SP-02 S0.RTR-0 ADOM 110.4.30 EDIT 2.VNALL B B B ADUTER-dwg DP-1042- SP-02 S0.RTR-0 ADOM 110.4.30 EDIT 2.VNALL B B B OT_1.VTD-dwg DP-04- SP-04 S0.VNA/dwg S0.VNA/dwg STR.T1 199.1.12 EDIT 1.VNALL B B	EDIT_2_CTL.dwg	CTL-1002-	I/F-02	SP-02	RS 422	RS422-2	112.DESK	EDIT 2.WALL	D9	9D	
B EDIT_1_VID.dwg DV-1049- Embedder-01_SP-01 SDI W/Audo SDI RTR I 109.1.1-2 EDIT 1.WALL B B	E ROUTER.dwg	DV-1041-	VPB-01	SP-01	8-01	SDI RTR O	ROOM 110.4.30	EDIT 1.WALL	В	В	
	E ROUTER.dwg	DV-1042-	VPB-01	SP-02	8-02	SDI RTR O	ROOM 110.4.30	EDIT 2.WALL	в	В	
DV-1055- Bmbedder-62 SP-62 SDI W/Audio SDI RTR I 112.1.1-2 EDIT 2.WALL B B	EDIT_1_VID.dwg	DV-1049-	Embedder-01	SP-01	SDI W/Audio	SDI RTR I	109-1-1-2	EDIT 1.WALL	в	В	
	EDIT 2 VID.dwg	DV-1055-	Embedder-02	SP-02	SDI W/Audio	SDI RTR I	112.1.1-2	EDIT 2.WALL	В	В	

Databases > Equipment List Commandline: sys

Explanation

This is the main **Equipment List** of all **SysNames** in the project. You can edit and ripple your changes from here.

This grid contains a **Visualizer** that lets you see the data in graphical form. The **Visualizer** associated with this grid will create a system snapshot of the selected **SysName**.

	GENERIC 24 PORT PAN	EL				
	ACM1-1					
SCA	001	001	SCA	B00118.01	B00118.01	
SCA	002	002	SCA	B00118.02	B00118.02	I ACMB2
SCA	003	003	SCA	B00118.03	B00118.03	L AGME2
SCA	004	004	SCA	B00118.04	B00118.04geo	L ACMES
SCA	005	005	SCA	B00118.05	B00118.05gn	L AGMER
SCA	006	006	SCA	B00118.06	B00118.06pt2	Lacusa
			<u></u>		ж. (-

Prerequisites Assigned SysNames

Related Topics Assign SysName Grid Basics अध्र How To: Use the Equipment List Visualizer

Data Tab Options

- Search Search the collection for the search term.
- Find All Clear the search field and return all records.
- **Ripple List** Changes you have made that may need to be rippled across the drawing set. The ripple will occur after you save the grid to the database.

Tools

- Attach Document Any document can be attached to any record. This is useful for storing data sheets, test data, and images.
- Slurp Locations Collect all location data from the Equipment List and populate the Locations table with it.

erminal		 Vertic 	al Pin Spacing 1/100 DU		100
Use Last Display Order	if Set	Body			500
Use Last Saved Appea		Port E	lata Source		
		@ Fr	om Equipment Lib	From Cables Table	
itle Block					
Z Enable					
ext Height 1/100 DU		25 ‡ Title	our Title Goes Here. It Can Be Multiline.		
Z Show Time Stamp					
itle Location	BottomLeft	•			
itle Offset	H <u>I</u> -100,-100,0	•			
lisc					

Visualization Tab Options

- Terminal Select the terminal to which we will attach the cables.
- Vertical Pin Spacing 1/100 DU How far apart vertically are the ports.
- Use Last Display Order if Set
- Use Last Saved Appearance Where is the SysName label positioned with reference to the end points of the polyline that represents the cable.
- Body Width -
- Port Data Source Pull the port data from the Equipment Library which will show all available ports as defined in the Equipment Library or pull port data from the Cable table which will show only ports which have cables attached.

	GENERIC 24 PORT PANE ACM1-1	L]			
SCA	001	001	SCA	B00118.01	B00118.01m	L ACUES
					£.	- AGUE2
SCA	002	002	SCA	B00118.02	B00118.02	-O
SCA	003	003	SCA	B00118.03	B00118.03	
SCA	004	004	SCA	B00118.04	B00118.04	
SCA	005	005	SCA	B00118.05	B00118.05	Acusa
SCA	006	006	SCA	B00118.06	B00118.06pt2	, Lease
					R1	Ŷ

4.3.3.6 Cables

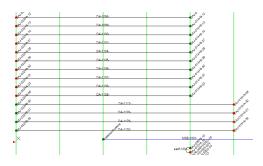
Intr_JAUD.dvg A-101-P PA-0 R N 109-112 109-212 R N 109-112 109-112 109-112 X Ban TTJAUD.dvg A-101- PA-01 SF R N 102.11-22 112.107 X Ban TTJAUD.dvg A-101- FA-02 SF R N 102.11-22 112.107 X Ban TTJAUD.dvg A-101- FA-02 SF R N 102.11-22 112.107 X Ban TTJAUD.dvg A-101- IFA SF	ch							Search	Find All		
Cableto Stc Systeme DestSys SRC/arc DestSys SRC/arc DestSys SRC/arc DestSys DestSys SRC/arc DestSys											Changes to Ripple Across Project
DTL_JALOAdmy Av102+ MP-00 MP-00 MP-10 MP-100 MP-100 </th <th>Sheet</th> <th>CableNo</th> <th> Src SysName </th> <th>DestSys</th> <th>9 SRCPin</th> <th>DestPin</th> <th>SRCLoc</th> <th>DestLoc</th> <th>SRCConn</th> <th>DestConn</th> <th></th>	Sheet	CableNo	 Src SysName 	DestSys	9 SRCPin	DestPin	SRCLoc	DestLoc	SRCConn	DestConn	
DTL_JALOAdmy Av102+ MP-00 MP-00 MP-10 MP-100 MP-100 </td <td></td>											
DTL_JALOAdmy Av102+ MP-00 MP-00 MP-10 MP-100 MP-100 </td <td>EDIT_1_AUD.dwg</td> <td>A-1011-</td> <td>PA-01</td> <td>SPK-02</td> <td>R</td> <td>IN</td> <td>109.1.12</td> <td>109.RIGHT</td> <td>X</td> <td>Ban</td> <td></td>	EDIT_1_AUD.dwg	A-1011-	PA-01	SPK-02	R	IN	109.1.12	109.RIGHT	X	Ban	
DITAUA.deg A-105- PA-0 PK-0 R II_2.1.12 DIRADHIT X III DIT_AUA.deg A-105- PA-0 R N 12.1.12 12.1.17 12.1.17 R R DIT_AUA.deg A-105- IAF S S S S S DIT_AUA.deg A-105- IAF S S S S S S DIT_AUA.deg C10-102- IAF S	EDIT_1_AUD.dwg										
NT_2,ML0.dvg A-1054 PA-02 SPK-01 L N 121.12 112LEFT K Ban NT_2,GL.dvg C1-001- I/Fe0 SP-01 SK 42 SK 92 <	EDIT 2 AUD.dwg										
UTL_CTLAde UTL_OCT UF-0 9-01 85-42 RM222 M0.025K EDT 1.VML D9 90 DT_J_CTLAde CT-1025 IA-92 85-42 85422 120.025K EDT 1.VML D9 90 DT_J_CTLAde O'-104- VP8-0 8-02 151.025K EDT 1.VML B B DUREAde O'-104- VP8-1 8-02 51.071K ROM 110.4.30 EDT 1.VML B B DUREAde O'-104- VP8-1 8-02 6004 110.4.30 EDT 1.VML B B DUREAde O'-104- VP8-1 S-01 S1.12 EDT 1.VML B B	EDIT_2_AUD.dwg	A-1016-		SPK-03	L	IN	112.1.12	112.LEFT	x	Ban	
NT_2_CTL.dsig CTL: 1002- I/Fe 02 SF-02 SF-922-2 I2.0ESX EDIT 2.VIAL DP SD DVITR-dwg VP-104- VPE04 SP-01 SD112 SDCM 10.6.30 EDIT 1.VIAL B B DVITR-dwg VP-104- VPE04 SP-02 SO X107.0 SDCM 110.6.30 EDIT 1.VIAL B B DTLTR-dwg VP-104- VPE04 SP-02 SO X107.0 SDT 1.VIAL B B DTLT_JUD.dwg VP-104- SP-02 SD X11/L, MA	EDIT_1_CTL.dwg	CTL-1001-	I/F-01	SP-01	RS 422	RS422-2	109.DESK	EDIT 1.WALL	D9	9D	
DUTRE-darg DV-104 VP64- 9P-10 6-11 SOCM 10A-30 EDIT LVMLL 8 8 DUTRE-darg DV-104-2 VP64-1 SP-02 S0 Z	EDIT_2_CTL.dwg	CTL-1002-	I/F-02	SP-02	RS 422	RS422-2	112.DESK	EDIT 2.WALL	09	9D	
DVI-1542- VPB-01 SP-02 B-02 SD (RTR, O ROOM 110.4.30 EDIT 2 W/WL B B VT_1_VTD.dwg DVI-1049- Embedder-01 SP-01 SD (RTR, M) SD (RTR, M) EDIT 1 W/WL B B	E ROUTER.dwg	DV-1041-	VPB-01	SP-01	8-01	SDI RTR O	ROOM 110.4.30	EDIT 1.WALL	8	В	
DVI-1049- Embedder-01 SP-01 SDI W/Audio SDI RTR I 109.1.1-2 EDIT 1.WALL B B	E ROUTER.dwg	DV-1042-	VPB-01	SP-02	8-02	SDI RTR O	ROOM 110.4.30	EDIT 2.WALL	8	в	
	EDIT_1_VID.dwg	DV-1049-	Embedder-01	SP-01	SDI W/Audio	SDI RTR I	109.1.1-2	EDIT 1.WALL	в	в	
	EDIT_2_VID.dwg	DV-1055-	Embedder-02	SP-02	SDI W/Audio	SOT RTR T	112.1.1-2	EDIT 2 WALL	B	R	
4 Record 1of 10 > >> >>	≪ 4 Record lof 10 → ₩	√ x + (==================================								,	

Databases > Cables Commandline: cg

Explanation

This is the main Cables table view. You can print, export and edit this view. Some fields are marked read only because they inherit their data from other tables. Changes to those fields should be done in the other tables then rippled into this table.

This grid contains a Visualizer that lets you see the data in graphical form. The Visualizer associated with this grid will create a Ladder diagram of the selected cables.



Prerequisites Cable numbers assigned in a drawing.

