

USER GUIDE

SI 5 User Guide

The D-Tools System Integrator version 5 (SI5) User Guide was designed for Microsoft Visio 2003/2007, AutoCAD Version 2006/2009 and D-Tools SI5 system integration software.

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Welcome to D-Tools SI5!

Welcome to the growing family of **D-Tools System Integrator (SI)** users! I want to thank you for putting your confidence in D-Tools software. We know that D-Tools SI5 will be a powerful enhancement to your system integration business. D-Tools SI is the leader in complete system integration software and has been proven by thousands of system integration companies that are already using it to more effectively design, engineer, document, estimate, sell, install, and manage their low voltage projects. In fact, many companies have seen the software pay for itself in the first project through increased efficiencies throughout the company.

This latest version of D-Tools SI has been extensively tested on various computer platforms, but it has not been tested on the most important one... yours. Give it a try, run through a sample project, test it, and by all means, please don't hesitate to contact us to report any issues or questions so we can continue to improve the software. You will receive free in-version updates to our product over time as we continue to hone the product and add even more enhancements. We want you to be successful with this product. Feel free to contact us with ideas and thoughts about the program. Some of our best enhancements have come from users just like you.

While D-Tools has been designed to be simple to use, it is also a very deep and full functioned software product. I have included some ideas you can use to make a smoother transition from your previous design, estimating and business management procedures to D-Tools SI:

- Take a moment to peruse the user guide included with the software before jumping right in.
 This guide is full of tips, tricks and detailed information that will help you get the most from the software.
- Your corporate product database is one of your most important business assets. Take the
 time to prepare your database by following the steps outlined in the Manage My Product
 Data (MMPD) interface. MMPD was specifically designed to easily allow you to add, edit and
 enhance your product data. In addition don't forget to make frequent backups of your DTools SI database and projects.
- Open one of the sample projects included in your software. See how we have created packages, accessories and miscellaneous labor costs. Run all the reports you have available with this demo project. Finally, take a small project that you have completed in the past, one that is successful and you are happy with. This will allow you to get familiar with the program and begin to create a custom database of your most used products.

I highly recommend product training. Although not a requirement, product trainings are reasonably priced and are offered regionally throughout the year. We offer a number of regional, on-site or web based trainings. Trainings are an excellent way to shorten the learning curve and quickly get up to speed. For more information about trainings visit:

http://www.d-tools.com/index.php/support/training-sub

It is our hope to always keep product data current and free for you to use. You can help in this regard by encouraging the manufacturers and reps you deal with to join the Manufacturer Vantage Point Partner Program. Please have them e-mail mvp@d-tools.com for more information.

Thank you again for your purchase. If you take the time to implement the software into your everyday business practices, I know that you will join the growing group of companies using System Integrator who are seeing tremendous results! Please contact me if I can be of any additional help.

Sincerely,

Adam Stone

President

adam@d-tools.com

About This Guide

This is guide is undergoing constant revision. You may find that some sections are not consistent with the screens or functionality you see. Feel free to contact us over any discrepancies and we will update these sections as quickly as possible. You may download the most recent versions via the following links:

Installation and Administration Guide

http://downloads.d-

tools.com/si5/documents/training/SI_5_Installation_and_Administration_Guide.pdf

User Guide

http://downloads.d-tools.com/si5/documents/training/SI_5_User_Guide.pdf

Help Videos

http://downloads.d-tools.com: 80/si5/documents/SI5_Help_Videos.html

Tutorial

http://downloads.d-tools.com/si5/documents/training/SI 5 Tutorial.pdf

This document along with the SI 5 Tutorial and the Installation and Administration Guide will help maximize the return on your D-Tools investment. SI 5 is a very feature rich product. If you have specific questions, scan the Table Of Contents or look for keywords in the index. If you find we have left out something, please let us know. We are releasing this document in PDF format so that it may be more easily updated as SI 5 continues to evolve. Please give us you feedback. We want to know how we can further improve both our products and our documentation.

Please report any errors, omissions or suggestions to bugs@d-tools.com.

Thanks,

The SI5 Documentation Team

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Pre-Implementation

This section is designed to help you prepare for a successful D-Tools System Integrator 5 (SI 5) implementation. SI 5 is a very flexible tool that can conform to a wide range of business needs. Our intent is help you understand the issues and gather the necessary information that will result in a successful implementation.

SI 5 Licensing

For a complete discussion of SI 5 Licensing issues please see the SI 5 Installation and Administration Guide.

Infrastructure Planning

Setting up the proper network configuration and appropriate computer resources can make a significant difference in the performance of the SI 5 application suite. The ideal designer workstation would have dual screens allowing easy viewing of both the Product data and drawings at the same time. If you have more than one SI 5 license, you need to provide access to a computer to serve as the "D-Tools Server". A server class computer is not required. In most cases, a modest performing desktop computer with a high speed network adapter is all that is necessary. If you happen to have a server that is already running SQL Server, then this would be an ideal machine to host the SI 5 server databases. Whatever machine you choose should be included in your daily backup procedure.

Recommended Hardware Requirements

These recommendations are based on our experience and should be considered in order to have an acceptable computing experience. These recommendations assume that you are using Visio or AutoCAD to complete drawings with SI 5.

Processor: Intel Core Duo, 2.0 GHz

Memory: 2 GB of RAM

Hard Disk: 2 GB of available space

Optical Drive: DVD-ROM

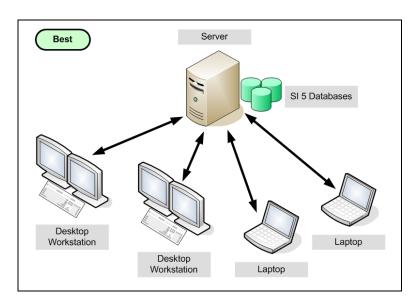
Display: Dual XGA (1024 x 768) or higher resolution monitors.

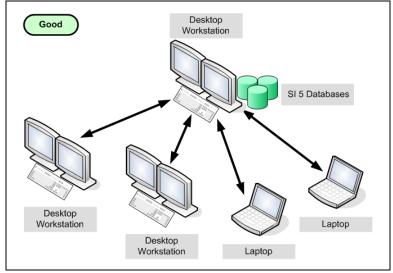
Operating System: US-English version of Microsoft Windows XP SP 2 or Vista

Small LAN (multiple licenses of SI 5)

Best: Provide a dedicated server with backup capability to host the SI 5 server databases.

Good: ...Provide a workstation with backup capability to host the SI 5 server databases. This machine would need to share files with all other SI 5 users and stay online at all times while others are using any of the SI 5 applications.



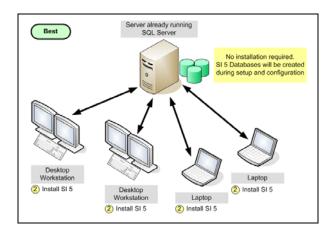


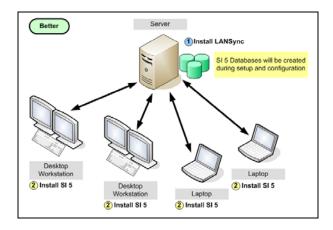
Server Database Locations

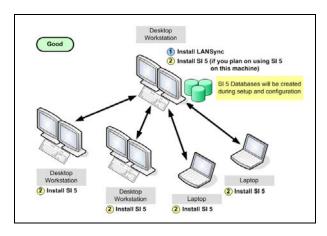
Best: Use an existing server running SQL Server 2000 SP3 or better.

Better: Install LANSync on a dedicated server. This will install the SQL Server Express Edition.

Good: Install LANSync on a desktop workstation. This will install the SQL Server Express Edition.







Data Architecture

SI 5 operates in a distributed architecture. Changes made to the **Local Products Database** stored on each user's computer are updated to the **Server Products Database** via **LANSync** at times to be determined by the user. These changes are propagated to all users based on each user's update strategy. This means that you may at any time disconnect an individual user from the network since you will be using the local Master Table Database. The next time the user connects; all changes will be propagated to the other users via the server. LANSync module keeps all Product information in sync between the users.

LANSync maintains the **Server Projects Database** which keeps track of all projects that are checked into the server. All shared Projects are "checked-in" to the server. To modify a Project it must first be "checked out". During checkout the Project is copied to the user's local hard drive. Once checked out, the user may disconnect from the network and take the Project home or into the field. Once the Project modifications are complete, the Project is checked back in to the **LANSync** server for possible editing by other users. While the Project is "checked-out", other users may view the Project and run reports, but no modifications are allowed. Due to the graphical nature of SI 5 Projects a lot of information may move between the server and the user's computer. A high speed network is required to provide optimal SI 5 performance.

Product Data and Pricing

A key to early success with SI 5 depends on the quality of the data you have to begin your first Project. Ideally you would like to begin with a database of Products you use today. D-Tools has a large Product database available for download. However, we suggest that you only download the data you need. See "**Downloading Products**" on page 121.

Gathering Existing Data

Identify the sources of the data you use today, such as QuickBooks, spreadsheets or an existing Product database. Use this list as a basis for downloading Product data from D-Tools. If you currently manage your Products in your accounting system you may use QuickLinks to link the D-Tools Products to your accounting Items, see **QuickLinks** on page **609**. Once you load your Product Database you may update prices by a) syncing with your accounting data via QuickLinks or b) use the MMPD spreadsheet export/import process.

Accessories

An accessory is a Product that is often needed to properly configure or install another Product. For example, a mount may need to be sold with a High Definition TV installation. In this case there

may be many mount options to choose from. Once a Product is in the database it can be listed as an accessory to another Product. So each time the parent Product is chosen, you could be prompted to select from a list of accessories that have been pre-assigned to the parent Product. You may choose to set up the accessories in advance for Products you often quote. However, accessory assignment can occur as needed during proposal generation. Once you make an accessory assignment, **SI 5** will store this assignment for future use. Accessories may NOT include other Accessories. In other words you cannot nest accessories.

For more details on managing "Accessories" see page 84.

Packages

Packages are a very powerful concept in **SI 5**. It is recommended that you look for every opportunity to "package" systems or subsystems. Once the packages are in place, quotes and proposals can be rapidly generated without sacrificing accuracy. Time spent on the front end creating packages will be paid for the second time they are used.

Look for packaging opportunities as you create your first Project. Don't attempt to create ALL of the packages for your business before starting your first Project. Let the number of packages and the level of detail included evolve to fit your business model.

For more details on managing "Packages" see page 93.

Labor

SI 5 offers a wide variety of options for quoting and estimating labor. One method is to estimate the amount of labor required to install an individual Product. Once each Product has an accurate number of install hours, the total Project labor amount is calculated by summing up the labor associated with each component. This approach is very flexible and has many advantages. However, the Product labor estimate will fluctuate from business to business and there are no known published labor standards for our industry. D-Tools provides labor hour estimates associated with its downloadable Product data. However, these are ESTIMATES and should not be used to quote labor for your business until they are verified by your specific business processes.

You also have the option of not calculating labor per Product. Instead you can add Products of Category "Labor" as line items to your Projects. These are called Labor Products, Labor Items, and Labor Line Items throughout the interface and documentation.

If you have a successful labor estimating strategy, use it. You can create as many unique labor Products in the database as you wish. These labor Products may also be associated with Packages.

If you are looking to improve labor estimating, SI 5 has all the tools you need but there is no silver bullet. You must track actual labor on a daily basis to produce reliable future estimates. You may treat labor estimating as an art or a science. It's your choice.

For more details see Price Tab on pg. 73 and Labor Products on pg. 137 for details.

Choosing a Labor Methodology

If you are successful at estimating labor, do not change your methodology unless you have benchmarked the alternative. Both methods can be successful; however the "labor per product" method is preferred. For either labor estimating method to be successful, one must track forecasted vs. actual labor and make adjustments accordingly. Timesheets should be recorded daily and associated with work orders if at all possible. SI 5 allows you to capture the time information required to improve the estimates over time.

If your estimate exceeds the price the client is willing to pay, do not lower the hour estimates. Instead, provide a labor dollar discount. It is important to track true forecasted vs. actual labor regardless of price. Do not skew the data by modifying labor estimates driven by price decisions.

Labor per Product

This is the preferred method, but it does take time develop an accurate model. The labor estimates provided with the SI 5 data will NOT accurately represent your business. They are only a starting point. If you wish to use this method, we suggest capturing actual labor over several Projects. The more granular the data the better the future estimate. It is suggested that you use your existing labor estimating method until you can demonstrate improved accuracy via the labor per Product method. See **Price Tab** on pg. **73** for details.