Related Topics <u>New Cable</u> 482 Grid Basics 38

Data Tab Options

- Search Search the collection for the search term.
- Find All Clear the search field and return all records.
- **Ripple List** Changes you have made that may need to be rippled across the drawing set. The ripple will occur after you save the grid to the database.
- Expert Mode Removes the read-only flags and puts the grid in a completely editable state. Not for beginners.
- Add Many Only available in Expert Mode this tool adds blank records to the table that you can edit as a spreadsheet.

Tools

- Repair Equipment List Scans the Cables table for SysNames then compares with the Equipment List. Missing SysNames are then added to the Equipment List.
- Attach Document Any document can be attached to any record. This is useful for storing data sheets, test data, and images.

Data Visualization Settings	Visualization					
Terminal		Location Marker Spacing				500 \$
Cable Number Text Ht		Location Marker Text Ht				25 \$
						25 🗸
Vertical Spacing 1/100 DU		Location Marker Color	(144,238,144)			•
Center Label Offset		Location Marker Pen Width				10 🗘
SysName Label Offset						•
SysName Text Ht	25 ‡	Show Dot Direction Cold	r	Junction Dot Radius		12 🌲
Port Info Format String	{0}>{1}	Show SysNames		Ignore Cables Betwee	en Same Location	
Cable Text Format String	(0)	Color By Signal Type		Cable Color 📃 (0,0		
Show All Locations		Collapse Multicore Cable	s to Single Line			
109.1	A.					
109.1.1-1 109.1.12	Up					
109.1.12 109.1.1-2	Down					
109.DESK	Liowh					
109.DESK LEFT						
110.DESK LEFT 112.1.1-1						
112.1.1-1 112.1.12						
112.1.12	*					
Title Block						
Z Enable						
Text Height 1/100 DU	50 \$ 1	Title Block Goes HereAn	Here			
Show Time Stamp						
Title Location	- BottomLeft -					
Title Offset	HE -1,-1,0 *					

Visualization Tab Options

- Terminal Not yet implemented.
- Cable Number Text Height
- Vertical Spacing 1/100 DU How far apart vertically are the cables.
- Center Label Offset Where is the center label positioned with reference to the center of the polyline that represents the cable.
- SysName Label Offset Where is the SysName label positioned with reference to the end points of the polyline that represents the cable.
- SysName Text Height The text height of the SysName label.
- Port Info Format String The following variables can be used along with the /n new line character to format the port info:

{0}SysName

{1}Port
{2}Location
{3}Alias
{4}Connector
{5}Cable Number
{6}Cable Manufacturer
{7}Cable Type

Example:

Assume that the SysName is VTR-01. The PortName is VID-OUT and the Location is RK-10 The following Port Info Format string:

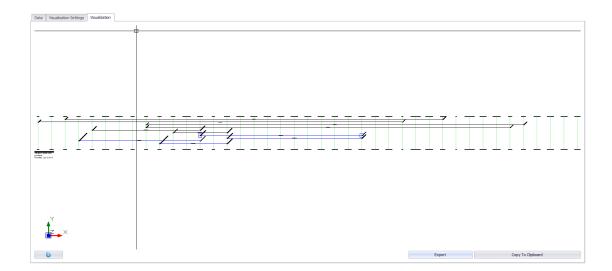
{0}>{1}@{2} Will produce the result:

VTR-01>VID-OUT@RK-10

• Cable Text Format String - The following variables can be used along with the /n new line character to format the Cable Text:

{0}Cable Number{1}Cable Manufacturer{2}Cable Type{3}Length{4}Sheet

- Location Marker Spacing How far apart horizontally the vertical location markers are spaced.
- Location Marker Text Hit, Location Marker Color, Location Marker Pen Width, SysName Rotation Angle
- Show Dot Direction Color Display a green dot on the source side and a red dot on the destination side of the cable.
- Show SysNames
- Color By Signal Type Inherit cable color by Signal Type or set a single color for all cables.
- Collapse Multi-core Cables to Single Line Multi-core cables are represented by many records in the Cables table. You can choose to display a cable for each or collapse to a single cable.



4.3.3.7 Locations

								Changes to Ripple Across Project
Campus	 Building 	+ Floor	A Room	Rack 🔺	Description	Qualified Location (FigureHandle	
							-	•
				ab		ab		
AMU				ab		AMU.ab		
AMU		BLDG 121	ROOM 312			AMU.BLDG 121.RO		
AMU	ANNEX 1	1ST FLOOR	101			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	102			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	102			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	103			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	111			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	121			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	122			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	123			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	124			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	135			AMU.ANNEX 1.1ST		
AMU	ANNEX 1	1ST FLOOR	150			AMU.ANNEX 1.1ST		
AMU	ANNEX 2	1ST FLOOR	104			AMU.ANNEX 2.1ST		
AMU	ANNEX 2	1ST FLOOR	105			AMU.ANNEX 2.1ST		
AMU	ANNEX 2A	1ST FLOOR	111			AMU.ANNEX 2A.1S		
AMU	ANNEX 2A	1ST FLOOR	112			AMU.ANNEX 2A.1S		
AMU	ANNEX 2A	1ST FLOOR	113			AMU.ANNEX 2A.1S		
AMU	ANNEX 2A	1ST FLOOR	114			AMU.ANNEX 2A.1S		-

Databases > Locations Commandline: showprojectlocationsgrid

Explanation

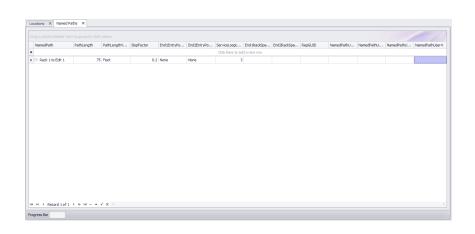
This is the main Locations table view. You can print, export and edit this view. Changes to this grid can be rippled throughout the project.

Remember that the only bit of data WireCAD actually uses from this grid is the **QualifiedLocation**.

Prerequisites None

Related Topics <u>New Location Dialog</u> 47[§] <u>Grid Basics</u> 3⁸

4.3.3.8 Named Paths



Databases > Named Paths Commandline: shownamedpathsgrid

Explanation

The **Named Paths** grid is an organizational tool to keep track of key distances. We name a path and give it a distance and other factors to determine. You can use it as a reference, as well as a length calculator in the **Assign Cable Numbers** dialog.

Prerequisites None

Related Topics Assign Cables 443 Grid Basics 38

4.3.3.9 ToDo

xplanation						
Drag a column header here b						
Item	Description	AssignedTo	Status	ExpectedCompletionDate	CompletedDate	Priority
			Click here to add a r	new row		
 Some Task 	That needs to get done	Wilma Flintstone	In Progress	7/7/2015 12:00:00 AM	7/6/2015 12:00:00 AM	✓ Like Now Man
≪i≪ Record lofi ≯						

Databases > Todo List Commandline: tdl

Explanation

A To Do list. You can define the data that fills the following drop downs in the <u>Todo List Settings</u> [362] panel:

- Assignees
- Statuses
- Priorities

Prerequisites An active project.

Related Topics Todo List Settings 362 Grid Basics 38

4.3.3.10 Drawings

DrawingName	CreatedOn	ModifiedOn	ModifiedDate	DrawingPath	 DrawingUser1 	Status	CheckedOut	Pr
asdf.dwg	5/7/2012 1	5/28/2015 12:48:25 PM		\Drawings\asdf.dwg				6f
E FP3.dwg	6/23/2015	7/2/2015 4:11:48 PM		\Drawings\FP3.dwg				6f
fp3w_locations.dwg	7/2/2015 3	7/6/2015 1:20:43 AM		\Drawings\fp3w_locations.dwg				6f
Dan view.dwg	6/15/2015	7/3/2015 10:29:42 AM		\Drawings\plan view.dwg				6f
racks too.dwg	6/15/2015	6/23/2015 4:35:16 PM		\Drawings\racks too.dwg				6f
⊞ racks.dwg	5/30/2015	6/20/2015 2:10:39 PM		\Drawings\racks.dwg				61
⊡ test1.dwg	5/28/2015	7/6/2015 1:16:53 PM		\Drawings\test1.dwg				6f
🗄 test1.pdf	6/23/2015	7/4/2015 12:02:33 PM		\Drawings\test1.pdf				6f
	7/1/2015 8	7/6/2015 1:16:53 PM		\Drawings\Test2.dwg				6
☑ WireCAD Drawing.dwg	5/31/2015	6/30/2015 8:15:48 AM		\Drawings\WireCAD Drawing.dwg				6

Project Explorer> Project Databases > Drawings **Commandline: sdg**

Explanation

This is the list of drawings in the Project\Drawings folder tree. The following changes in the Drawings table have occurred in WireCAD v8 and forward:

- The DrawingsPath has changed from absolute to relative.
- The tool now scans for and lists pdf files.
- If the project database is SQLAzure the dwg and pdf files are embedded in the database for portability.

NOTE: to rename a drawing use the function in the Project Explorer. Right-click a closed drawing and select the context menu item Rename Drawing.

Prerequisites

An active project.