Labor Products/Labor Items/Labor Line Items

These entities are referred to by many names throughout the software and documentation. Many organizations begin estimating labor by breaking a Project into logical tasks and assigning labor recourses to each task. Even in this method, we would suggest breaking the Project into as many task categories as possible. The more well thought the Project plan the better your labor estimates. Project managers with input from lead installers typically provide the best estimates. This is particularly true for retrofit Projects where the labor may vary drastically. See **Labor Products** on pg. **137** for details.

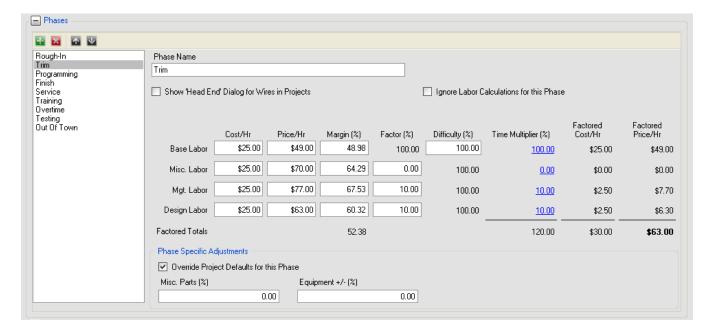
Determining Labor Rates

Your accountant should be involved in determining appropriate labor rates. It will be important for them to understand how SI 5 generates labor estimates and the options that are available. As a starting point, each labor group should have a fully burdened labor cost and selling price. The labor groups would include anyone with direct labor charges to a Project, including: a) Installers, b) Project Managers, c) Designers or Engineers, d) Programmers e) Misc. Each labor group may also have different rates by Phase. For example you may need to create a "Finish Overtime" phase if you take on a project knowing that overtime will be required. Ideally, you will want to pass these additional costs on to the client. A default "Programming" phase is included with SI 5 to track programming labor. However, you will still need to provide the cost and margin data. See the D-Tools forum for a sample spreadsheet that will help calculate burdened labor costs (http://www.d-tools.us/showthread.php?t=1211).

Labor Factor Calculations

Within each Phase, there are four labor entries (Base Labor, Misc. Labor, Mgt. Labor, and Design Labor). Let's assume you sell labor at the following rates; Installation \$49/hr, Project Managers \$77/hr, Design services \$63/hr and other Misc Labor \$70/hr. Yes, we know you would be out of business, but hey it's just an example. When you indicate that a Product requires 10 hrs of labor, the "Labor" section is used to determine the base selling price of the total installed labor for the Product. In this case that would be 10 hrs x \$49/hr = \$490. In addition, there is a "Factor" associated with Management, Misc. Labor and Design. This Factor may be used anyway you see fit, but most often it is used to recover other direct labor costs such as Project Management and Engineering/Design costs. For instance if you have one full time Project manager and ten full time installers, you would need to include .1 hrs of PM time for each Installer Hour. If you have two engineers that spend 50% of their time on sold Projects, then you would need a Design Factor of .1 to account for this direct cost. A scheduler may be accounted for under the Misc. Labor entry. In the example below we assume that no Misc. Labor is used in the Trim phase. So the selling price of one hour of Trim would be:

Selling Price of Trim Labor = Number of Trim Hours x (49.00 + 7.70 + 6.3) or \$63/hr.



Accounting Considerations

Global Parameters

These settings allow you to tailor the application to your locale. Settings include: Measurement Unit, Currency Symbol, Date Format and Tax Code. Modifying the Tax Code will change the values you see when viewing Accounting Rates. Choose the appropriate Tax Code before moving on to Setup Accounting.

Taxes

SI 5 provides a wide variety of tax estimation methods. The recommended method will depend on the tax rules imposed on your client. For most organizations, tax on goods (Sales Tax) and services (Labor Sales Tax) will be sufficient. If more complex tax calculations are required, consider using the Canadian Tax Code.

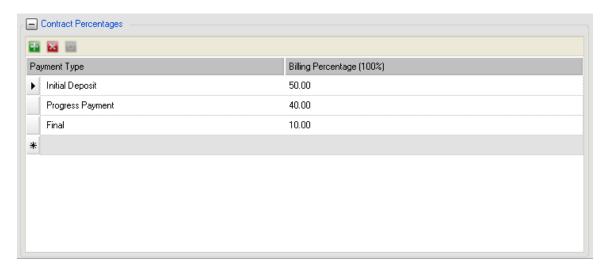
Tax rates and other global settings may be customized for each Project (see Section "**D-Tools-** >**Options**" on page 280).

More details on Taxes on pg. 57.

Contract Percentages - Progress Billing

If your business uses progressive billing, Contract Percentages is where the billing percentages are managed. You should set these percentages and descriptions to the values that are most often

used by your organization. Each new Project will initially have these values. You are able to modify the percentages and descriptions on a project by project basis. These percentages are used to calculate the installed price for each description. This information is shown on the Contract report providing the client a detailed payment schedule with signature page.



For more information see "Payment Schedule" on page 283.

Misc. Parts %

This percentage can be used for any purpose you choose. However it is most often used to account for the cost of consumable Products. If you choose to use this percentage for some other purpose, such as to estimate freight charges, you will need to modify the client report label to match your intended use. The Misc. Parts% is applied to all Non-Labor Products and is taxed as equipment.

Equipment +/- %

This percentage operates just like the Misc Parts%. It is used to provide a percentage adjustment for all non-labor Project line items. This value can be negative in order to give a discount.

The **Misc. Parts** % and **Equipment** +/- % factors are used as part of the Installed Price calculation and are subject to the same tax as other non-labor Products. These will show up as separate line items in the project summary section of client reports. These two factors can be used in any way you choose such as Freight and Equipment Discounts. However, you may need to modify the client report labels to match your intended use.

Inventory

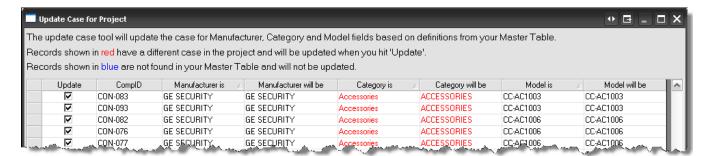
Inventory is not managed directly by SI 5. However, SI 5 QuickLinks (an optional SI 5 module) can create Purchase Orders, Estimates and Invoices which may be processed by QuickBooks. These accounting procedures can make adjustments to physical inventory within QuickBooks.

Purchasing

SI 5 has a set of reports that may be used to generate Purchase Orders for an individual Project. Purchase orders may be generated in one of the three following ways

- 1) A Purchase Order Report is run from with SI 5. This report is faxed to your vendor(s) or used to reenter the Purchase Order(s) by hand in your accounting system.
- 2) OrderTools is a built-in Purchase Order system in SI 5. It has no links to any accounting software and the POs are created on a per Project basis. For more information on Order Tools see "D-Tools->Update Case

Use this to update the case settings within a project if you have made changes to your default case settings in the MMPD interface. A window will open showing what will be changed. You can uncheck any products you do not wish to change:



- 3) D-Tools->OrderTools" on page 291.
- 4) Products for a single project may be automatically transferred to purchase orders for supported accounting systems, reducing data entry time and errors. QuickLinks is required.
- 5) Products across multiple projects may be automatically transferred to purchase orders for supported accounting systems, reducing data entry time and errors. QuickLinks is an optional license.

Time Tracking

Time tracking is extremely important for both job costing and labor forecasting. Time should be recorded in the accounting system to provide accurate job cost information. If you are using the "labor per product" method of estimating labor, then you also need to use the SI 5 Work Order system to record actual time required to complete the Work Order. It is not necessary to track time for each individual Product. SI 5 will allow you to distribute time across multiple Products in proportion to the original estimate. If these time tracking procedures are consistently used, labor forecasting will become more accurate over time.

P&L by Project

All SI 5 Projects should be associated with the same Project name in your accounting software. If you use QuickLinks, the Project name association is handled automatically. All Invoices, Purchases, and Payroll costs can be tracked via your accounting software to create a Project profit and loss statement. SI 5 estimates Project gross profit but does not provide accurate Job Cost analysis. Use your accounting software for all financial analysis and reporting.

Accounting ID mask

The accounting ID mask defines the way QuickLinks names and groups SI 5 items in your accounting software. The mask is of the form:

MMMMMMM OOOOOOOOOOOO, where the number of "M"s represented the first number of characters of the Manufacturer name. The "O"s represent the first number of characters of the Model number. It is recommended that a non-colon separator such as a space " " be used between the Ms and Os. If a colon ":" is used as the separator character, all model#s will show up as a sub-item of the Manufacturer in QuickLinks. While this provides a nice hierarchical view of the items in QuickBooks, it is very restrictive. In some accounting systems such as QuickBooks, all sub-items must be of the same type (Inventory or Non-Inventory) as the parent item. If you ever wish to mix Inventory and Non-Inventory parts within a vendor, use ANY separator other than a ":", such as the space. The non-colon separator provides the most flexibility for item assignment. However, if you intend to code all Products as Inventory Parts, then use the ":" as a separator.

For more details see QuickLinks on pg. 582.

Project Workflow

Project Status

Develop an exhaustive list of possible Project statuses. Prefix each status with a number to provide order to the list (e.g., 01-Proposal Under Development, 02-Proposal Complete, 03-Proposal Under

Review... xx-As-Built Drawings Complete). Put them in the order in which they would normally occur in your project work flow. (See "**Project Statuses:**" on page 46.)

Staff Types

Prepare a list of names of those individuals that may participate in the creation and/or delivery of a Project. This would include Sales, Designers, Engineers, Project Managers, Lead Installers and members of the Installation Team. (See "Staff Types and Members:" on page 45.)

Staff Members

This may include the names of your Sales, Designers, Engineers, Project Managers, Lead Installers and members of the Installation Team. (See "Staff Types and Members:" on page 45.)

Phases

Each Equipment and Labor Product can be assigned to a Phase. You may name a Phase anything you like. The Phases should correspond to the possible events in your Project delivery methodology. At a minimum, most companies will have a Rough-In, Finish and Programming Phase. Remember that if you are using the "labor per product" estimating method, you will need to define labor rates for each Phase you create. (See "**Phases:**" on page 50.)

Component ID Format

A unique ID is assigned to each Product that is added to a Project. These IDs show up on drawings and wire labels. Work with your engineering and install team to construct a component ID schema that best suits your business. (See "Component ID Format:" on page 55.)

Company Information

All company contact information is completely editable. Company information will show up on almost all SI 5 reports, particularly client reports. (See "Company Information:" on page 43.)

Company Logo

SI 5 allows your logo to be shown on client reports. Any JPG or BMP file is acceptable. (See "Company Information:" on page 43.)

Project ID Format

Each Project may have both a Project Name and Project Number (ID). In many cases the Project Number is a more convenient way to identify a Project. A common Project Prefix would be the first

"N" digits of the Client Name. Using the Project Number Format will enable auto generation of unique Project Number when a new project is created. However, you may enter any Project Number you wish. It is strongly suggested that the Project Number be unique. (See "**Project Number Format:**" on page 57.)

Case Settings

This allows you to decide how you want text to appear within the database and on reports. The AV industry has a lot of abbreviations. If you see abbreviations that are not correct (Ipod rather than iPod) use the Exceptions link to add corrected abbreviations to the existing list. (See "Formatting" on page 164.)

I/O Definitions

Review the lists associated with Label, Signal and Terminal. Make sure the terminology you use is represented in these lists. (See "I/O Lists" on page 162.)

Default Wire Length

Enter your most typical wire pull length. When wires are placed in your drawings you may be prompted to provide a wire length. The value entered will be presented as the default. (See "**Project:**" on page 44.)

Equipment Categories

Each Product in the SI 5 database must be assigned a category. Care should be taken when assigning Products to categories since many Products may logically exist in more than one category. Your team should review your current Products lines and consistently apply categories. This will particularly help individuals without extensive Product knowledge find Products to include in the Project. The sales reports can group Products by Category within a Location or Zone. (See "Categories" on page 161.)

Locations

SI 5 provides a wide range of options for specifying the location of Products and the associated labor within a Project. The level of Location detail required by your organization should be carefully considered before implementing your first Project. In some locales, wire label standards require detailed location information as provided by the SI 5 default types. However the requirement for this level of detail is the exception. SI 5 provides five levels of location types that creates a top to bottom hierarchy. The default Location Types are Campus, Building, Floor, Room and Closet. You may use one or more of these Types and they can be renamed. You may also use only one

location if you like. If you choose to use only one Location Type, a "Room" could be called "First Floor Master Bedroom", providing sufficient detail for both proposals and installation reports. However if you need to sort or group Products by floor or building, you will need to assign multiple Location Types to your Project.

Each individual location may also include a detailed text description. These descriptions may be included on proposal reports further defining the requirements or limitations of your system. It is highly recommended that these text fields be used for more complex systems to provide functional detail for each location. This level of specification with the proposal will help reduce misunderstandings in scope that could lead to future payment disputes. (See "Location Types and Locations:" on page 47.)

Location Types

SI 5 provides five "Types" of locations. These Types are listed in a parent/child hierarchical list. Only define the number of Types that you would typically use in a Project. Do not use more Types than necessary. Unless you need to group, sort or in some other way view data by Location Type, we recommend that you start with Type (Room). (See "Location Types and Locations:" on page 47.)

Location Names

Each Location Type may have as many name/description pairs as you like. As mentioned above, if you only use one Location Type (Room), you may have a Room named "First Floor Master Bedroom" on your Location List. Populate your Location List with the names you use most often. You may add more items to the Location List at any time.

The description field is best used to provide detailed scope of work or requirements for a particular Location. A "By Location" proposal report will show the Location Descriptions on the proposal. This is an excellent way to carefully review system functionality on a Location by Location basis with the client. As a result, when you first set up SI 5 there is no need to populate the description fields, since these descriptions will typically change from Project to Project. (See "Location Types and Locations:" on page 47)

Zones

Zones are another way to group Products in a Project. Reports can be generated by Zone or by Location within Zone. Think about how clients may wish to view groups of Products on a proposal. Zones may include detailed text descriptions that flow to the sales reports giving you the opportunity to clearly define the scope and functionality of a particular Zone.

Many residential users will use Zones to define disciplines such as Audio, Security and Central Vac. In the commercial sector one may consider using Zones to provide high level category grouping by placing all the Products associated with the sound system, video and Projection and control in separate Zones. (See "Zones:" on page 48)

Users and Groups

Access to SI 5 requires a Username and a Password. Basically, Users get assigned Groups, and Groups contain your permissions for functionality within SI 5. Your system or SI 5 administrator should be the only person with access to the SI 5 Administration Console. How you intend to use SI 5 within your organization will determine the Group settings. These setting let you restrict changes to data and access to many functions within SI 5. Define the roles within your organization and then match the needs of each of the roles to a particular group. For small organizations where everyone wears a lot of hats, you may provide all rights to all users. For larger organizations with divisions of labor, rights and permissions may be customized for a specific role. See the SI 5 Installation and Administration Guide for more details.

Work Order Resources

Work Orders may be assigned to individuals (Fred) or groups (Install Team 1). This interface allows you to define the resources that are used to fill work orders. A code field is provided for use in accounting if required. Codes are used in QuickBooks time reporting to further identify labor expenses on the P&L. Typical codes could include IN=Installation, PM=Project Management, EN=Engineering, etc.

Training

Your rate of return on your SI 5 investment is directly proportional to the quality and extent of the training you receive. This training is possible from one of many sources including; knowledgeable coworkers, D-Tools staff and D-Tools Certified Partners. Training options include Regional Classroom events, D-Tools University (DTU), one-to-one web based education (Getting Started Web Series) and one-to-many web based education (MIT). The amount and depth of the training will depend on how you intend to use the SI 5 application. To make full use of SI 5's capabilities, knowledge of other applications such as Visio, AutoCAD, Excel, Word and QuickBooks may also be required. (http://www.d-tools.com/index.php/support/training-sub)

Implementation Services

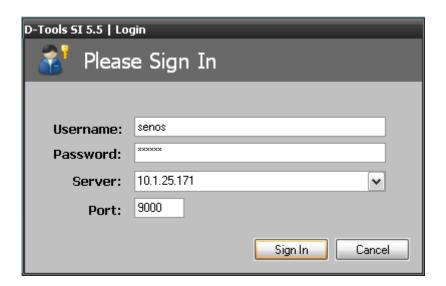
Many of our most successful clients are those who took advantage of the skills and experience of our <u>Certified Partners</u>. These partners provide a wide range of implementation and data services.

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We encourage you to engage them as early as possible in your deployment process. (http://www.d-tools.com/index.php/partners/certified)

Launching SI 5

To launch SI 5, you can either double-click the SI 5 icon on your desktop, select from your Start menu, or click the SI 5 Icon in your Quick Launch bar (depending on what options you selected when you installed SI 5)



Navigator

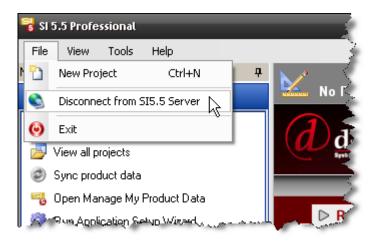
The main user interface for **System Integrator 5** (**SI 5**) is called the **SI 5 Navigator**, or **Navigator** for short. The **Navigator** displays when you launch the **SI 5** application.

- There are eight primary interfaces in the Navigator that are represented by buttons along the bottom left side of the screen: Start, Manage Data, Clients and Contacts, Projects, Reports, Orders and Accounting, Scheduling, and Setup.
- 2......The **Display Area** displays the screen or sub-screen based on your Tab selection and/or Task Pane selections.
- 3......The **Task Pane** list links to functions that are available to you based on your Tab selections that you have chosen.
-The Menu Options offer additional functions and an alternate way to make selections in the Navigator.
- The **D-Tools News** section displays the latest news from us as well as the occasional Hotfix.

Most of the **Menu Options** are just an alternative way to accomplish a function that is available elsewhere in the Navigator. One notable exception is detailed below.

Disconnecting From the SI 5.5 Server

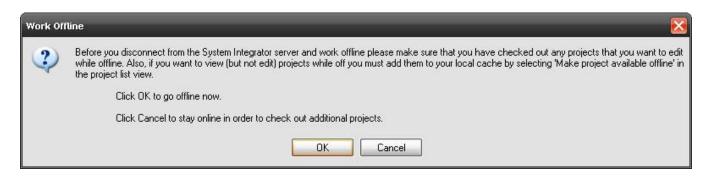
This option is primarily for laptop users that need to work away from your network. Your status can be verified by clicking **File** on the menu bar. When connected to the SI 5.5. Server, you will have the options of disconnecting should you need to remove yourself from your network:



The "connected" symbol also displays in the lower left had corner of the Navigator interface. The symbol is grayed out when disconnected:



It is important that you check out any projects that you wish to work on prior to taking yourself offline. An example of when you would take yourself offline would be if you are working on a laptop and wish to work away from your office network. When you choose to take yourself offline you will see the following prompt reminding you to check out any projects that you wish to edit while offline:

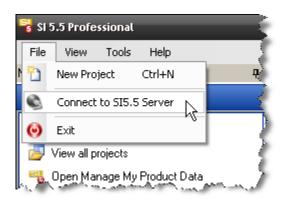


If you want to be able to review but not edit a project while you are offline, you must use the "Make project available offline" function. See **Project Functions** pg. **205** for details of these functions.

When you are disconnected from the SI 5.5 Server, SI 5 will launch without you being prompted to login. That is a clear indication that you are not connected to the SI 5.5 Server. You will not be able to use many of the functions within SI 5 including the Orders and Accounting interface or the Scheduling interface. You will not be able to check-in/out projects or synchronize your database while offline.

When you choose to disconnect from the SI 5.5 Server you effectively "cache" your license of SI 5.5. locally to your machine. This means that one license from your "license pool" will be unavailable to all other users of SI 5 on your network while you have that license "checked out" to you. To add your license back into the "license pool":

- 1) Connect your machine you your network
- 2) Launch SI 5
- 3) Select File->Connect to SI5.5 Server



4) Close SI 5

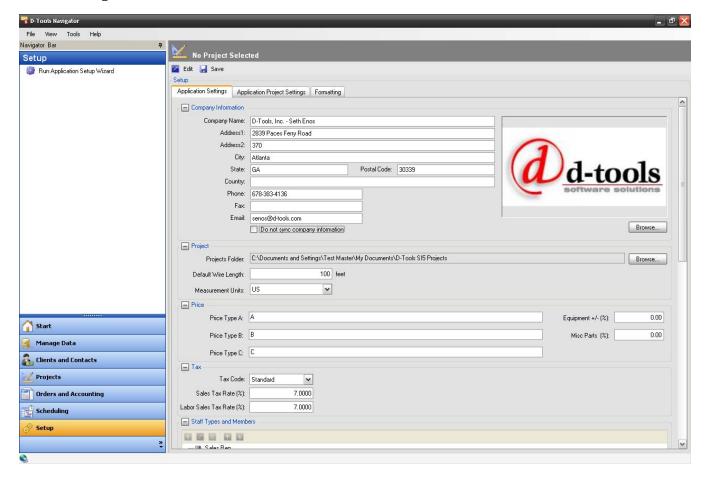
Once connected you will have full functionality of SI 5 and should synchronize your database and check in and projects to update the copy on the server.

Start

The Start screen displays when you launch SI 5. The **Task Pane** displays links to commonly used functions. There are links to latest news relating to D-Tools, SI 5 and other SI 5 activities. Look in the "News" section for information concerning updates and service packs for SI 5.



Setup

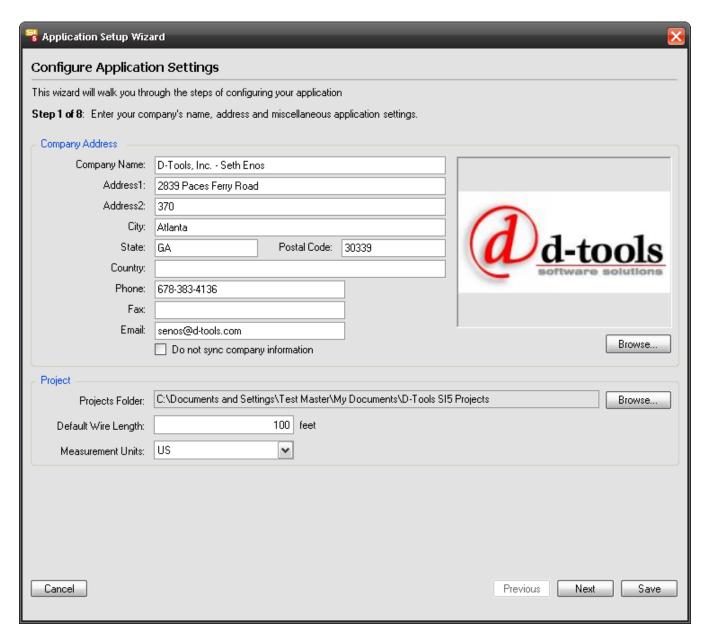


The setup tab is where you configure your default settings for SI 5. If this is your initial setup of SI 5, there is a "Run Application Setup Wizard" link in the Task Pane that will open a wizard to guide you through the setup:

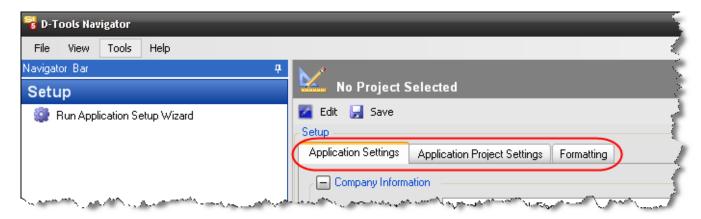


The Application Setup Wizard guides you through filling out essential data for SI 5 to function properly.