Related Topics

Grid Basics 38

4.3.3.11 Index Grids

More Information <u>Understanding Indexes</u>

4.3.3.11.1 Unassigned Cables

Drav	wing Name 🔺									
Ha	indle	SRC Sys	Src Sys Loc	SRC Pin	SRC Conn	Dest Sys	Dest Sys Loc	Dest Pin	Dest Conn	Signal Type
÷	Drawing Name: Bl	UILDING 102 RIS	SER.dwg							
	Show Me 🔍 23	ACM6-2	AMU.BLDG 126	049-054	SCA	GP5-1	AMU.BLDG 102.9TH	001-006	SCA	FIBER
	Show Me 🔍 23	AD-1	AMU.BLDG 102.BASE	001-005	SCA	CC-R59-5	AMU.COM CTR. 1ST F	067-072	SCB	FIBER
	Show Me 🔍 23	AD-1	AMU.BLDG 102.BASE	013-018	SCA	AD-17	AMU.BLDG 103.BASE	001-006	SCA	FIBER
	Show Me 🔍 23	AD-1	AMU.BLDG 102.BASE	019-024	SCA	AD-17	AMU.BLDG 103.BASE	007-012	SCA	FIBER
	Show Me 🔍 23	AD-1	AMU.BLDG 102.BASE	007-012	SCA	CC-R59-4	AMU.COM CTR. 1ST F	067-072	SCA	FIBER
	Show Me 🔍 23	AD-4	AMU.BLDG 103	025-036	ST	AD-5	AMU.BLDG 102.BASE	025-036	ST	FIBER
	Show Me 🔍 23	AD-4	AMU.BLDG 103	037-048	ST	AD-5	AMU.BLDG 102.BASE	037-048	ST	FIBER
	Show Me 🔍 23	AD-4	AMU.BLDG 103	013-024	ST	AD-5	AMU.BLDG 102.BASE	013-024	ST	FIBER
	Show Me 🔍 23	AD-4	AMU.BLDG 103	001-012	ST	AD-5	AMU.BLDG 102.BASE	001-012	ST	FIBER
	Show Me 🔍 23	AD-5	AMU.BLDG 102.BASE	049-060	ST	AD-6	AMU.BLDG 102.BASE	001-012	ST	FIBER
	Show Me 🔍 23	AD-5	AMU.BLDG 102.BASE	061-072	ST	AD-6	AMU.BLDG 102.BASE	013-024	ST	FIBER
	Show Me 🔍 23	AD-12	AMU.BLDG 103.BASE	115-120	SCA	AD-24	AMU.BLDG 102.1ST F	031-036	SCA	FIBER
	Show Me 🔍 23	AD-12	AMU.BLDG 103.BASE	109-114	SCA	AD-24	AMU.BLDG 102.1ST F	025-030	SCA	FIBER
	Show Me 🔍 22	AD-15	AMU.BLDG 103.BASE	001-048	SC	AD-16	AMU.BLDG 102.12TH	001-048	SC	FIBER
	Show Me 🔍 23	AD-18	AMU.BLDG 103	049-072	SCA	AD-24	AMU.BLDG 102.1ST F	001-024	SCA	FIBER
	Show Me 🔍 23	AD-19	AMU.BLDG 103	001-144	SC	AD-21	AMU.BLDG 102.BASE	001-144	SC	FIBER
	Show Me 🔍 23	AD-22	AMU.BLDG 102.BASE	001-048	SC	AD-23	AMU.BLDG 102.2ND	001-048	SC	FIBER

Database > Index Grids > Unassigned Cables Commandline: ShowUnassignedCablesGrid

Explanation

Any **Cable** that does not yet have a number to this index by drawing. As you approach the end of a project this grid should be empty.

4.3.3.11.2 Unassigned SysNames

Drawing Name 🔺			
Figure Handle	Manufacturer	 Equipment Name 	 Entity Type
+ Drawing Name: sdcxvzxc.dwg			
Show Me 🔍 17A48	360 SYSTEMS	Image Server 2K	EquipmentBlock
Show Me 🔍 17988	360 SYSTEMS	Image Server 2K	EquipmentBlock
Show Me 🔍 17776	CUSTOM PANEL	BSP	EquipmentBlock
Show Me 🔍 17871	CUSTOM PANEL	BSP	EquipmentBlock
Show Me 🔍 17AEA	CUSTOM PANEL	BSP	EquipmentBlock
Show Me 🔍 181C0	ManufacturerName	EquipmentName	Pointer
Show Me Q, 1819F	ManufacturerName	EquipmentName	Pointer

Database > Index Grids > Unassigned SysNames Commandline: ShowUnassignedSysNamedGrid

Explanation

Any equipment that does not yet have a **SysName** and add it to this index by drawing. As you approach the end of a project this grid should be empty.

4.3.3.11.3 Cables by Drawing

Ira	wing Name 🔺											
R	gure Handle	Full Cable Type	Cable No	 Src Sys 	Qualified Src Loc	Src Pin	SRC Conn	Dest Sys	Qualified Dest Lo	Dest Pin	Dest Conn	Signal Type
-	Drawing Nam	e: EDIT_1_ALL.du	vg									
	Show Me 🔍 .		A-1009-	O2R-01	109.DESK LEFT	CR L	1/4	PA-01	109.1.12	L	x	AUD
	Show Me 🔍 .		A-1010-	02R-01	109.DESK LEFT	OR R	1/4	PA-01	109.1.12	R	x	AUD
	Show Me 🔍 .		A-1011-	PA-01	109.1.12	R	x	SPK-02	109.RIGHT	IN	Ban	BAN
	Show Me 🔍 .		A-1012-	PA-01	109.1.12	L	x	SPK-01	109.LEFT	IN	Ban	BAN
	Show Me 🔍 .		CTL-1001-	I/F-01	109.DESK	RS 422	D9	SP-01	EDIT 1.WALL	RS422-2	9D	RS422
	Show Me 🔍 .		D-1001-	CPU-01	109.DESK	FIREWIRE	IEEE	I/F-01	109.DESK	1394	1394	DATA
	Show Me 🔍 .		D-1002-	CPU-01	109.DESK	MON-01	HD 15	Cmon-01	109.DESK RIGHT	VGA	15D HD	VGA
	Show Me 🔍 .		D-1003-	CPU-01	109.DESK	MON-02	HD15	Cmon-02	109.DESK RIGHT	VGA	15D HD	VGA
	Show Me 🔍 .		DA-1003-	I/F-01	109.DESK	CH1/2	XLR	O2R-01	109-DESK LEFT	AES 5,6	x	AES
	Show Me 🔍 .		DA-1004-	O2R-01	109.DESK LEFT	AES 5,6	x	I/F-01	109.DESK	CH1/2	XLR	AES
	Show Me 🔍 .		DA-1005-	DMBDR-01	109.1.1-1	AES01	в	O2R-01	109.DESK LEFT	AES 1,2	x	AES
	Show Me 🔍 .		DA-1006-	DMBDR-01	109.1.1-1	AES02	в	02R-01	109.DESK LEFT	AES 3,4	x	AES
	Show Me 🔍 .		DA-1007-	O2R-01	109.DESK LEFT	AES 1,2	x	Embedder-01	109.1.1-2	AES 101	в	AES
	Show Me 🔍 .		DA-1008-	02R-01	109-DESK LEFT	AES 3,4	x	Embedder-01	109.1.1-2	AES 102	в	AES
	Show Me 🔍 .		DV-1046-	SP-01	EDIT 1.WALL	SDI RTR O	в	DMBDR-01	109.1.1-1	SDI Input	в	SDI
	Show Me 🔍 .		DV-1047-	I/₽-01	109.DESK	SDI OUT	BNC	Embedder-01	109.1.1-2	SDI	B	SDI
	Show Me 🔍		DV-1048-	DMBDR-01	109.1.1-1	SDI 01	в	I/F-01	109.DESK	SDI IN	BNC	DGV

Database > Index Grids > Cables by Drawing Commandline: ShowCablesbyDrawingGrid

Explanation

Any **Cable** that has a number and corresponding entry in the **Cables** database is added to this index by drawing.

4.3.3.11.4 SysNames by Drawing

Irawing	Name 🔺											
Figure I	Handle	Sys Name	 Alias 	Qualified Loca 🔺	Manufacturer	Equipment Name	IP Address	Subnet Mask	User 1	User2	User3	User4
+ Dra	awing Name	e: EDIT_1_ALL.di	wg									
Sh	ow Me 🔍	Cmon-01										
Sh	w Me 🔍	Cmon-02										
Sh	w Me 🔍	CPU-01										
Sh	ж Ме 🔍	DMBDR-01										
Sh	w Me 🔍	Embedder-01										
Sh	w Me 🔍	I/F-01										
Sh	w Me 🔍	MONT-01										
Sh	w Me 🔍	02R-01										
Sh	w Me 🔍	PA-01										
Sh	w Me 🔍	SP-01										
Sh	w Me 🔍	SPK-01										
Sh	w Me 🔍	SPK-02										
+ Dri	awing Name	e: EDIT_1_AUD.d	wg									
Sh	ж Me 🔍	DMBDR-01										
Sh	w Me 🔍	Embedder-01										
Sh	w Me 🔍	I/F-01										
sh	w Me 🔍	02R-01										

Database > Index Grids > SysNames by Drawing Commandline: ShowSysNamesbyDrawingGrid

Explanation

Any equipment that has a **SysName** and corresponding entry in the **Equipment List** is added to this index by drawing.

4.3.3.11.5 Cables by SysName

The !	iys Name 🔺												
Fig	ire Handle	Cable Number	Full Cable Type	Src Sys	Qualified Src Lo	Src Pin	SRC Conn	Dest Sys	Qualified Dest	Dest Pin	Dest Conn	Signal Type	Drawing Name
+	The Sys Nan	ne:											
	Show Me 🔍	A-1017-		100101		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L.		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CHB			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CH B			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1017-		100101		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CHB			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CHB			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CHB			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CH B			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L.		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L		AMU-01		CH A			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CH B			MACHINE_ROOM.
	Show Me 🔍	A-1018-		1001-01		R		AMU-01		CHB			MACHINE_ROOM.
	Show Me 🔍	A-1017-		1001-01		L		AMU-01		CHA			MACHINE_ROOM.

Database > Index Grids > Cables by SysName Commandline: ShowCablesbySysNameGrid

Explanation

Any **Cable** that has a number and corresponding entry in the **Cables** database and where both ends of the **Cable** have valid entries in the **Equipment List** will be added to this index.

4.3.3.11.6 Orphaned Cables

Dr	rawing Name 🔺													
F	Handle	Cable No ·	SRC Sys	Qualified Src	SRC Pin	SRC Conn	Dest Sys	Qualified Des	. Dest Pin	Dest Conn	Signal Type	Created By	Orphaned At	Error Messag
,														
	+ Drawing Name:													
	Show Me 🔍 25581	REF-1004-	SP-02	EDIT 2WALL	REF	в	I/F-02	112DESK	REF IN	BNC	REF	chris_000	DRAWING	
	Show Me 🔍 25599	V-1008-	L/F-01	109DESK	в	BNC	MONT-01	109DESK FA	в	в	YRB	chris_000	DRAWING	

Database > Index Grids > Orphaned Cables Commandline: ShowOrphanedCablesGrid

Explanation

Any **Cable** with a number but no corresponding entry in the **Cables** database will be added to this index by drawing.

As you approach the end of a project this grid should be empty.