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You can use the Wizard or you can simply type in the information on the Application Settings, Application Project Settings, and Formatting tabs:

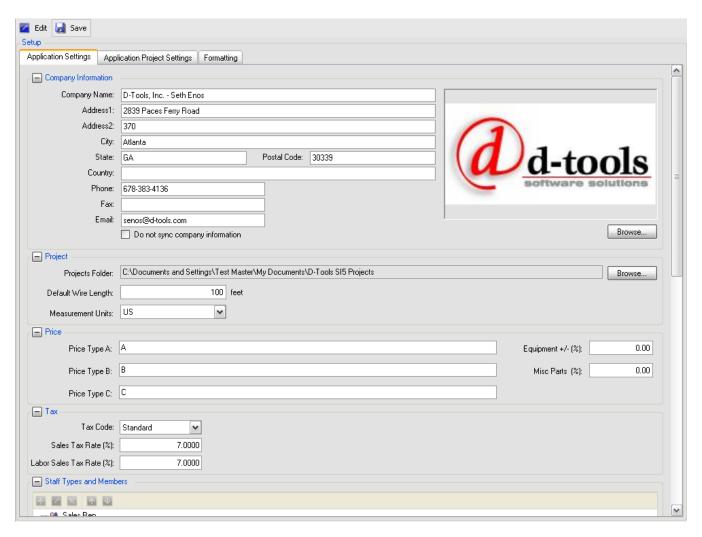


You must click the [Edit] button to make changes to these settings

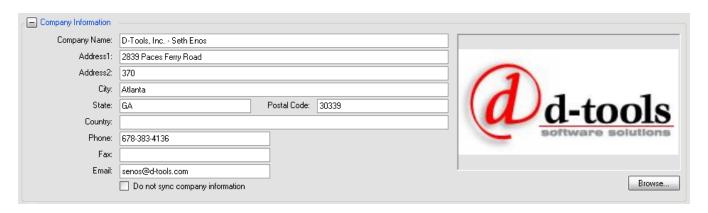


Application Settings

Many of these values can be modified from within a Project.



Company Information:



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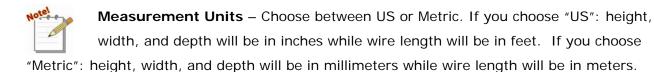
Enter your company information here. Use the **[Browse...]** button to locate and insert a .jpg of your company logo. Your company information and logo will display on most of the reports within SI 5.

Project:

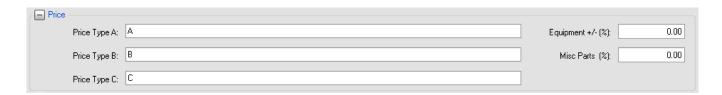


Project Folder - This is where you set the default path for where your local SI 5 Projects are stored. This folder should be on the local machine and not on a server. There is a completely separate folder that is created on your server during install for projects that are checked-in. This foldThe factory default for XP is C:\Documents and Settings*username\My Documents\D-Tools SI 5 Projects (C:\Users*username\Documents\D-Tools SI 5 Projects for Vista).

Default Wire Length - This is the default wire length for Wire and Cable products in your database assigned to the Rough-In Phase. This number can be changed on a per project basis via D-Tools->Options.



Price:



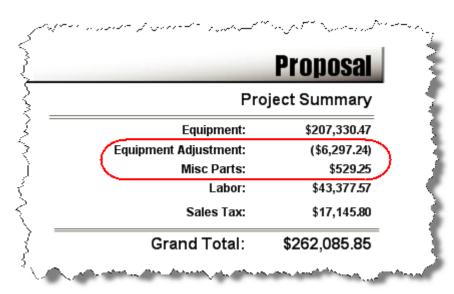
Price Type A-C - Name the three levels of pricing in SI 5. Each product in SI 5 can have up to three pricing levels. If you only use one price per product, use "A" as this is the default for projects.

Equipment +/- (%) – This is a percentage that will be added to all non-labor Products (Products not assigned to the Category "Labor") in a Project based on the Unit Price of the Product. This number can be positive or negative. This setting can be overridden on a per Phase basis.

^{*} username = your Windows login.

Misc Parts (%) - This is a percentage that will be added to all non-labor Products (Products not assigned to the Category "Labor") in a Project based on the Unit Price of the Product. This setting can be overridden on a per Phase basis.

The **Misc Parts** % and **Equipment** +/- % factors are used as part of the Installed Price calculation and are subject to the same tax as other non-labor Products. These will show up as separate line items in the project summary section of client reports. These two factors can be used in any way you choose such as Freight and Equipment Discounts. However, you may need to modify the client report labels to match your intended use. The default labels for Misc Parts % and Equipment +/- % are "Misc Parts" and "Equipment Adjustment", respectively.



Tax:



Tax Code - Choose from between Standard, Canada, Australia, and New Zealand.

Sales Tax Rate (%) - Enter sales tax rate

Labor Sales Tax Rate (%) - Enter labor sales tax rate

For a complete discussion of SI 5 tax related issues see "Taxes" beginning on page 57.

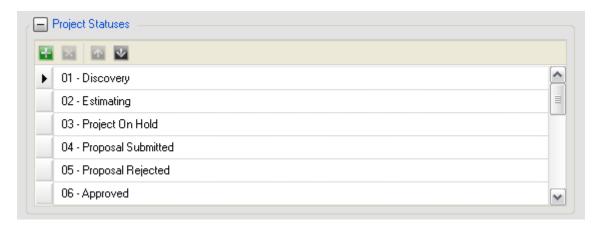
Staff Types and Members:

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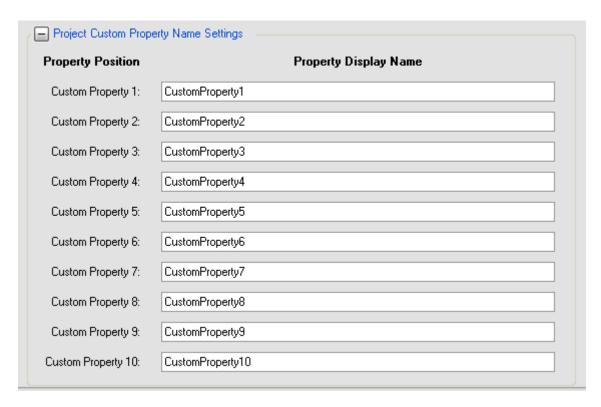
You can have up to four Staff Types in SI 5 and any number of Members. Use the , to add, edit, and delete Staff Members. Use the to move Members up and down in the list. When creating a project you can select these names from dropdown fields.

Project Statuses:



This lists the Project Statuses for Projects. Use the and buttons to add and delete Statuses and the buttons to arrange the list. When creating a project you can select these values from a dropdown field. Project Statuses are project level designations that let everyone involved on a project know what milestone a project is at for any given time.

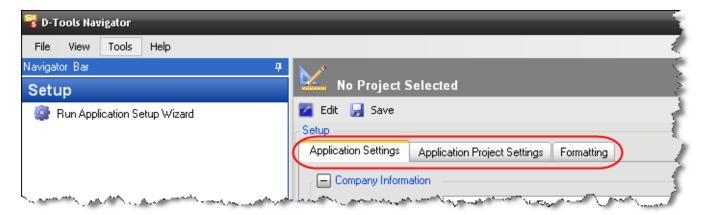
Project Custom Property Name Settings:



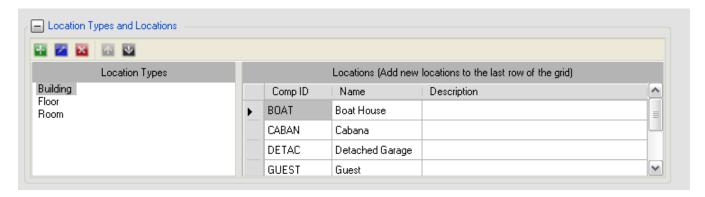
Here you can name the ten custom properties associated with Projects. These fields are 255 characters in length and can be used for any additional information you wish to add to a project.

Application Project Settings

The following settings provide the default values when starting a new project. Many of these values can be modified from within a Project.



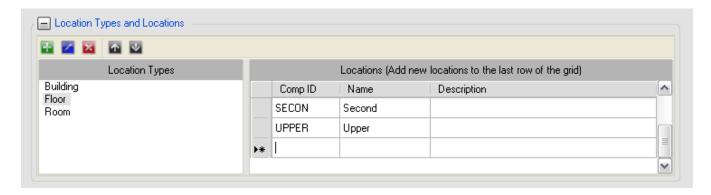
Location Types and Locations:



This is where you setup your default Location Types and then create a list of default Locations for each Location Type. Locations are a way to group products on SI 5 reports. Locations are for identifying where equipment is being installed in a project. You can use up to five levels to identify your Location Types hierarchy. In the screen shot above, only three levels have been added to the Location Types hierarchy: Building, Floor, Room. An example using all five levels is: Campus, Building, Floor, Room, Closet. Whatever hierarchy you choose to use, just make sure that it makes sense when read from top to bottom. Building->Closet->Floor, for example, does not make sense.

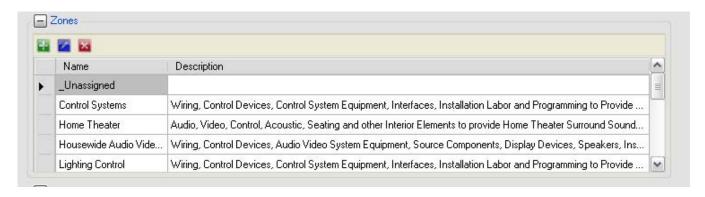
Use the , , to add, edit, and delete Location Types and use the to move Location Types up and down in the list. These buttons are handy because this is a hierarchy and should flow from the top down.

To add a new Location, first select the Location Type then scroll to the bottom of the Locations grid:



There are three fields for each Location: Comp ID, Name, and Description. The Comp ID field by default is the first five characters of the Name field. But you could changes this to be the room numbers from an architectural floor plan plot, for example. The Comp Id for Locations can be used in your Component ID Format, see pg. 55

Zones:

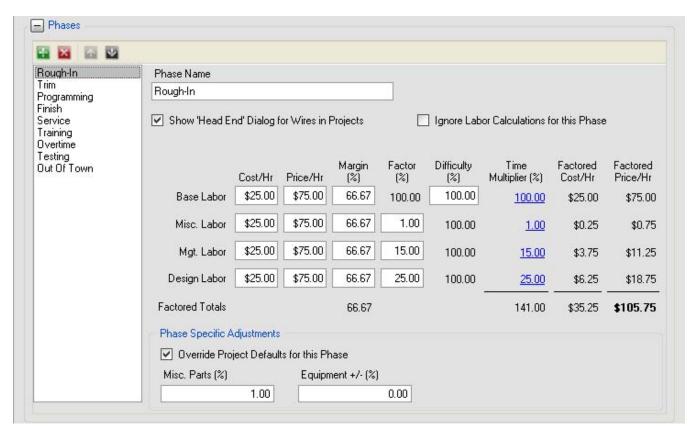


This is where you setup your default Zones list. Use the , to add, edit, and delete Zones from the list. Zones are another way to group Products in a Project. Think of Zones as "Systems" or "Disciplines" for a project. Reports can be generated by Zone or by Location within Zone. Think about how clients may wish to view groups of Products on a proposal. Zones may include detailed text descriptions that flow to the sales reports giving you the opportunity to clearly define the scope and functionality of a particular Zone.

Many residential users will use Zones to define disciplines such as Audio, Security, and Central Vac. In the commercial sector one may consider using Zones to provide high level category grouping by placing all the Products associated with the Sound System, Video and Projection, and Control in separate Zones.

For more information on "Location and Zone Configuration" see page 241.

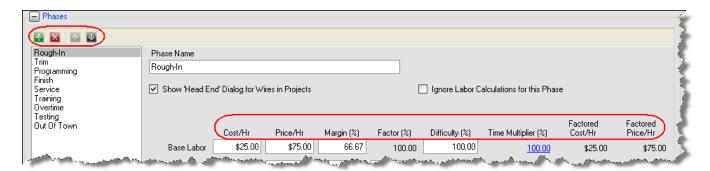
Phases:



Phases are the primary way in which Labor is charged for products in SI 5. Every product can be assigned a Phase and a Unit Labor Hour to automatically calculate how much labor to charge for installation. The settings for the product shown below would charge 1.5 hours of the "Finish" labor rate that you have set.



This is where you create your default Phases and their associated labor values. Although there are many Phases in the default list, there are really four that you will use primarily: Rough-In, Trim, Programming, and Finish. When you download products from D-Tools (see **Downloading Products** on pg. **121)** they will be assigned one of three Phases: Rough-In, Trim, or Finish. Programming is a phase that is more often used for "Labor Line Items" see **Labor** on pg. **137**.