4.3.3.11.7 Orphaned SysNames

rawing Name 🔺							
Figure Handle	Manufacturer	Equipment Name	 Entity Type 	Sys Name	Qualified Location	Orphaned At	Error Message
+ Drawing Name:							
Show Me 🔍 501CF	360 SYSTEMS	Instant Replay	EquipmentBlock	IR-01	ROOM 110.5.18	DRAWING	
Show Me 🔍 4FEC6	ADC	PPI1224N	EquipmentBlock	VPB-03	ROOM 110.4.26	DRAWING	
Show Me 🔍 501EC	ADC	PPI2232RS-MVJ	EquipmentBlock	JF-05	ROOM 110.5.38	DRAWING	
Show Me 🔍 501FD	ADC	PPI2232RS-MVJ	EquipmentBlock	JF-06	ROOM 110.5.37	DRAWING	
Show Me 🔍 4FE63	EVERTZ	HD9084	EquipmentBlock	CC-01	ROOM 110.4.39	DRAWING	
Show Me 🔍 4FD62	GENERIC EQUIPMENT	Radk 45	EquipmentBlock	RCK-02	ROOM 110.2.1	DRAWING	
Show Me 🔍 4FDD3	GENERIC EQUIPMENT	Rack 45	EquipmentBlock	RCK-03	ROOM 110.3.1	DRAWING	
Show Me 🔍 4FE38	GENERIC EQUIPMENT	Radk 45	EquipmentBlock	RCK-04	ROOM 110.4.1	DRAWING	
Show Me 🔍 501E1	GENERIC EQUIPMENT	Radk 45	EquipmentBlock	RCK-05	ROOM 110.5.1	DRAWING	
Show Me 🔍 5020E	GENERIC EQUIPMENT	Traffic Computer	EquipmentBlock	TC-01	ROOM 110.5.21	DRAWING	
Show Me 🔍 4FE20	GRASS VALLEY	8900 Frame	EquipmentBlock	FRM-01	ROOM 110.4.41	DRAWING	
Show Me 🔍 4FEF5	GRASS VALLEY	8900 Frame	EquipmentBlock	FRM-02	ROOM 110.4.43	DRAWING	
Show Me 🔍 4FE46	GRASS VALLEY	8941	EquipmentBlock	MDA-01	ROOM 110.4.41-1	DRAWING	
Show Me 🔍 4FDEE	KRAMER	1058	EquipmentBlock	Video-01	ROOM 110.3.25	DRAWING	
Show Me 🔍 48F	ManufacturerName	EquipmentName	Pointer	VPB-02	Location	DRAWING	
Show Me 🔍 1184	ManufacturerName	EquipmentName	Pointer	VPB-02	Location	DRAWING	
Show Me 🔍 11B5	ManufacturerName	EquipmentName	Pointer	VPB-02	Location	DRAWING	

Database > Index Grids > Orphaned SysNames Commandline: ShowOrphanedSysNamesGrid

Explanation

Any equipment with a **SysName** but no corresponding entry in the **Equipment List** will be added to this index by drawing.

As you approach the end of a project this grid should be empty.

4.3.3.12 Import Project Data

Start Page × EDIT_1_AU.0.dwg* × grapset tests.dwg × Cables [Needs Refresh] × Import Tool Import Tool Import Tool Import Tool Import Tool Import Tool	
Welcome to the Import Wizard This import tool can perform three levels of import depending on what you need. Import Project Data	
SysNames - Imports directly to the Systems database. Missing Global Database Manufactuer and EquipmentName infomation will be added. Cables - Imports directly to the Cable database. Missing SysNames will be added but you will need to manually edit some info.	
O Hybrid - Imports to the Cable, Systems, and Global Equipment databases. Making all necessary relationships.	
Giobal Database	
	Click [Next >] to select a file to import
	Next > Cancel

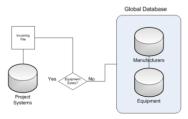
Database > Import Tool Commandline: it

Explanation

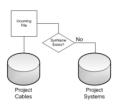
This tool imports data from a text delimited file into the various databases based on your initial selection.

There are three modes available for selection in this form:

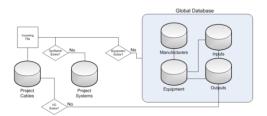
1. Import SysName data. This tool attempts to import data into the project Equipment List and the Global Equipment Library.



2. Import Cables data. This tool attempts to import data into the Cables table and the Equipment List.



3. Hybrid import. This tool attempts to import data into the Cables, Equipment List and Global Equipment Library.



The process leads you through file selection Column Mapping Data validation Import.

Prerequisites

One of the import templates with your incoming data.

Related Topics

4.3.3.13 Discrepancies

DrawingName	CreatedOn	ModifiedOn	ModifiedDate	DrawingPath	 DrawingUser1 	Status	CheckedOut	Pr
asdf.dwg	5/7/2012 1	5/28/2015 12:48:25 PM		\Drawings\asdf.dwg				6f
E FP3.dwg	6/23/2015	7/2/2015 4:11:48 PM		\Drawings\FP3.dwg				6f
■ fp3w_locations.dwg	7/2/2015 3	7/6/2015 1:20:43 AM		\Drawings\fp3w_locations.dwg				6f
🗉 plan view.dwg	6/15/2015	7/3/2015 10:29:42 AM		\Drawings\plan view.dwg				6f
racks too.dwg	6/15/2015	6/23/2015 4:35:16 PM		\Drawings\racks too.dwg				6f
⊞ racks.dwg	5/30/2015	6/20/2015 2:10:39 PM		\Drawings\racks.dwg				6f
⊞ test1.dwg	5/28/2015	7/6/2015 1:16:53 PM		\Drawings\test1.dwg				6f
	6/23/2015	7/4/2015 12:02:33 PM		\Drawings\test1.pdf				6f
	7/1/20158	7/6/2015 1:16:53 PM		\Drawings\Test2.dwg				6f
⊞ WireCAD Drawing.dwg	5/31/2015	6/30/2015 8:15:48 AM		\Drawings\WireCAD Drawing.dwg				61

Project Explorer > Project > Discrepancies Commandline: dr

Explanation

This function is provided for legacy purposes. These functions have been replaced by the index grids. There is one instance where the discrepancy report is used.

If a ripple is initiated in a multi-user install and another user has the drawing open. The ripple cannot update the drawing.

A record is added to the discrepancy report. Use the **Sync Equipment** function.

Prerequisites

Related Topics

Sync Equipment with Database

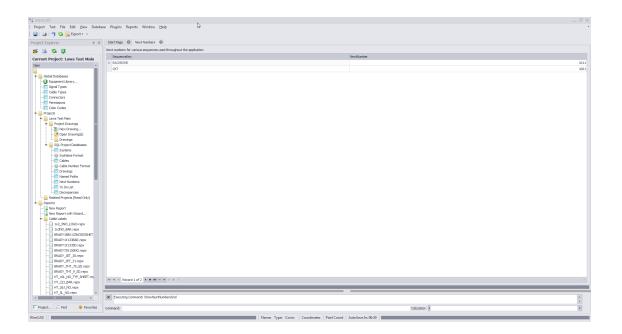
4.3.3.14 Next Numbers Grid

Menu: Database > Next Numbers Default command line shortcut: NN Related Project Settings: None Product Level: ALL

The **Next Numbers** Grid will show you the next available Cable number based on your <u>Cable Number</u> Format 124. To access the **Next Numbers Tool**, type NN in the command line prompt.

This grid will show you both **Backbone Cable Numbers** as well as **Standard Cable Numbers**. As you progress through your project, these numbers will change.

To edit these numbers (such as in the event of deleted Backbones) simply click in the Next Number box and fill in the desired number. Be sure that you are not entering a number that is already in use.



Note: Yours will look different as the Next Numbers grid will automatically create entries for each new sequence used by the application.

4.3.4 Report Forms

The forms in this section are specific to the **Reporting Engine**.

4.3.4.1 Print Preview

<image>

Explanation

This is the default view that loads when a report is loaded. From here you can determine the number of pages to print and to which device.

Form Options

• Save - Save the rendered document to the native print document format (.prnx). NOTE: this is the rendered document not the report design. The report design can only be saved from the **Report Designer** tab.

The remainder of the controls are obvious.

4.3.4.2 HTML View



Explanation

This is the report rendered to html. The controls are self-explanatory.

4.3.4.3 Report Designer

Visible only when the active environment is a report.

BRADY1X133SD.r	epx - WireCAD8 - ENTERP	RISE - Current Pr	oject: [just a t	est]									- 8
ROJECT View Databas	e Plugins Reports	Print Preview	HTML View	Report Designer	Toolbox	Cable Data Selector							s ? 🖷 🗹 🖉
📫 💾 🗐	X 🗅 🖻	50	Times New	Roman 💌	• <u>A</u> •			Q		Ð			
t Open Save Save All	Cut Copy Paste	Undo Redo	9.75 -	BIU		TOL		Zoom Out	Zoom	Zoom In	Windows		
Report				Font					•		View		
Report	Edit			Pont		Alignment	Layout		Zoom		view	Scripts	
Start Page X Report > Tool Box a X Standard Controle ^ Pointer A Label C Check Box A Rich Text Photoe Box						SE	ace for repeating columns.	*	blankRe blankRe Styles Formatt Compor Uf bind	port1 al		x # C	
Panel	2	non printable area	•					Fiel	d List			ty Grid	
Shape									 Bom Cab 	DetailColle leConducto	ction rsCollection		
2p Code	bindingSource1) 📅 Cab	leNoForma lesCollectio			
Group and Sort										isesCollecti uitsCollecti			
Add a Group + 🔨 Ad	d a Sort x 🦋 Delete 🍘	Movello @M	lave Down								SettingsColl	ection	
Field Name	Sort Order	Show Heade									portCollecti		
Group and Sort		and// Heade	a anow Poo							wingRevision wingsCollect	insCollection	n -	
blankReport1 { PaperKind: Le	tter }								1009	% 😑		÷]

Explanation

Here we design the report. The menus are obvious so we won't bother. What may not be obvious the Banded Report design and the Smart Tag. Smart Tags will be displayed on entities that are selected (if available) like so:

CAD [CableNo]	
non printable area	

Smart tags can be expanded to so entity specify settings. Here we see properties specific to the Detail Band:

🗉 Detail 🔇	Detail Tasks		
	Edit and Reorder Ba	nds	
	Sort Fields	(Collection)	
	Multi-Column Mode	Use Column Width	•
	Multi-Column Layout	First Across, then Down	•
	Column Count	1	\$
	Column Width	180	
	Column Spacing	0	
	Formatting Rules	(Collection)	
	Page Break	None	-
	Keep Together		

Related Topics

A discussion on report design can be found here

4.3.4.4 Toolbox

Visible only when the Report Designer Tab is active. ▲ ? ⊕ E ፆ i A 🛛 🛔 🔳 🔳 • k • 10 di. 0 - \pm -• WireCAD Label Check Rich Text Picture Panel Table Box Box Zip Code Chart Sparkline Pivot Grid Table Of tartPage × Report × Report × Discrepancies × fp3w_locations.dwg × 1x2_5N0_LOGO.repx × Pointer [CableNo] A Label Check Box A Rich Text Space for repeating columns ols placed here will be printed in Picture Box Panel Table Line R Shape IIII Bar Code 30 Zip Code bindingSo 🛱 Add a Group 🔻 📉 Add a Sort 🕶 💥 Delete | 🍈 Move Up 🔘 M Group and Sort

Any of these tools can be added to the report under design.