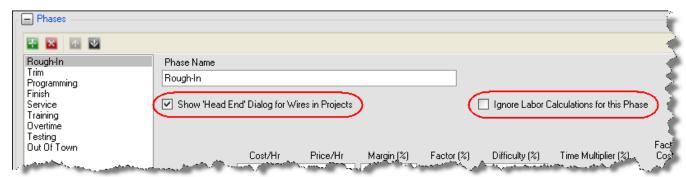
Use the and buttons to add or delete Phases and use the was to move Phases up and down in the list. To edit any fields for a Phase, select the Phase on the left and then edit the fields on the right.

Each Phase is broken down into four sections: **Base Labor**, **Misc. Labor**, **Mgt. Labor** and **Design Labor**. There are eight columns for each section: Cost/Hr, Price/Hr, Margin (%), Factor (%), Difficulty (%), Time Multiplier (%), Factored Cost/Hr, and Factored Price/Hr.

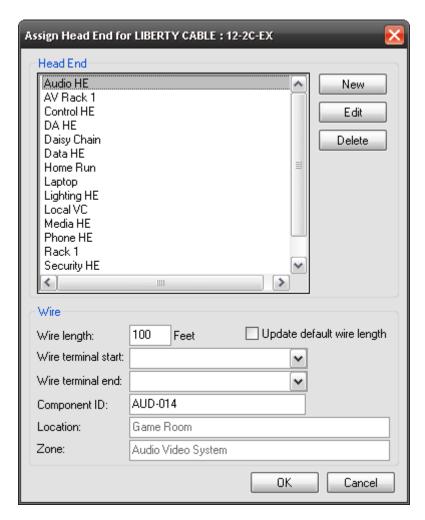
Field	Description
Cost/Hr:	How much labor costs you per hour
Price/Hr:	How much you charge the client per hour of labor
Margin (%):	The margin between Cost/Hr and Price/Hr
Factor (%):	What percentage of each Base Labor hour you are charging the client. This number is always 100% for the Base Labor but you will most likely vary the Misc., Mgt., and Design percentages. This will affect the number of hours used in calculations. For example a Design Labor factor of 25% would mean that you would include .25 hrs (15 minutes) of Design Labor for each hour of Base Labor (Install Labor).
Difficulty (%)	This field is a multiplier for hours and it affects the Base and Misc. hours only. This number should be set to 100% here under the Setup tab but can be changed on a per project basis if you wish to increase the number of hours charged for Base and Misc. Labor. For example, if you change this number to 200% for the Rough-In Phase within a project, you would charge twice the amount of hours for Rough-In than usual.
Time Multiplier (%)	These numbers show the details of what is being multiplied. These are links that will show how each field is calculated.

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Field	Description
Factored Cost/Hr:	This field cannot be edited. It is your Cost/Hr based on the number you enter for the Factor(%)
Factored Price/Hr:	This field cannot be edited. It is your Price/Hr based on the number you enter for the Factor(%)



The "Show Head End Dialog for Wires in Projects" option opens the Assign Head End form when you add an item associated with this Phase to a Project.



In the Assign Head End dialog box you can select the Head End, Wire Length, and Terminations for the wire. This options really only applies to the Rough-In Phase (or whatever you have named your Phase that contains bulk wire). All products that are assigned the Category of "Wire and Cable" and assigned to the "Rough-In" Phase will be affected by this setting. This option will charge materials and labor by the foot for any Wire and Cable products associated with the Phase.

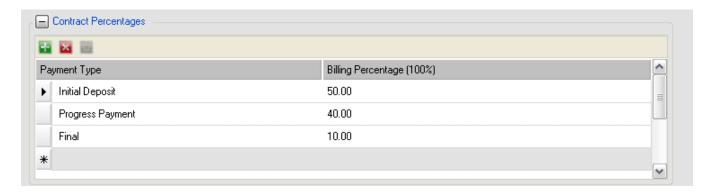
The "Ignore Labor Calculations" checkbox is an option to have no labor calculations compute for a particular Phase. You might use this option within a Project, for example, where you were not charging labor and only want to charge a client for the equipment within a particular Phase. You may also use this option if you want to use your products of Category "Labor" instead of the Labor Hours associated with the Products for that Phase.

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The Phase Specific Adjustments section for each allows you to set a Misc Parts % and Equipment +/- % on a per Phase basis. When you check the "Override Project Defaults for this Phase" box, these values will override the Misc Parts % and Equipment +/- % settings on the Application Settings tab. Using these price adjustment settings on a per Phase basis gives you more control and accuracy than if you charge a percentage across the board for all products in a project. See pg. 27 for details on these fields..

Contract Percentages:

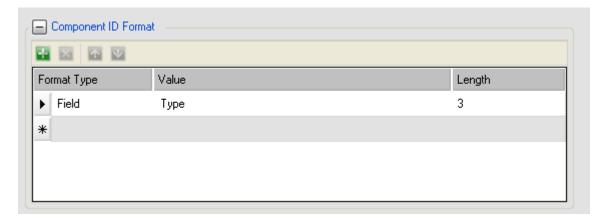


This is where you setup your default Contract Percentages. Use the and buttons to add or delete rows. If you wish to revert to the original settings, click the to revert back to the original settings. The Contract Percentages print on the default Contract report in SI 5. Contract Percentages can be changed on per project basis.

Phase	Amount		
Rough-In	\$944.39		
Trim	\$5,687.08		
Finish	\$18,357.35		
Misc. Costs	\$200.00		
Grand Total:	\$25,188.82		
Payment Schedule	Amount	Due Date	
Initial Deposit	\$12,594.41	11/24/2008	
Progress Payment	\$10,075.53	12/10/2008	
Final	\$2,518.88	12/19/2008)

Formatting

Component ID Format:



This is where you set the default **Component ID** for Products added to a Project. The **Component ID** is a unique identifier assigned to each Product that is added to a Project. The **Component ID** is customizable and can be modified on a per Project basis if you choose. The **Component ID** Format form consists of three columns: Type, Value, and Length.

A unique **Component ID** is assigned to each Product when it is added to a Project. The format of the **Component ID** is determined by the **Component ID** Format form above with the addition of a sequence number, all separated by dashes "-". The sequence number will increment as Products are added to the Project. The form of the **Component ID** should be carefully considered. It will be shown on drawings and used as a reference throughout SI 5. It should be long enough to provide reference clarity, but short enough to not clutter complex drawings.

Type – you choose either "Field" or "Text". "Field" allows you to choose a product property in the **Value** dropdown. If you choose "Text", you will type in a value in the **Value** cell. Although "Text"

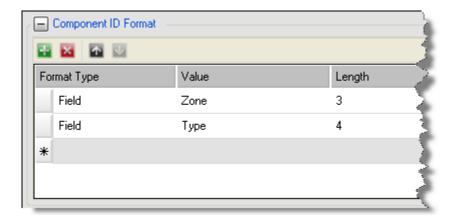
is an option, it really doesn't make sense to use it here. The reason being, the **Component ID** Format is used for every Product that you add to a Project to uniquely identify that Product. If you use "Text" in the **Component ID** format, every product will have the same text shown in the **Component ID**. Using Fields is a much better way to uniquely identify Products. "Type" and "Model" are popular **Value** choices.

Value – if "Field" is selected in the Type cell, then use the dropdown in the Value cell to pick a field from the Product Properties for a Product. If "Text" is selected in the Type cell then type in a value in the cell.

Length – the number entered in this cell determines how many characters you are pulling from the Fields that you selected.

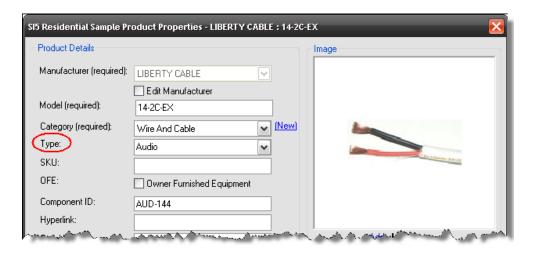
The buttons allow you to add new rows or delete existing rows. You can also move existing rows up or down in the list. See section "Component ID" on page 279 for information on changing the Component ID within a project.

Example: In this example, the **Component ID** Format is as shown below (first three characters of the Zone name followed by first four characters of the Type name).



You add a wire to a Project of Type "Audio" and assign it to the "Distributed Audio" Zone. The **Component ID** that will be generated for this Product will be: DIS-AUDI-001. If you add another run of the same wire to the Project, its **Component ID** will be: DIS-AUDI-002.

"Type" is an available field for Products in your database and is used extensively throughout **SI 5**.



Project Number Format:



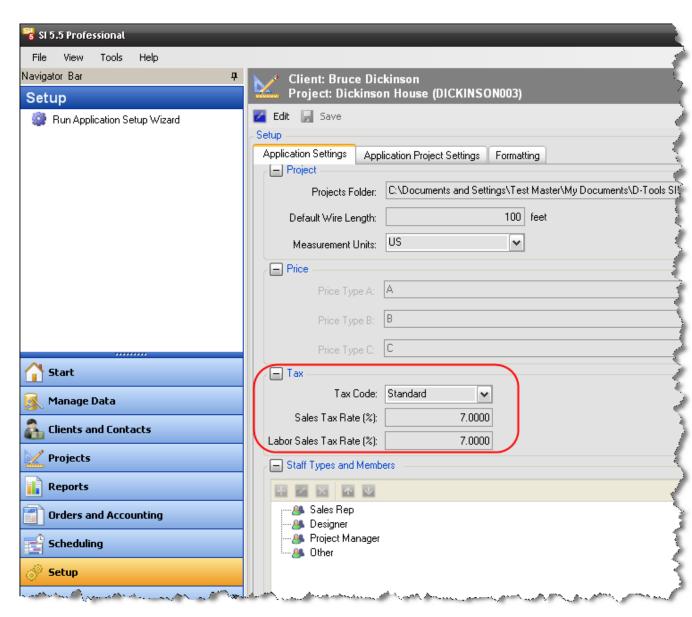
This is where you set the default Project Number for Projects. The functionality of Project Number Format is the same as for the Component ID Format. The only difference is that the "values" available are based on Project properties rather than Product Properties. Project Numbers will automatically be assigned based on this format unless you type something into the "Project Number" field within a project. Project Numbers are never checked for uniqueness so there is the possibility that you could have duplicate project numbers.

Taxes

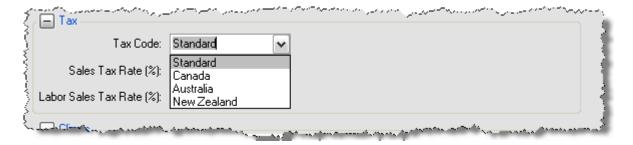
SI 5 provides a lot of flexibility when it comes to calculating taxes on client proposals. However, all tax values presented should be considered estimates. Your accounting system will provide the definitive tax calculations for reporting to your friendly tax authorities. Creative taxation seems to be on the rise. Individual tax rates may apply at the municipal, regional, state/provincial and national level. These rates may apply differently depending on the use of product or how it is sold. **SI** 5 can handle most of these tax situations.

For a Product to be taxed one must:

1) Choose the most appropriate Tax Code in the Navigator via Setup tab->Application Settings tab->Tax section:



2) You can choose either Standard, Australia, New Zealand, Canada:



3) Set the default rates tax rates that apply to you. The fields you see will depend on the Tax Code you selected. These are your default tax rates meaning that they will initially apply to any Project you create. You may modify tax rates on a per Project basis when necessary.

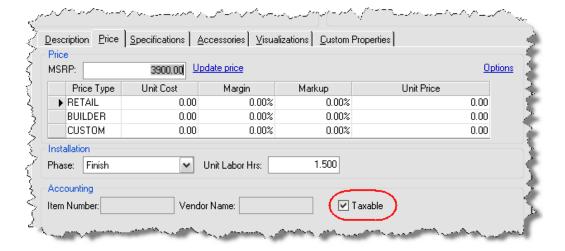
Standard – has separate fields for Sales Tax and Labor Sales Tax.

Australia – has just a Sales Tax field. When you see "Sales Tax Rate", think GST. No tax is charged on labor in Projects. Ignore the "Labor Sales Tax Rate" row.

New Zealand – has just a Sales Tax field. When you see "Sales Tax Rate", think
GST. Tax is applied to all labor in a Project. Ignore the "Labor Sales Tax Rate" row.