Controls

- Pointer Stop drawing and revert the mouse to a Selection tool.
- Label The most common tool. Can be used to display static text or if the text is held in square braces[]. For example: a label with the caption S:[SRCSys]>[SRCPin] will render S:SomeSrcSys>SomeSrcPin once for every record in the collection.
- Check Box A Check Box is used to display True/False or Checked/Unchecked/Indeterminate values in a report.
- Rich Text The Rich Text control allows you to display formatted text in your report. It can represent static or dynamic text, or both. In addition to the capability to embed plain text into your report (using the Label control), you may need to display RTF or HTML content as well. WireCAD does not use RTF or HTML natively but there is no reason you could not put formatted text in a user field.
- **Picture Box Picture Box** is used to embed static (stored along with the report definition) or dynamic (obtained from a data source) images into a report. It can display images of various file formats: BMP, JPG, JPEG, GIF, TIF, TIFF, PNG, ICO, DIB, RLE, JPE, JFIF, EMF, WMF.
- **Panel** The **Panel** control is a container that frames separate report controls to allow them to be easily moved, copied and pasted, and visually unites them in the report preview (with borders or a uniform color background).
- **Table** The **Table** is used to display tabular information in a report. Note: Table reports should not be confused with hierarchical master-detail reports or cross-tab reports. You can create two tables simultaneously, e.g., one for showing column titles in the Page Header, and the other for showing regular information in the Detail band.
- Line The Line control draws a line of a specified direction, style, width and color. It can be used for both decoration and visual separation of a report's sections. Note that the Line cannot cross bands.

- Shape The reporting engine provides you with the capability to embed shapes into your reports. You can simply add an Shape control to a report, choose one of the available shape types, and then print or export this report. The following shapes are available:
 - Arrow Brace Bracket Cross Ellipse Line Polygon Rectangle Star
- Bar Code A Bar Code object. The supported bar code types are:

1D Barcode Types	2D Barcode Types
Codabar	ECC200 - Data Matrix
Code 11 (USD-8)	GS1- Data Matrix
Code 39 (USD-3)	Intelligent Mail
Code 39 Extended	PDF417
Code 93	QR Code
Code 93 Extended	
Code 128	
EAN 8	
EAN 13	
GS1-128 - EAN-128 (UCC)	
GS1 - DataBar	
Industrial 2 of 5	
Interleaved 2 of 5	
Matrix 2 of 5	
MSI - Plessey	
PostNet	
UPC Shipping Container	
Symbol (ITF-14)	
UPC Supplemental 2	
UPC Supplemental 5	
UPC-A	
UPC-E0	
UPC-E1	

- Zip Code The Zip Code control transforms its content into a zip code. To specify the text for the control, use the ZipCode. Text property. Note that the Zip Code control can only display numeric characters and dashes. Other characters are displayed as empty zip boxes.
- **Chart** The **Chart** control visualizes the series of points using the available 2D chart types or 3D chart types. The chart type is defined via the View property of a series. And, a single chart can display multiple series, if their view types are compatible. A **Chart** contains multiple visual elements (diagram, axes, titles, labels, strips, constant lines, etc.) and, when any of these elements is selected, its properties are shown in the **Property Grid**.
- Gauge The Gauge control provides you with the capability to embed graphical gauges into your report.
- **Sparkline** The **Sparkline** control displays a compact chart that is commonly used to reflect the flow of data for every row in a report.
- Pivot Grid The Pivot Grid allows you to create a pivot table, an Excel-inspired data visualization application for multi-dimensional data analysis. Using the Pivot Grid, large amounts of data can be summarized and represented in a cross-tabular format that can be sorted and filtered. Also, since the Pivot Grid provides customization you can freely change the layout of the report based on your analysis requirements, using simple drag-and-drop operations. It also supports drill-down (to view the underlying data for calculated cells).
- **Sub-Report** The **Sub-Report** control is used to embed reports into each other; this allows you to create Master/Detail reports (reports with hierarchically linked data).
- Table of Contents The Table of Contents control allows you to provide your report with a table of contents that reflects the hierarchical structure of the report bookmarks.
- Page Info The Page Info is used to display auxiliary information on report pages, such as date, time, page numbers or user name.
- Page Break The Page Break control's sole purpose is to insert a page delimiter at any point within a report. This control is visually represented by a short line, attached to the report's left margin. The **Page Break** control is useful when you need to insert a page break between controls within a report band for example, to divide subreports, so that the second subreport starts printing on a new page. You can also insert a **Page Break** before or after a specific report band using the Band.PageBreak property.
- Cross-band Line, Cross-band Box Cross-band controls are used to draw lines and rectangles through several bands, as opposed to Line and Shape controls that can be used only within a single band. The following two cross-band controls are available:

Cross-band Line allows for the drawing of vertical lines, which are not restricted to a particular band. For example, it can be used to emphasize a report section consisting of multiple band areas.

Cross-band Box allows for the drawing of rectangles through several bands. It can be used to encompass a report section consisting of multiple band areas.

4.3.4.5 Cable Data Selector

ојест	Vier	VY1X133SD.rep			rint Preview		Report Design	er Cable	Data Selector									▲ ? ⊕ ☶
Clear	AI	Copies 1																+WireCA
/ Selec	+ 41	Pad with Empty		-														WireC
5660			vecorda 0	•														• WIICCI
		Actions																
Start P	age >	Report X	Report ×	Discrepancies	× fp3w_loc	ations.dwg ×	1x2_5N0_LC	GO.repx ×										
Selec	t This	CableType	CableType	CableNoPr	CableMask	CableNo	CableNoSu	Src SysName	DestSys	SRCPin	DestPin	SRCLoc	SRCEI	DestLoc	DestEl	SRCConn	DestConn	1
•	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1001-		DAJ-001	DAJ-002	8-01	A-01	Location	Elevation	Location	Elevation	8	B ÷	f
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1002-		DAJ-001	DAJ-002	8-02	A-02	Location	Elevation	Location	Elevation	в	в	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1003-		DAJ-001	DAJ-002	8-06	A-06	Location	Elevation	Location	Elevation	в	в	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1004-		DAJ-001	DAJ-002	B-05	A-05	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1005-		DAJ-001	DAJ-002	B-04	A-04	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1006-		DAJ-001	DAJ-002	8-03	A-03	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1007-		DAJ-001	DAJ-002	8-07	A-07	Location	Elevation	Location	Elevation	8	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1008-		DAJ-001	DAJ-002	8-08	A-08	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1009-		DAJ-001	DAJ-002	8-09	A-09	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1010-		DAJ-001	DAJ-002	B-10	A-10	Location	Elevation	Location	Elevation	в	В	1
æ	\checkmark	BELDEN	1505A 003		\w{1,6}-\d			DAJ-001	DAJ-002	B-11	A-11	Location	Elevation	Location	Elevation	в	В	
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1012-		DAJ-001	DAJ-002	B-12	A-12	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1013-		DAJ-001	DAJ-002	B-13	A-13	Location	Elevation	Location	Elevation	В	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1014-		DAJ-001	DAJ-002	B-14	A-14	Location	Elevation	Location	Elevation	В	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1015-		DAJ-001	DAJ-002	B-15	A-15	Location	Elevation	Location	Elevation	В	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1016-		DAJ-001	DAJ-002	B-16	A-16	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d			DAJ-001	DAJ-002	B-17	A-17	Location	Elevation	Location	Elevation	в	В	1
æ	\checkmark	BELDEN	1505A 003		\w{1,6}-\d			DAJ-001	DAJ-002	B-18	A-18	Location	Elevation	Location	Elevation	в	В	1
Œ	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1019-		DAJ-001	DAJ-002	B-23	A-23	Location	Elevation	Location	Elevation	В	В	
E	\checkmark	BELDEN	1505A 003		\w{1,6}-\d			DAJ-001	DAJ-002	B-22	A-22	Location	Elevation	Location	Elevation	в	В	1
æ	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1021-		DAJ-001	DAJ-002	8-21	A-21	Location	Elevation	Location	Elevation	8	В	1
æ	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1022-		DAJ-001	DAJ-002	8-20	A-20	Location	Elevation	Location	Elevation	в	В	1
Ð	\checkmark	BELDEN	1505A 003		\w{1,6}-\d	DA-1023-		DAJ-001	DAJ-002	8-19	A-19	Location	Elevation	Location	Elevation	в	В	1
	\checkmark	BELDEN	1505A 003		\w{1.6}-\d	DA-1024-		DAJ-001	DAJ-002	8-24	A-24	Location	Elevation	Location	Elevation	8	в	1

Explanation

This tool allows you to pick and choose which cable records to print without having to create a complex filter. Simply select the records to print in the Select This field and set the number of copies to print then click the **[Apply]** button.

Controls

- **Reload** Reloads the data. All current selections are cleared then the data is reloaded from the Cables table.
- Clear All Uncheck all.
- Select All Check all.
- Copies Number of copies to print.
- Pad with Empty Records Useful when trying to use a label on a sheet of labels that has already had some use.
- Apply Do it!

4.3.4.6 Bill of Materials Generator

	inaphshot													
Snapshot Name	My Snapsho	ot				Include Equips	nent		Equipment	Filter				x
						Include Cable	Types		Cables Filt	BL				x
						🗹 Include Conne	ctors							
													Generate	
Done														
							X							
Category	Soundhat N	Manufacturer	Item					Status	BOMUser 1	ROM Iser 2	BOMUser3	ROM Iser4		
cutegory	an rapar raction.	The land care		Bill of Materials crea	ted. In the grid below (don't for	and the shale frame)		510103	00000001	DOMODELLE	0000000	DOMOJET 1		
			_	Then open one of the	ne Bill of Materials reports a	nd filter for this Snaps	hot						1	
			_		OK									
		360 SYSTEMS	-		L			Not Ordered						
Equipment	My Snapshot		PP12232					Not Ordered						
Equipment	My Snapshot	Manufactu	Equipment.			0	0	Not Ordered						
Cable Types				13				Not Ordered						
	My Snapshot		1505A	0		0		Not Ordered						
	My Snapshot		1504A	2		0		Not Ordered						
	My Snapshot		200Pair	789789		0		Not Ordered						
	My Snapshot		test mc 1	0		0		Not Ordered						
	My Snapshot		9508	0		0		Not Ordered						
	My Snapshot	BELDEN	1505A 003			0	0	Not Ordered						
Output Co				0				Not Ordered						
	of 20 + HI	+ - → √ ×												

Reports > Generate Bill of Materials Commandline: bom

Explanation

Before a **Bill of Materials (BOM)** report can display data, that data must first be generated. We generate **Bill of Materials** data with a **Snapshot Name**. The report that you run will group be **Snapshot Name**.

You can choose which items to count in the **BOM** and refine your counts by creating filters.