Canada – There are multiple tax codes listed and you have the option of adding PST Tax and/or GST Tax to the various Tax Codes.

4) Check the "Taxable" box for the Product on the Product Properties form. Or in the case of Canada, select the appropriate Tax Code(s) as described later in this section.



Choosing the Appropriate Tax Method

Use the following rules to determine which Tax Code best suits your needs. Just because you do not live/work in Canada does not mean that you can't choose to use the Canada Tax Code. Each Tax Code has a specific functionality, so choose the one that works best for you.



Once the Tax Method is set you may adjust the default rates. The user interface depends on the Tax Code selected (see below).



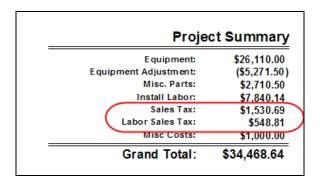
Since **SI 5** allows the user to more easily modify client reports, making changes to labels is very straight forward. Pick any Tax Method that best fits your needs and then modify the report descriptions to anything you choose. For a complete description of **Reports** see page 471.

Standard

This method allows you to have one tax rate for Non-Labor Products (Equipment, Wire and Speakers) and another rate for Labor.

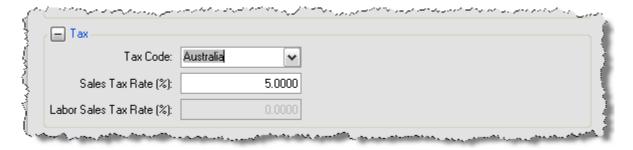


Labor and Sales Tax will show as separate line items on client reports. Sales Tax is applied to the sum of **Equipment+Equipment Adjustment+Misc Parts**. **Misc Costs** are <u>NOT</u> taxed in any of the Tax Codes. Labor Sales Tax is applied to the total labor selling price, referred to as **Install Labor**. The **Install Labor** amount may include Install, Design, Management, and Miscellaneous labor. Products of Class "Labor" are also included in the **Install Labor** figure.

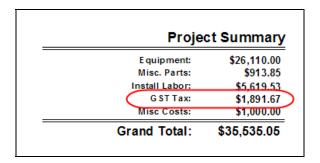


Australia

Australia uses the came calculations as "Standard" except Labor is not taxed. The client report label will show "GST:".

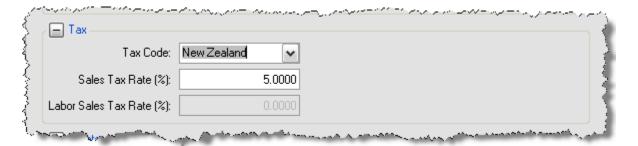


Example: Sales Tax is set to .07. For this Project, GST Tax = .07*(26110.00+913.85) = 1,891.67



New Zealand

The New Zealand Tax Code is the same as "Australia" except Equipment and Labor are taxed at the same rate. Only one rate is shown but it is applied to both Equipment & Labor. The client report label will show "GST:"

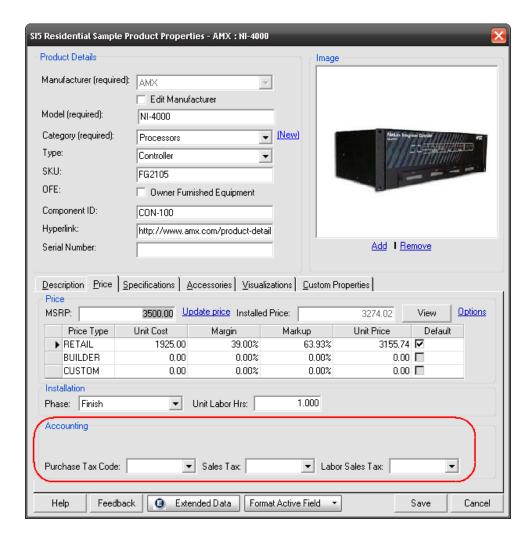


Example: Sales Tax (GST) is set to .07. For this Project, GST Tax = .07*(.07(26110+522.20-522.20+5619.53) = 2,221.07

Proje	ct Summary
E quipment:	\$26,110.00
Equipment Adjustment:	(\$522.20)
Misc. Parts:	\$522.20
Install Labor:	\$5,619.53
G ST Tax:	\$2,221.07
Misc Costs:	\$1,000.00
Grand Total:	\$34,950.60

Canada

The Canada Tax Code option is by far the most complex. Let's start with the report and work backwards. There are two reported tax values that can be reported, GST Tax and PST Tax. Each Product, with the exception of Products of Class "Labor", has three fields by which to assign tax rates; **Purchase Tax Code**, **Sales Tax** and **Labor Sales Tax**. You may assign each of these fields one of the following Tax Codes (E, G, P, S, Z) as shown below. These codes correspond to the rows in the Canadian Tax Table and to those used in the Canadian version of QuickBooks.



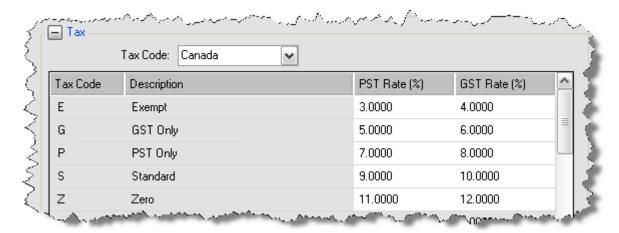
Purchase Tax Code: The Tax Rates for the letter associated with this code are applied to the Cost, not the Unit Price, of Non-Labor Products. This code does not apply to Labor Products. This code is **NOT** used in any D-Tools standard report or computation.

Sales Tax: The Tax Rates for the letter associated with this code are applied to the Unit Price of Products (with the exception of Products of Category "Labor"...noticing a pattern here?).

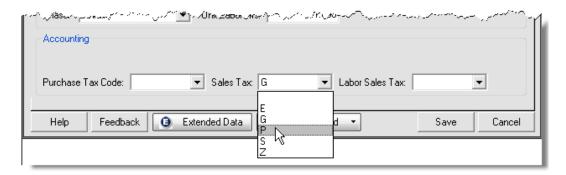
64 Accessories

Labor Sales Tax: The Tax Rates for the letter associated with this code are applied to the selling price of Labor and Products of Category "Labor".

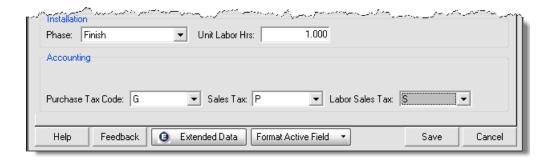
Example: Let's assume we are using the following Tax Table. These values are not actual Canadian tax values, but are used for explanation purposes only. Not even Canadians would attempt taxes like these.



Then assign the codes to a Product by using the dropdowns as shown below.



The "P" code is applied to the product Unit Price, the "S" code is applied to the total labor price as defined by 2 hours of Finish labor, and the "G" does nothing as the Purchase Tax Code is not used at all in SI 5.



```
PST= .07*[Unit Price] +.09*[Labor Price]
```

GST= .08*[Unit Price] +.1*[Labor Price]

The ability to mix and match these rates provides a lot of flexibility.

Canadian taxes will show up on standard reports as follows:

Proje	Project Summary	
E quipment:	\$26,110.00	
Equipment Adjustment:	(\$522.20)	
Misc. Parts:	\$522.20	
Install Labor:	\$5,619.53	
G ST Tax:	\$1,899.92	
PST Tax:	\$1 ,693.57	
Misc Costs:	\$1,000.00	
Grand Total:	\$36,323.02	

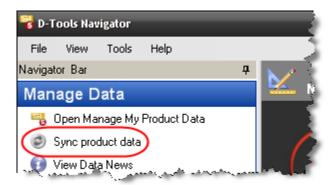
Manage Data



The Navigation Bar on the left side of the screen contains mainly links to help documents for the various interfaces within the Manage My Product Data (MMPD) interface. However, a few are actual functions.

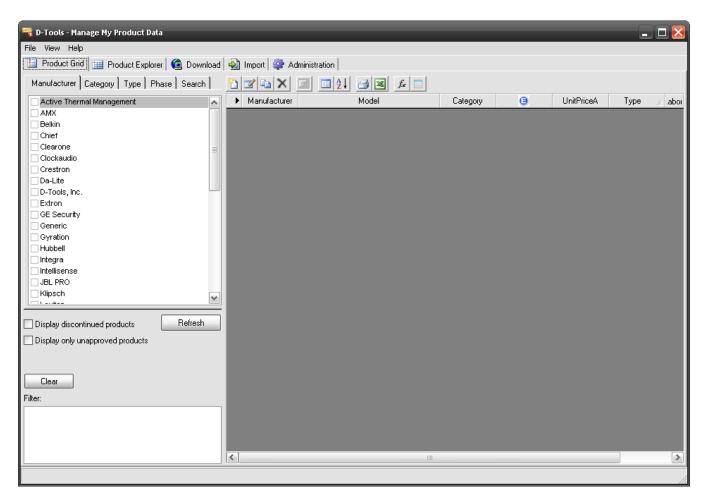
66 Accessories

The "Sync product data" link allows you to synchronize your local database with the server database. See **LANSync** on pg. **167** for additional info.



In order to do add/edit/delete data you must click the "Open Manage My Product Data" link and the MMPD interface will open in its own window.





There are five tabs available in the MMPD interface: **Product Grid**, **Product Explorer**, **Download**, **Import**, and **Administration**. You can also access these screens using the **View** option on the menu bar.

Product Data

Before we get into the mechanics of creating and editing Products, let's explore the characteristics of D-Tools data. Each record in your database is referred to as a Product. There are three required fields for a product: **Manufacturer**, **Model**, and **Category**. There are four Types of Products in your database as determined by the Category Type: "Equipment", "Labor", "Speakers", and "Wire" (see **Categories** on pg. **161** for details on Category Type). Each Product has many editable fields that you can utilize to meet your particular business requirements. The Category Type determines what the available fields for that particular Product are. For example, there are no **Height**, **Width**, and **Depth** fields for "Wire" Type Products (instead there are **Diameter** and **Length** fields).

This is an example of the Product Properties form for a Product in SI 5. Each field will be detailed below, but not necessarily for this particular Product.



There are functionality buttons along the bottom of the screen:



[Help] Opens a digital version of the SI 5 User's Guide.

[Feedback] Opens an online form for reporting errors that you find in data that you downloaded from D-Tools, Inc.

[Extended Data] This opens a link to a D-Tools server that hosts additional downloads for the Product. These additional downloads may be brochures, manuals, and/or images. Not every Product has Extended Data

associated with it. All user's have access to the Extended Data for Manufacturer's Vantage Point (MVP) data. Client's who have enrolled in our Data Subscription program will have access to Extended Data for non-Partner data as well.

[Format Active Field]

This option allows you apply one of the following formatting options to any field that is in focus i.e. the field with the cursor: ALL CAPS, Sentence case, or Title Case. There are four fields that this option may not work for: Category, Manufacturer, Model, and Description. This is because these fields have a global setting that may override the selection you make on an individual Product. These global settings are under the Administration tab in the MMPD interface. See "Formatting" on page 164.

[Save]

Saves changes made to the Product

[Cancel]

Does not save the changes made to a Product and closes the tab.

There are three main areas on this form: Product Details, Image, and the Tabs.

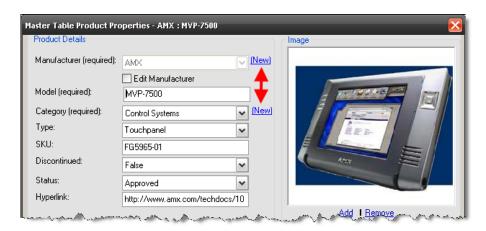


The user interface will vary depending on from where in SI 5 you are viewing/editing the Product, i.e. within the Manage My Product Data interface, within a Text, Visio, or AutoCAD project. Within a Project, Project specific options/fields will display:



Product Details

There are three required fields that uniquely identify each Product in your database: Category, Manufacturer, and Model. To add a new Category or Manufacturer to your database, click the **[New]** link next to the appropriate field.



Type: The Type field allows you to further identify the product beyond the Category. To add a new Type simply type the new one into the field. There is no way to delete from this list. This Type field is different from the Category Type field mentioned above.

SKU: This field is optional and can be used for a Manufacturer's part number or your own internal numbering system for identifying parts.

Discontinued: This dropdown allows you to identify whether a Product has been discontinued by the manufacturer.