One of the most common misunderstandings with the **BOM** generator is how it deals with cable lengths. The generator sums all lengths of a give **Cable Type**. But what if you have specified a pre made cable of 2 meter length? In this case we don't want to total the length but rather the quantity. To handle pre made cables take the following steps:

- 1. Create a new <u>Cable Type</u> with the cable length in the name. For example an of the shelf 2 meter HDMI cable might be named: OTS HDMI 2m. This will show up in the **Cable Type** field of the **Cables** table and further in your **BOM**.
- 2. When entering the cable **Length** for pre made cables enter the **Length** as 1.

In the **BOM** you will then see a count of your OTS HDMI 2m cables.

Prerequisites

1. You will need an active project with SysNames and Cable data.

Related Topics

Grid Basics 38

Form Options

- **Snapshot Name** Name is something unique that you will remember. Preset by the Default BOM Snapshot Name in the Project Settings panel.
- Include Equipment, Include Cable Types, Include Connector Types What to include.
- Filter Equipment Apply a filter to the set. Click the [...]

And O			
[Flags] Equals CFE	٢		

4.3.5 **PDF Viewer**

- ∂ × • ? ⊕ ⊡ ፆ i Deen PDF Print Previous Next Find Zoom Out Zoom in Zoom •+WireCAD Ð 2 14 -Q, Rind 201

Visible only when the active environment is a pdf document.

Explanation

This is the built in PDF viewer. Any pdf file placed in the project\Drawings\ folder tree can easily be previewed by double-clicking it in the **Project Explorer**.

Controls

- Open PDF Open another pdf.
- Print Shows the PDF preview dialog. 510
- Page Navigation
- Find Shows the find text panel.

4.3.6 Plugins Forms

4.3.6.1 Translation Manager

ment Culture is: en - English (United States)	Select Language To Trans	late: Er-français - French	2	Show Context		Translation Statistics Total String Count = 3399
rag a column header here to group by that column						Not Translated to en = 0
en		ŕ				Foreign Language en = en count: 33 Translated = 0
P						
WreCAD						
UserSettings.wnl					11	
SupportPaths						
Group						
Label						
Checked						
Unchedied						
Loaded Plugins:						
PRO						
Copyright 2000-2009 Holbrook Enterprises, Inc.						
Version:						
Serial Number: - Trial						
Info						
0						
Lubing up the engine room						
Lubing up the engine room						
AutoSave In: (0)						
(Unassigned Items)						
(All Items)						

Explanation

All visible text strings in WireCAD are contained in dictionary that is editable via the Translation Manager. The current UI culture is queried for a string. If not found the English (en) version is returned. You can right-click a column header and select the KeyString column to show the base en string that the program searches from.

NOTE: Some forms and dialogs only get their text strings on program start so changes here will not be visible to all areas of the application until you restart WireCAD.

Possible Uses

- 1. Translate WireCAD into a different language.
- 2. Change user column names and labels in the application to aid your process.

See Also

How to Translate a Form Caption 208

Form Options

- Current Culture is The culture of your machine. If no translation exists, WireCAD defaults to the en (English) language.
- Select Language To Translate Selects the language to edit in the right-hand column.
- Show Context Select to display a column showing the primary context in which the string or message appears.

4.4 Tool Panels

Tool panels are used to present logical groups of controls. Tool panels can be shown/hidden from the **View>Tool Panels>Pane Name** menu.

Tool panels can be docked together or undocked. To Undock a tool panel drag its tab page.

	Find 4	× Start Page
	Find: X F	
	Search Where	
	O Active Drawing	Select Existi
	All Project Drawings All Project D	Show M
	☑ Project Databases	Lefthan
	Search Options	LH Conr
	Show File	+ B
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	Replace	
	atter	
Drag Hint	Results. Double-Click to Show	
	Project Explore	
		n
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	Equipme	
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	Cable Ty	pes 🕌
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T		Information
Tab Page	Select All Clear Selection Results Count = 0	× No Auto
de	Replace Selected Cancel Fir	No Auto
	🔍 Find 🔀 Plan 🏾 🗱 My T 🗮 Favo.	Command:

4.4.1 Project Explorer

oject Explorer	#	×
1 2 2 0		
tem		
Connectors		*
Permissions		
Color Codes		
E Pinouts		
Projects		
+ 🗋 just a test		
⁹ A New Drawing		
Dpen Drawing(s)		
 Project Drawings 		
R FP3.dwg		
A plan view.dwg		
A racks too.dwg		
A racks.dwg		
A test1.dwg		
د test1.pdf		
A WireCAD Drawing.dwg		
 Project Databases 		
Equipment List (SysNames)		
SysName Format		
Cables		
Baddones		
Circuits		
Cable Number Format		
Drawings Named Paths		
Named Paths Next Numbers		
To Do List		
E Locations		
 Locations Discrepandes 		
Related Projects (Read Only)		
Related Projects (Read Only)		ų.
	÷	

View > Tool Panels > Project Explorer Commandline: none

Explanation

This is the main access point to the project. From here you can:

- Open global database grids.
- Open drawing(s).
- Open Project Database grids.
- Rename drawings.

Related Topics

New Project 64 Show Report Mode 364

Prerequisites

In order to see project related information you will first have to open a project.

Tool Panel Options

Open Project Folder - Show the current project folder in a windows folder browser. **Project Properties** - Show the <u>Project Info</u> [513] form. **Refresh** - Refresh the **Project Explorer**. **Equipment Library** - Show the <u>Equipment Library</u> [418].

4.4.2 Draw Cables

Start Cable	
Point to Point Cable	
able Text Height (1/100 DU)	25 💲
Replace Cable with Pointers	
Manually Draw Cable	
Aux Text	
Enable	
Height (1/100 DU)	
Location Over	
Variable CircuitNumber	
Format (0)	
 Settings 	
Router X Offset (1/100 DU)	150 🗘
Router Y Offset (1/100 DU)	100 🗘
Default Pointer	-
Preview:	
[

View > Tool Panels > Draw Cables Commandline: none

Explanation

The Draw Cables tool panel is only active when the current environment is a drawing. This tool allows you draw several different types of cables:

- <u>One-to-One</u> 72 One output to one input.
- <u>One-to-Many</u> 74 One outputs to many inputs.
- <u>Many-to-One</u> 77 Many outputs to one input.
- <u>Many-to-Many</u> 78 Many outputs to many inputs.
- <u>Terminal to Point</u> 79 Drag a Terminal into the drawing an drop it on a connection point in the drawing. This will place the terminal on the left hand side of the block.
- <u>Point to Terminal</u> 82- Drag a Terminal into the drawing an drop it on a connection point in the drawing. This will place the terminal on the right hand side of the block.
- Working with Pointers 851.

Prerequisites

Requires and open drawing.

Related Topics

Draw Cables 69

4.4.3 Drawing Properties

Grid Space X	1.0000
Grid Space Y	1.0000
GridStyle	Dot
Limits	0.0000,0.0000,0.000
OrthoMode	
OrthoModeAxis	X, Y, Z
PolarTrack	
PolarTrackAngle	45.0000°
PolarTrackLock	
SnapAngle	0°
SnapBase	0.0000,0.0000,0.0000
SnapMode	
SnapSpaceX	1.0000
SnapSpaceY	1.0000
Keyboard	^
OrbitActionKey	AltLeft
OsnapDialogKey	Ctrl+None
PanMouseButton	Middle
SelectionPreviewDo	Down
SelectionPreviewUp	Up
UrlActionKey	Ctrl+None
Misc	^
PanMouseButton SelectionPreviewDo SelectionPreviewUpi	Middle Down Up

View > Tool Panels > Drawing Properties Commandline: none *Explanation*

Provides access to the drawing properties. If no selection set exists in the drawing the general document properties are presented. If a selection exists then the common properties of all items in the selection set are displayed for edit. You may also select a single item from the selection set and edit all of its properties.

Prerequisites

An open drawing.

Related Topics

Tool Panel Options

• Selected Object - This combo box displays the selected object and allows you to selected individual items from the drop down.

Drawing Properties	чх
🧭 💩 🐗 🔍	
4 Items 4 Items	
vdPolyline	
vdText vdText	
vdInsert 360_SYST-Image_	Sev0
Misc	^
Drawophiag	Default
FadeEffect	0
Handle	

- **Property grid** The properties displayed here will all have property editors that are specific to the entity type.
- Sort/Group/Display Descriptions/Search toolbar buttons



Reference

4.4.4 Find

Find					L X
ind:				×	Find
Sear	ch Wher	e			
	tive Dra	wing			
() Al	Project	Drawing			
V Pr	oject Da	tabases			
~ Se	arch Op	tions			
V st	ow File				
🗸 st	ow Item	Туре			
^ R	place				
Repla	e With				

View > Tool Panels > Find and Replace Commandline: none

Explanation

Find and replace text found in any drawing and in editable fields of the project databases. The found list will tell you the context in which the searched text appears.

NOTE: found text may occur in an invisible attribute.

Changing a port name on a device using the Find and Replace tool requires that you change the text in the following contexts:

- The visible attribute.
- The invisible CP_IN or CP_OUT attribute string. This is a pipe delimited string that contains the name conn|type. You must change the name portion of this.
- Any records that exist in the Project Cables table that reference that port.

Prerequisites

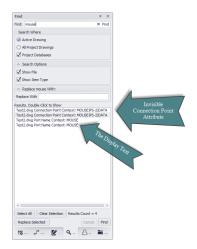
An active project

Related Topics

Tool Panel Options

- Find The text to search for.
- [X] Clear the Find text.
- Search Active Drawing Only look in the active drawing.
- Search All Project Drawings Search every project drawing.
- Show File Show file name if any of the context in which the item is found.
- Show Item Type Is it a text entity in a drawing or a field in a database.

• Results -



- [Select All] Selects all items in the results window.
- [Clear Selection] De-selects all items in the results window.
- **Replace With -** The text to replace the found text with.
- [Replace Selected] Initiate the replacement.
- [Cancel] Cancels the current search.
- [Find] Initiate the search.

4.4.5 Plan View

sus	All groups	
C M IA	Annotation	â
Project Plan View Items	 >	0
	Bold Arrow.dwg	
All Plan View Files		
2	Ellipse 1.dwg	
Equipment Library Plan Mew Files	Ellipse 2.dwg	
Equipment Librar	a Souddwg	
	Juea Cloud.dwg	
	\odot	
	Large Idea Cloud.dwg	

View > Tool Panels > Plan View Commandline: none

Explanation

This tool panel provides three tabs. Each tab houses a gallery of **Plan View** blocks. The tabs are:

- All Plan View Files Enumerates the %BLOCKS%\Plan View Files\ folder tree presenting a preview
 of each dwg file. Each sub folder will be added as a gallery group and items in that folder added to the
 group.
- Project Plan View Items Provides a gallery item for each SysName in the Equipment List. If the SysName's equipment definition has an empty Plan View File, the project Default Plan View File is presented.
- Equipment Library Plan View Files Shows all Equipment Library items that have data in the Plan View File field.