Status: This dropdown allows you to mark Products as "Approved" or "Unapproved". Unapproved Products do not synchronize via LANSync.

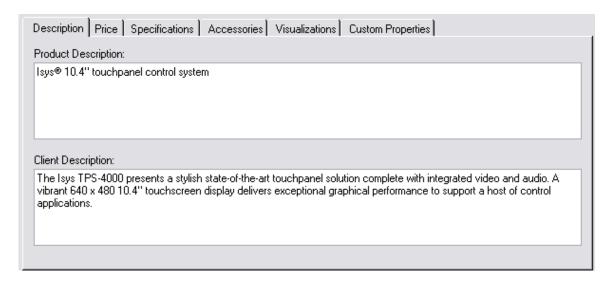
Hyperlink: This field is used to store the URL for the Product. This can be any URL you choose, e.g. the manufacturer's website, a PDF of the cut sheet, etc.

Image



This section displays the JPG image associated with the Product. Here you can add an image or remove the current image using the links. This image will be used by default in Visio on a Line Page and is displayed on some of the stock Proposal reports. Any image you import will be converted to a .jpg and scaled accordingly for use within SI 5.

Product Tabs

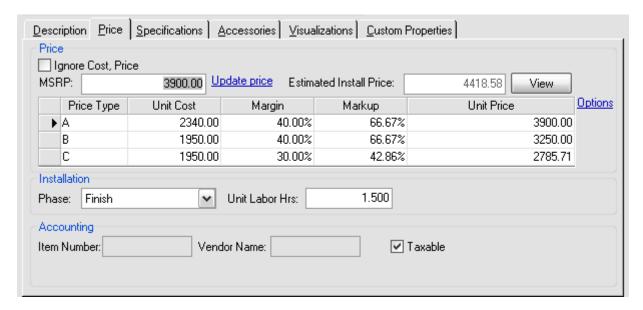


Description Tab

Product Description: The Product description is a basic description of the Product. This description can be displayed on client reports, install reports and purchasing documents, or used to find Products via search. This field is also passed to QuickBooks through **QuickLinks** by default. There is a 255 character limit to this field.

Client Description: If this field is filled in it will be used on Client proposals instead of the Product Description to provide a more marketing oriented description. There is no character limit to this decription.

Price Tab



There are three sections under the Price tab: *Price*, *Installation*, and *Accounting*.

Price

MSRP: Manufacturer Suggested Retail Price - this is for reference only and can be used as the basis for Unit Cost and Unit Price calculations. It does not appear in reports nor does it get used in project pricing calculations.

Price Type: You can have up to three pricing levels for each Product. The names of these fields default to A, B, and C, but can be changed in the Navigator, see "**Application Settings**" on page 44.

Unit Cost: What one unit of the Product costs you.

Unit Price: The price you charge for one unit of this Product.

Margin: Profit represented as a percentage of Unit Price (preferred).

Markup: Profit represented as a percentage of Unit Cost.



There are two handy formulas to use for markup and margin. Remember to convert percentages to decimals for the following calculations.

Unit Price = Unit Cost / (1 - Margin)

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```
Margin = (Unit Price-Unit Cost)/Unit Price

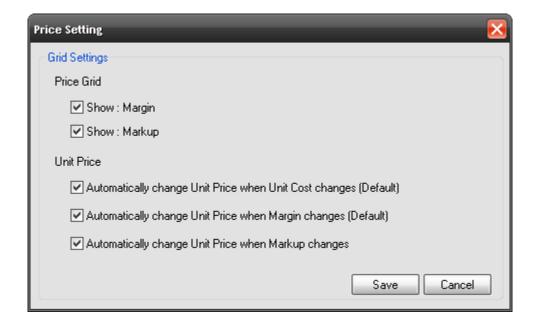
Unit Price = Unit Cost * (1 + Markup)

Markup= (Unit Price-Unit Cost)/Unit Cost

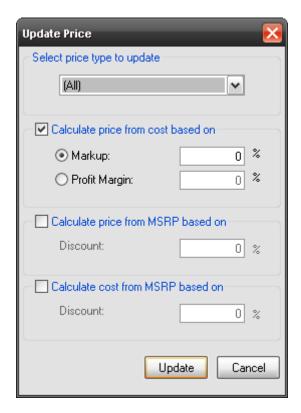
Example: Unit Cost is 1700 and you add a 40% markup to your products. Your Unit Price will be 1700 * (1 + .40) = 2380.