Prerequisites An open project. An open drawing.

Tool Panel Options

- Place with Rotation and Scale If checked then when placing the selected item in the drawing you will be prompted to scale the X, Y, Z and set the Rotation angle.
- Plan View Galleries Click an item to add it to the drawing. Then place (and scale/rotate).

4.4.6 Favorites

Scale Factor 1 🗘	2
Scale Factor 1 🗘	
Explode after insert	
avorites - Double-Click to Add to Drawing	
Item	
<u> </u>	
 Global Favorites 1.dwg 	
🗙 ny router.dwg	
PESA-COLIGAR Sv0.dwg	
🛨 VTR.dwg	
Your User Favorites	
Project Favorites	

View > Tool Panels > Favorites Commandline: none

Explanation

Often times we find ourselves creating the same block or circuit configuration over and over. These times are a great candidate for a Favorite. Creating a Favorite stores the item(s) as a block in the OS in one of three places:

- Global Saves in the %BLOCKS%\Favorites path and may be visible to other user with the same support path.
- User Saves to your user profile. Visible only to you.
- Project Saves in the Project\Favorites folder for use by anyone with access to the project.

Prerequisites

A drawing with the block or configuration you want to save as a Favorite. A drawing into which you wish to place a Favorite.

Tool Panel Options

- **Explode** If you have grouped a system together that includes multiple blocks and cables into a single block. It will need to be exploded back one level to expose the individual WireCAD objects.
- Scale
- List Double-click to add to the current drawing.

4.4.7 Command Line

Executing Command: Open PDF - C:\Users\Public\Documents\just a test\Drawii Can't find dependent file: C:\Users\Tarab\Documents\Marketing\W1\times\Wire	js\test1.pdf AD logo.jog	×
Command:	Calculat	

View > Tool Panels > Command Line Commandline: none

Explanation

The **Command Line** interface to the application. Here you can view a history of commands and enter commands directly. All commands entered must be executed by clicking the **[Enter]** key.

Prerequisites

None

Related Topics My Space Bar is my Enter Key 365

Dialog Options

- Command History What went before.
- **Command Prompt** What the application is expecting of you. If no job is running or no input is expected from you it will read: Command:

x	No AutoSave Needed : test1.dwg
	No AutoSave Needed : Test2.dwg
Comr	mand:

Otherwise it will prompt you for some action:

X No AutoSave Needed : test1.dwg No AutoSave Needed : Test2.dwg	
Selec	t the Source

- Command Line Enter the command here.
- Calculator

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Writing Plugins

INTRODUCTION

The examples can be found at: C:\users\public\documents\WireCAD\WireCAD9\WireCAD SDK\Examples

Welcome to the WireCAD SDK examples. These examples show you how to interact, via your own code, with WireCAD. These examples assume that you understand the basics of C# programming syntax and structure (the examples are in C# but you may use any .NET programming language that you are comfortable with).

If you do not understand it don't let that deter you. It is really very easy to understand. Microsoft has tons of examples. Just get on the web.

If you have WireCAD SDK specific questions email support@wirecad.com along with as much code as you can and an explanation of what you are trying to do. We will try to help. If you need more help or if you are developing a commercial plugin for WireCAD you may want to consider purchasing custom programming services from us. Please call the office for more information.

Getting Started

You will want to download a .net ready integrated development environment(IDE) like Visual Studio for c# or SharpDevelop. Visual Studio has free versions. SharpDevelop is open source.

We recommend the Visual Studio for the ability to attach a debugger to your running process. Also use the **WireCADv9TemplateInstaller.vsix** to install several starter projects in Visual Studio that you can use from the **File>New Project** wizard.

The first place to go with any programming effort is the ubiquitous "Hello World" example in the Basic folder.

NOTE: there are two types of WireCAD plugin.

- 1. The automatically discovered (AD) plugin that loads silently and may or may not interact with the user.
- 2. Plugins that require a WireCAD .wpi manifest file that describes where the plugin can be found, how to call it, what icon to display and on which toolbar or menu, etc. Both plugins implement the WireCAD.IPlugin interface.

AD plugins are named YourPluginName.**Plugin.Dll** and are placed in the C:\users\public\documents\WireCAD\WireCAD9\\bin folder.

Standard WireCAD plugins have no naming requirements but must be accompanied by a **.wpi** file in the C:\users\public\documents\WireCAD\WireCAD9\Plugins\Active Plugins folder.

To create a wpi file you can use the utility in Plugins>Plugin Manager [New Pl Info]

Take some time to read through the code. The interface is very simple,

yet you can access most of the WireCAD object model including drawing, data access, grids, GUI, reports, etc.

You can also create your own forms and functions to interact with the WireCAD objects.

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COPIES. PLEASE DO NOT IGNORE THIS STATEMENT. THESE ARE GREAT LIBRARIES AND IF YOU ARE PLANNING TO DEVELOP A COMMERCIAL PLUGIN FOR WIRECAD YOU WILL WANT TO HAVE THEM. If you are developing a small project or line of business function for your own use you may not need to purchase licenses. Here is an example: If you want your plugin to have the same look and feel, or create a custom form with the same gridview or treeview as WireCAD you will need to purchase the Developer Express library. If you are developing a custom form that needs to show its own drawing engine you will need to purchase the VectorDraw developer framework. If, on the other hand, you are able to use the WireCAD baseforms object, are happy with the WinForms controls and can develop using the WireCAD drawing engine then you can get started without spending a dime.

BUILDING YOUR FIRST PLUGIN

STEPS:

- 1. Open your IDE
- 2. Click **File>Open Project** or Solution and browse to the basic hello world.csproj project file in the examples\basic\hello world folder
- 3. Click **Build>Build Solution** (Ctrl+Shft+B) to build the project.
- 4. Check that the file C:\Users\Public\Documents\WireCAD\WireCAD9\bin\helloworld.plugin.dll exists. If it does not then you need to check the project build path in the project properties section and point it to the WireCAD bin folder above.

If you get any reference errors check **Project>Hello World Properties...** [Reference Paths] section

points to C:\Users\Public\Documents\WireCAD\WireCAD9\bin\. If it does not then modify it and make sure that your reference errors disappear.

5. You now need to force WireCAD to load the shiny new plugin.

Either relaunch WireCAD (tedious) or click **Plugins>Plugin Manager** ... then click the **[Rescan and Reload All Plugins]** button. Make sure that the helloworld.plugin appears in the Auto Discovered Plugins list.

- 6. Now enter **hw** in the commandline and click **[Enter]**. This will launch the command that the plugin registered in its Load() method.
- 7. Make some changes and click **Build>Build Solution** (Ctrl+Shft+B) to build the project again. if your changes are outside the load() method you will not need to force a reload.

just call the command again by typing hw in the commandline and click [Enter].

There you have it. You have just built your first WireCAD plugin. Now go forth and do more!

DEBUGGING YOUR PLUGIN

Invariably you will need to stop the execution of your plugin and examine the variables and logic structure to figure out why it is not working as you expect.

The following instructions assume you are using the Visual Studio IDE for C#. Further, that you have built your project and made sure it is loading in the WireCAD plugin framework by looking at the loaded plugins list in **Plugins>Plugin Manager...**

NOTE: The following will work for anything other than the initial Load() method. To debug that read on.

Steps:

- 1. Open your project in the Visual Studio IDE.
- 2. Run WireCAD.
- 3. In VS click Debug>Attach to Process...
- 4. Select WireCAD9.exe.
- 5. Place a breakpoint in the code where you want to stop execution. Do this by clicking in the gutter of the text editor(very left hand edge. A red dot will appear).
- 6. Execute your command. The debugger will pause at the line and highlight the paused line. In the interface you will find two very helpful tool windows - Locals and Autos. These windows list the variables in play at the time of the breakpoint.
- 7. On the IDE Debug menu you will find commands to continue execution:
 - 1. **Continue** runs from the break point until it hits the next breakpoint if any.
 - 2. **Step Into** continues execution of the next line. If the next line calls another function you will be stepped into that function.
 - 3. **Step Over** continues execution of the next line. If the next line calls another function that function will execute in it entirety and you will step to the next line in the current code block.

While you cannot edit and continue you will be able to understand the changes you need to make

to fix the issue you are having.

8. Stop the debugger. Fix your code. Lather, rinse, repeat.

DEBUGGING THE LOAD() METHOD OF THE IPLUGINCORE INTERFACE

The load method or the HasPermissionToRun methods of the IPluginCore interface require some special consideration if we are to debug them. The reason for this is that the WireCAD loading process will call these methods before we have a chance to attach the debugger to the process.

This section will outline two approaches:

1 - PAUSE EXECUTION USING MESSAGEBOX

Place a MessageBox.Show("Pause"); command in the **Load** or the **HasPermissionToRun** method. This modal dialog will pause execution for you to attach the debugger as shown above. like this:

```
/// <summary>
/// This is called when the plugin is loaded at application start
/// </summary>
/// <param name="ws">Singleton WireCAD Workspace object</param>
public void Load(IWorkspace ws)
{
    MessageBox.Show("Pausing plugin load so you can attach the debugger");
    ....... Your code here
}
```

2 - START WIRECAD IN THE DEBUGGER PROCESS

The other approach is to start WireCAD in the debugger from your project. While this seams like a good approach it suffers from a major drawback. When you want to fix your code you must stop the debugging session. Since WireCAD is running in the same process it will stop as well. Thus requiring you to start WireCAD every time you want to make a fix.

Steps:

- 1. Open your project in the IDE.
- 2. Close WireCAD.
- 3. Open the Project Properties window Project>YourProjectName Properties...
- 4. Select the **Debug** section.
- 5. Select the Start External Program radio button.
- 6. Browse to the WireCAD9.exe at: C:\Users\Public\Documents\WireCAD\WireCAD9\bin\WireCAD9.exe
- 7. Place your breakpoint.
- 8. Click **Debug>Start Debugging** (F5).

This will start the debugging session by launching WireCAD first. As WireCAD loads it will eventually

come to your Load() method and hit your breakpoint.

When you are finished with your examination close WireCAD and let it shutdown. Ending the debugging session with the **Debug>Stop Debugging** (Shift+F5) acts like Kill Process and will not allow WireCAD to store session state.

ADDITIONAL RESOURCES

C# is the language of choice for developing in WireCAD. There are tons of resources online to learn this language.

For WireCAD specific issues: www.wirecad.com/wiki support@wirecad.com Please don't submit support tickets for SDK issues. Use the support email.

Developer Express is the library we use for many of the UI elements. They have a brilliant web site with documentation and support. If you are going to go deep on WireCAD development you will probably want to purchase a license. www.developerexpress.com

VectorDraw is the drawing engine we use. While their site is minimal they do offer registered developers lots of sample code. www.vdraw.com

for a full api listing visit: for the main WireCAD9.exe: https://www.wirecad.com/api/90/exe/index.html

Writing Plugins

for the global data access layer: http://www.wirecad.com/api/90/globaldal/index.html

for the project data access layer: http://www.wirecad.com/api/90/projectdal/index.html

5.1 Hello World

Every programming effort starts with the ubiquitous "Hello World" example. This example is meant to provide just enough information to show the framework and produce an output.

Please note that in C# comments are preceded by //.

```
//WireCAD Plugin
//Contents:
    Basic WireCAD Plugin Framework
//Instructions:
      1. This project assumes that you installed WireCAD in the default
            location. If you did not, you will need to change the reference
            path and the build path to that of your install path
             ..\WireCADx\bin folder. You can do that byclicking:
             Application Menu > Project Options [Reference Paths] Reference path
             Application Menu > Project Options [Compiling Tab] Output Path
     3.Add your code and build
      4. Create a wpi file (from within WireCAD click Plugins>Plugin Manager [New]) that points to
             place it in the ...WireCADx\bin\plugins folder
//Explanation:
//This heloworld example demonstrates a number of different WireCAD SDK
//concepts. This is WireCAD Automatically Discovered (AD) plugin and
//therefore does not require a .wpi file in the /plugins folder. As such,
//it will load silently and can only be executed from the commandline since
//it does not add any other GUI elements.
//First familiarize yourself with the code below and try to understand
//what will happen before testing.
//1. Build the project and ensure that the helloworld.plugin.dll is located
             in the ...WireCADx\bin folder.
//2. if WireCAD is running click Plugins>Plugin Manager[Rescan and Load Plugins]
//3. Type hw into the WireCAD commandline.
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using VectorDraw.Professional.vdFigures;
using VectorDraw.Professional.vdObjects;
using WireCAD;
using WireCAD.Interfaces;
using WireCAD.Translation;
namespace hello_world
{
    public class MyPlugin: IPluginCore
    {
```

```
#region Fields
```

```
//Place your field level variables here
     CommandInfo ci = null;
#endregion
      #region Properties
      //Place your Properties Here
#endregion
#region IPluginCore Members
/// <summary>
/// Called before plugin is loaded to make sure that this plugin
/// has permission to run at this application mode level and
/// for this person(Identity)
/// </summary>
/// <param name="ws">The Singleton Workspace object</param>
/// <param name="id">Current user identity</param>
/// <returns>should return true if the plug can load</returns>
public bool HasPermissionToRun(IWorkspace ws, Identity id)
{
    return true;
}
/// <summary>
/// This is called when the plugin is loaded at application start
/// </summary>
/// <param name="ws">Singleton WireCAD Workspace object</param>
public void Load(IWorkspace ws)
{
     //We pass an IWorkspace object exposing most if the WireCAD
     //object model
    //on load we will register a commandInfo object with our
    //commands so that our static method can be invoked from
    //the command line in WireCAD
    ci = new CommandInfo();
    //The name of our dll
    ci.Assembly = "helloworld.plugin.dll";
    //The NameSpace and Class of our function
    ci.NameSpaceAndClass = "hello_world.MyPlugin";
    //Our function's name
    ci.MethodName = "HelloWorld";
    //The long descriptive name of our function
    ci.CommandLongName = "Hello World Demo";
    //An alternative name for our function. You can type this text into the WireCAD comman
    //to call the function
    ci.CommandAlt = "hello";
            //The shortcut
    ci.ShortCut = "hw";
    //this registers the command so that the commandline knows how to parse the information
    //and call our function
    ws.Commands.RegisterCommand(ci);
}
/// <summary>
/// Unload code for your plugin
/// </summary>
```

```
/// <param name="ws"></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param></param>
```

```
public void Unload(IWorkspace ws)
{
    //here we place any code to unload our plugin.
    //Unregistering the commandInfo prohibits the command from
    //being persisted. This is more a development function.
    //once you are ready to distribute your plugin you will
    //probably want your user to be able to save his own shortcuts
    //and therefore not unregister the command.
    ws.Commands.UnRegisterCommand(ci);
}
```

#endregion

#region Static Methods

```
/// <summary>
/// Static method that can be called from the WireCAD command line
      /// It's a good idea to rename this to something meaningful
/// </summarv>
/// <param name="ws">WireCAD is expecting to find this parameter</param>
public static void HelloWorld(Workspace ws)
{
   //This hello world function demostrates a number of different
   //areas of the WireCAD SDK
   //this is a winForms messagebox
   MessageBox.Show("Hello World");
   //now we'll show an instance of form1(defined elsewhere in this project);
   Form1 f = new Form1();
   f.ShowDialog();
   //now let's send a message to the Command Line History
   ws.MainForm.CommandLine.AppendHistory("Hello World");
   //let's check to make sure that we have an open drawing
   if(!Commands.IsActiveDrawing(ws,true))
   {
            //no active drawing so return
            return;
   }
   //Get some user input on the next step
   if(DialogResult.No == MessageBox.Show(
             "Would you like us to add some text to the active drawing?",
             "WireCAD SDK", MessageBoxButtons.YesNo)) return;
   //First we create a vdText object
   vdText text = new vdText();
   //register it with the active document
   text.SetUnRegisterDocument(ws.ActiveDrawing);
   //give it the document defaults
   text.setDocumentDefaults();
   //Set the string
   text.TextString = "hello world";
   //locate it in the coordinate space
   text.InsertionPoint = new VectorDraw.Geometry.gPoint(0,0,0);
   //Set the textHeight
   text.Height = .25;
   //Set the color
   vdColor colorRed = new vdColor();
```

```
colorRed.SetUnRegisterDocument(ws.ActiveDrawing);
  colorRed.Palette = ws.ActiveDrawing.Palette;
  colorRed.FromRGB(255,0,0);
  text.PenColor = colorRed;
  //alternately you could do this
  //text.PenColor.ColorIndex = 1;
  //our text will be added to the drawing on the ActiveLayer and with
  //the ActiveTextStyle if you want to change those you can by setting
  //those properties on the text object
  ws.ActiveDrawing.ActiveLayOut.Entities.AddItem(text);
  //now refresh the drawing
  ws.ActiveDrawing.Redraw(true);
        //alternately you can just invalidate the text object(less expensive)
        //like this:
        //text.Invalidate();
}
     #endregion
```

}

}

5.2 Getting Started

The following assumes that you have installed either Visual Studio 2013 or 2015. Run the **WireCADv9ProjectTemplate.vsix** template installer from C: \Users\Public\Documents\WireCAD\WireCAD9\WireCAD SDK\Visual Studio Templates Installer\WireCADv9ProjectTemplatesInstaller.vsix. Launch Visual Studio

Study the examples by loading the All Project solution: C:\Users\Public\Documents\WireCAD\WireCAD9\WireCAD SDK\Examples\All Projects.sln

When you want to create a new project to start your own plugin follow these steps:

Your First Plugin Project

- New Project
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 Sort by: Default
 If: E
 Search Installed Templates (Carl-E)

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- 1. Click File>New Project

- 2. Select one of the C# WireCAD Project Templates
- **3.** Name it something meaningful.
- 4. Click [OK] and a new solution will be created for you with all the necessary references and interface files.
- 5. Now start coding!
- 6. Click F5 to build your project and make sure that it builds and copies to c: \users\public\documents\WireCAD\WireCAD9\bin\YourPluginName.dll. If it does not build check to make sure that the **Project Properties - Reference Paths** section has a pointer to the above path.
- 7. If you are using a wpi file make sure that it is edited to point it to your dll and method and that you have copied it to c:\users\public\documents\WireCAD\WireCAD9\Plugins\Active Plugins folder. Relaunch WireCAD or click [Rescan and Reload] from the WireCAD Plugin Manager to make WireCAD load your plugin.

5.3 Registering Your Plugin

Menu: Plugins>Plugin Manager[Add/Edit Pl Info]

Default command line shortcut: none

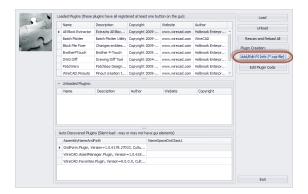
Assuming your plugin requires user input to launch it, ie. it does not respond to an event. You will want to register your command with the application.

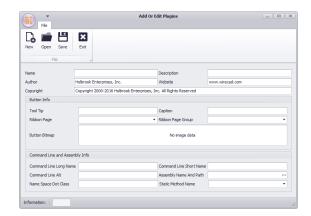
WireCAD uses an information file (wpi - WireCAD Plugin Info) to describe a command and to tell the application how to execute the command.

WireCAD looks for these files in the c:\users\public\documents\WireCAD\WireCAD9\plugins\Active Plugins

Commands can be executed directly from the Commandline or from a button on a menu bar.

In order to register your command you must, at minimum, set up the Commandline arguments. Toolbar buttons are optional. To edit a wpi file use the editor.





Controls

• Name, Description, Author, Website, Copyright - Self explanatory.

Button Info

- Tool Tip Text displayed when mouse hovers over the button.
- Caption The button caption.

- Ribbon Page Select a page or create your own.
- Ribbon Page Group Select a page group or create your own.
- Button Bitmap bitmap image. 16x16 for a small button 32x32 for a large one.

Command Line and Assembly Info

- Long Name The display name of your command.
- Short Name The shortcut.
- Alt Shorter less descriptive.
- Assembly Name The name and fully qualified path of your dll. If no path we will search the \WireCADx\bin directory.
- Namespace Dot Class YourNameSpace.YourClass where your function is located.
- Static Method Name The static void method name of your function. This must have the proper signature as follows:

```
public static void YourFunctionName(WorkSpace ws)
{
    .....
}
```

Using the above example the Static Method Name would be: YourFunctionName

NOTE: if you use the WireCAD Plugin template a static method with the proper signature will be created for you. You will need to rename it to be something meaningful.

-[-

[Add Ports] 54 [Add to Drawing] 65 [Cleanup] 120 [Clear All Cables] 120 [Column Chooser] 38 [Ctrl]+[D] 38 [Ctrl]+[1] 38 [Fillet] 120 [Preview] 168 [Ratsnest] 120 [Register by Phone] 19 [Register By Web] 19 [Remove this Column] 38 [Submit] 168 [X] 38

-_-

_D.DWG 69 _S.DWG 69 SD.DWG 69

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