A 40% margin for the same product would yield a Unit Price of 1700/(1-.40) = 2833.33.
```

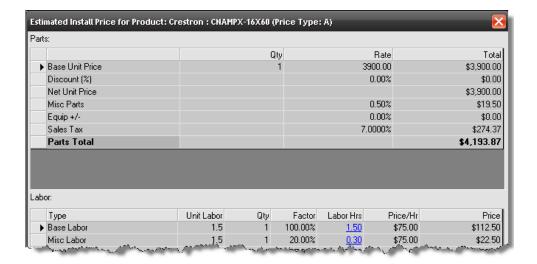
<u>Options</u> link will open the following form and allow you to change the view and pricing methodology:



<u>Update Price</u> link will open the following form allowing you to determine Product pricing in various ways.



Estimated Install Price: This shows you what the estimated install price for the product is based on your default Phase and tax settings from the Setup tab. Click the **[View]** button to see the detail:



Installation



Phase: This dropdown allows you to choose the **Phase** when the Product is being installed. Labor rates are **Phase** specific.

Unit Labor Hours: Number of labor hours associated with the Product. This number is multiplied by the labor rate set for the Phase.

Labor is calculated for each Product in a Project based on the Phase rates and the Unit Labor Hours assigned to the Product. You also have the option of creating Labor Products (also called Labor Items or Labor Line Items) to add labor to a project. See **Labor Products** on pg. **137**.

Accounting



Item Number: This field holds the item number of the corresponding Product from your QuickBooks database. This value is generated by the **QuickLinks** interface.

Vendor Name: This field is for the default vendor associated with the corresponding QuickBooks Item and is established through the **QuickLinks** interface.



These fields should only be edited/set from within the accounting software interface such as **QuickLinks** (optional product), or by importing from a CSV file via the Import tab. Modifying these fields is not recommended for non-administrators. See **QuickLinks** pg. **582** for more details.

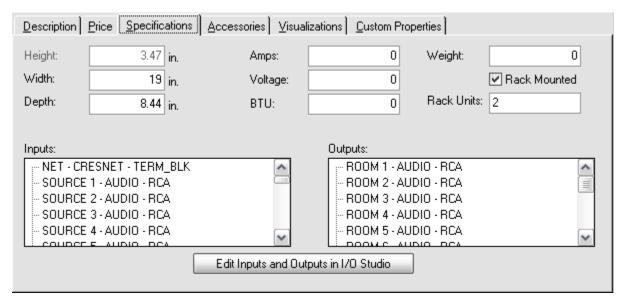
Taxable: Choose whether or not the item is taxable. See Taxes on pg. 57 for details.



If you set your Tax Code to Canadian under your International Options, you will have dropdowns for assigning Purchase Tax Code, Sales Tax, and Labor Sales Tax rather



Specifications Tab



Height, **Width**, and **Depth**: These values will either be in inches or millimeters, depending on your Measurement Units setting (see "**Application Settings**" on page 44). Height and width are used in Visio and AutoCAD on the Elevation pages to determine the size of the shape or block. Width and depth are used in Visio and AutoCAD on the Plan view pages when you use a Scaled Plan shape or block.

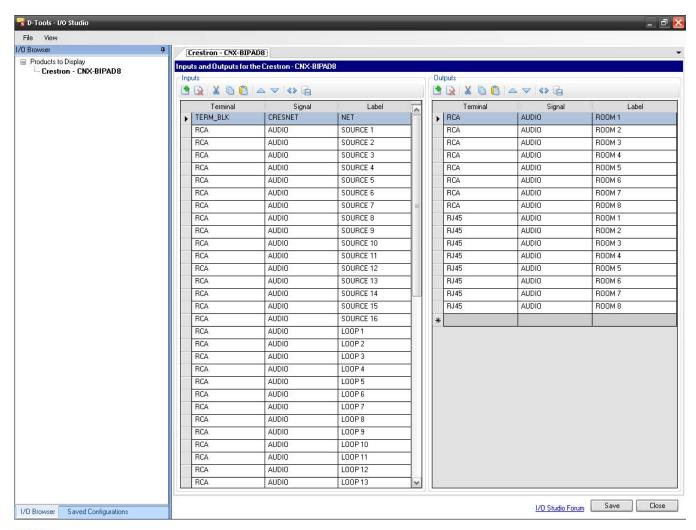
Amps, Voltage, BTU, and Weight: These fields do not have any effect on any functions within SI 5; however, custom reports may be generated to make use of these fields for engineering and installation analysis purposes.

Rack Mounted: Converts the Height value to Rack Units through the magic of math. When checked, the Height field will gray out and the Rack Units field will populate. This calculation rounds up.

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Inputs and Outputs: Inputs and outputs are used in Visio and AutoCAD on the Schematic pages, which are then used to generate wire connection reports. The shapes and blocks will automatically populate with the inputs and outputs that are listed in this section. Clicking the [Edit Inputs and Outputs in I/O Studio] will open the I/O Studio.

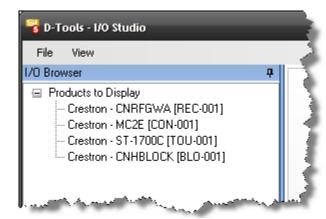
I/O Studio





To open the I/O Studio for more than one product, select multiple products on either the Product Grid tab or in the PDM within a project and then click the button.

When you do this, more than one product will display in the I/O Browser:

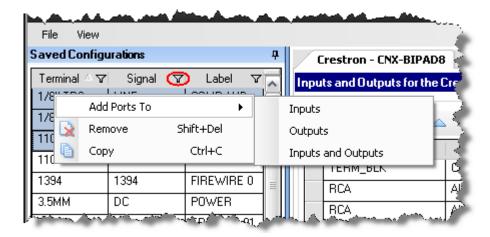


If you are within a project, the Component ID will display next to the product.

The left side of the form will either display the I/O Browser or your Saved Configurations depending on which tab along the bottom you've selected:



Saved Configurations are generally commonly used combinations of Terminal, Signal, and Label. When viewing saved configuration, you can select multiple products by using Shift or Ctrl on your keyboard, filter any column using the filter buttons, and right click to add ports to either/both the Inputs/Outputs, remove from the list, or copy the configuration(s):



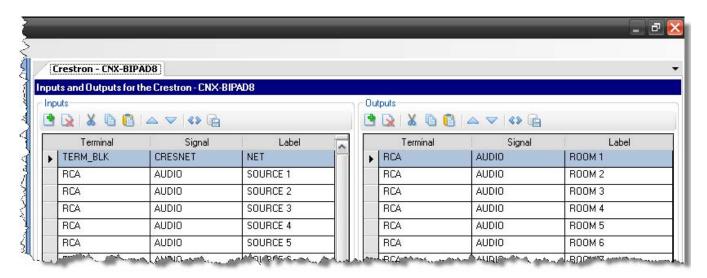
The bottom of the list has these right-click options, plus the ability to change quantity and a very handy "Auto increment label if quantity is greater than 1" option:



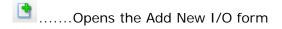
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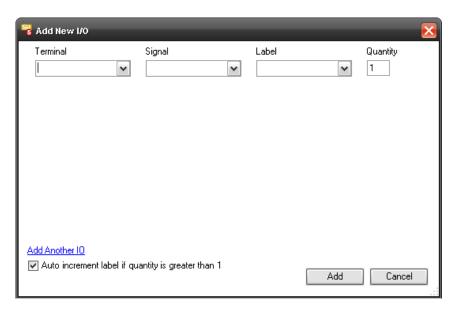
The "Auto increment..." function will automatically add a "1" to your first label and count up from there when adding more than one of the same I/O configuration to a product.

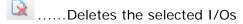
The right-side of the I/O Studio form (and the majority of the interface) displays the Inputs and the Outputs for the selected product each of which have their own separate command buttons:



You can select multiple I/Os by using the Ctrl or Shift buttons on your keyboard.



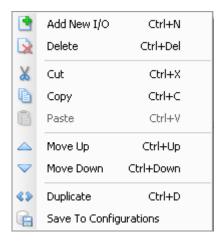




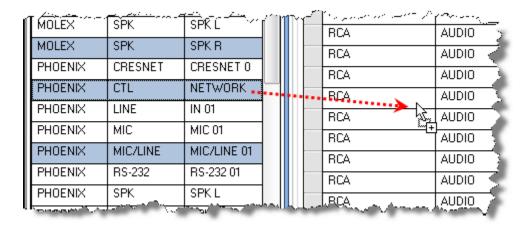
.....Cuts the selected I/Os

-Copies the selected I/Os
 Pastes copied or cut I/Os
- ...Move Up/Move Down buttons allow you to choose the order of display for I/Os
-Duplicates the selected I/Os
-Saves the selected I/Os to your Saved Configurations list

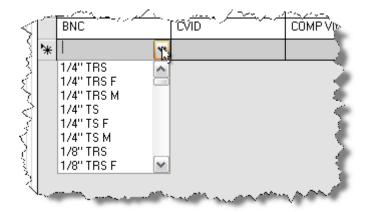
You can also access these functions by right-clicking on the form. This form also displays the keyboard shortcuts for these commands:



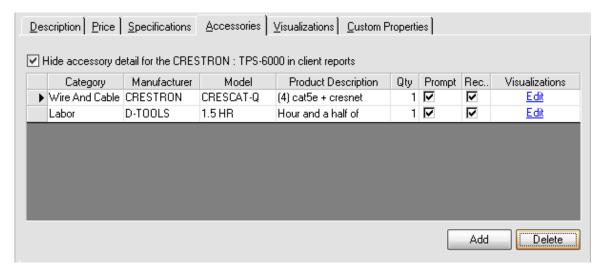
Another way to Add I/Os to a product is to select one or more I/Os from the Saved Configuration list and then drag and drop over to the Inputs or Outputs section on the form:



And yet another way to add an I/O is to scroll to the bottom of the list and use the dropdowns to a new record:



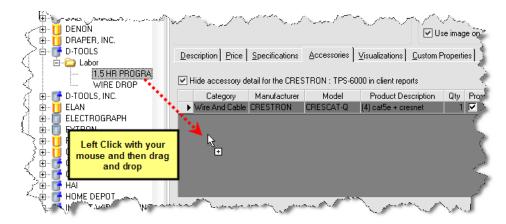
Accessories Tab



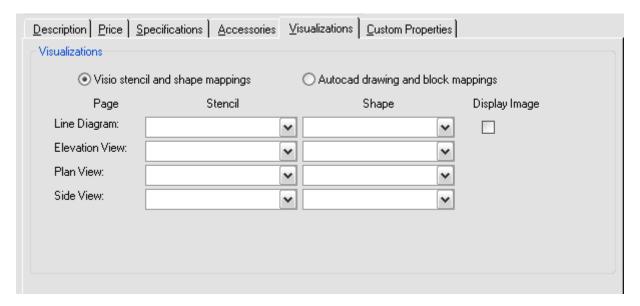
Accessories are Products that are associated with a primary, or "parent" Product. Here you can **[Add]** or **[Delete]** accessories to a Product. Accessory management is a critical component that will improve design productivity and reduce errors in the final bill of materials. For a complete discussion see **Accessories** on pg. **84**.



Instead of using the **[Add]** button, you can drag and drop from the Product Tree to add Accessories within in the Product Explorer interface.



Visualizations Tab

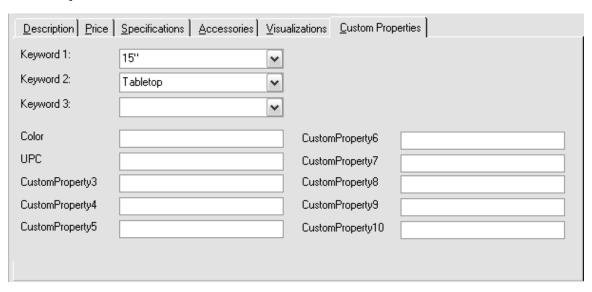


The radio buttons allow you to toggle between editing settings for Visio and AutoCAD.

Visio stencil and shape mappings: The dropdowns on this tab allow you to pick a Shape from a Stencil to assign to the Product for three of the four page types in Visio: Line, Elevation, and Plan. There is also the option of assigning Shapes for Side View. You do not have to use these dropdowns unless you want to override the default shape that drops on each of these pages.

AutoCAD drawing and block mappings: The Visio description above also applies to AutoCAD, with the exception of AutoCAD terminology and there are no Side View or Schematic options.

Custom Properties Tab



Keywords 1-3: These fields are used to be filters to help you find a Product quickly when adding the Products to a Project. We are phasing out their use for future releases so these can be treated like additional Custom Property fields.

Custom Property1-10: These are ten fields that are user definable. For information on defining these fields, see "**Custom Properties**" on page 165.

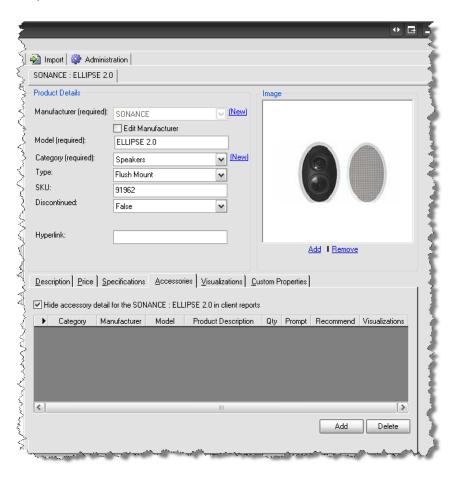
Accessories

Proper Accessory management will significantly improve design productivity and reduce errors. For instance, once you find the proper mount for a display and associate it as an accessory to the display, you never have to look it up again. However, keep in mind that Accessories cannot have Accessories, so this association can only go one level deep.

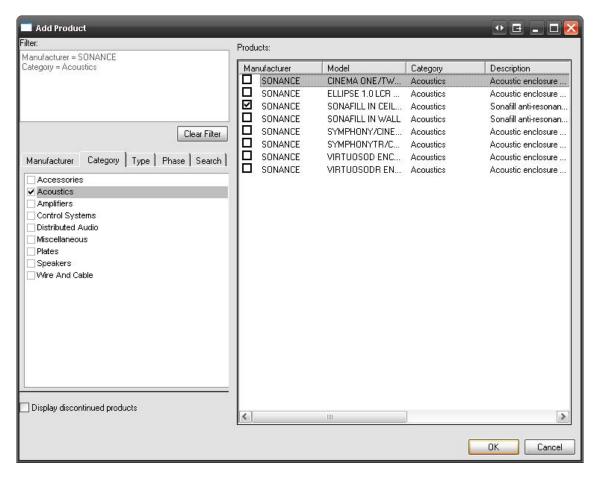
Adding Accessories to a Product from the MMPD Interface

To add an accessory to a Product, you just have to be in the Product Properties. You can do this on either the Product Explorer or Product Grid views within the MMPD interface.

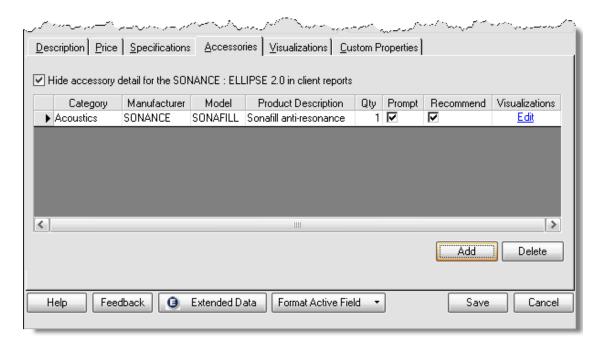
Open the Product Properties form and click the Accessories tab.



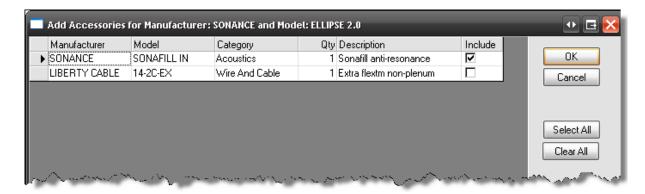
Click [Add]. The Add Product form opens:



Use the filters to select the item you want to add as an Accessory then click **[OK]**. The selected Product will be listed as an Accessory:



The "Prompt" and "Recommend" checkboxes determine whether the Accessory will add automatically or not to a Project when the "parent" Product is added:

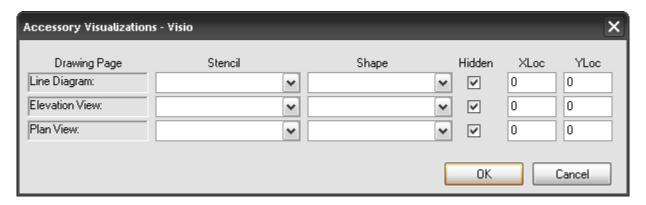


Prompt and Recommend both checked: the "Include" checkbox will be pre-checked as shown in the first Product above

Prompt checked: the "Include" checkbox will not be pre-checked as shown in the second Product above

Neither checked: the Accessory adds automatically to the Project without prompting

The <u>Edit</u> link in the "Visualizations" column will open the **Accessory Visualizations – Visio** form:



When a "parent" Product is dragged from the Project DataMatrix (PDM) to a drawing page in Visio, shapes for the Accessories for that Product do not automatically drop on the drawing page. This is because the "Hidden" column is checked by default for each drawing page type as shown above. If you want certain Accessories to drop shapes automatically with the "parent" Product on certain drawing page types, uncheck the appropriate box.



For the most part, you may not ever need to change the default Visualizations settings for **Accessories**. If you want a shape in Visio for an Accessory, simply drag it from the **PDM**.

Adding an Accessory to a Product within a Project

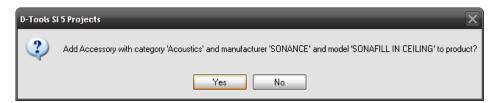
If the Product is already in the PDM, double click the item to open the Product Properties form. The remaining steps are exactly the same as when adding an Accessory within MMPD.



Once you close the Product Properties for the Product, you will be prompted whether or not to update your Master Table database. This prompt only applies to the "parent" Product, not the Accessories.



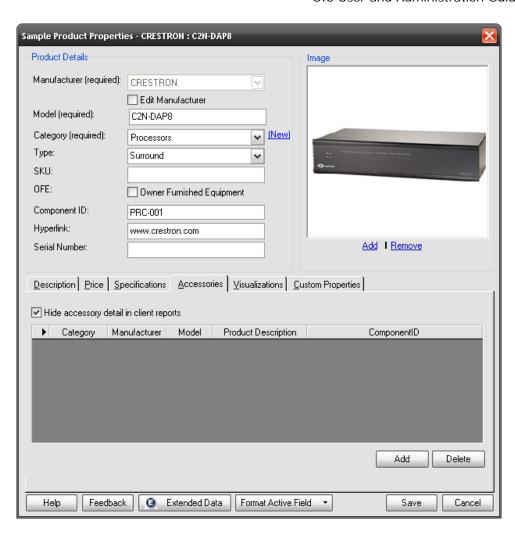
If you choose **[Yes]**, you will then be prompted whether or not to update the Master Table for the "parent" Product with the **Accessories** you have added. Choose **[Yes]** if you want the Accessories added to be a global change, **[No]** if you only want them as Accessories for the "parent" Product within that Project.



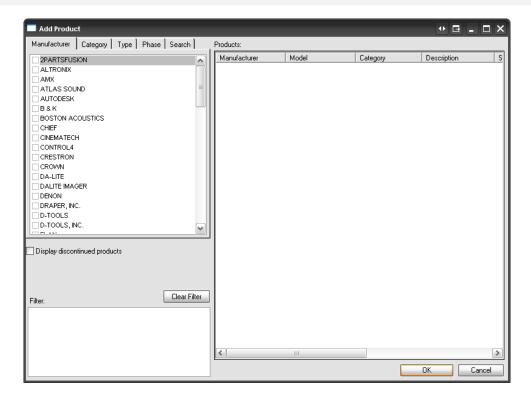


Example: You want to add a programming labor line item, interconnect cables, and a rack shelf to a processor as Accessories. You want the programming Labor Line Item to add automatically, you want to prompt and recommend the interconnect cables, and prompt but not recommend the rack shelf since the processor won't be rack mounted in every project.

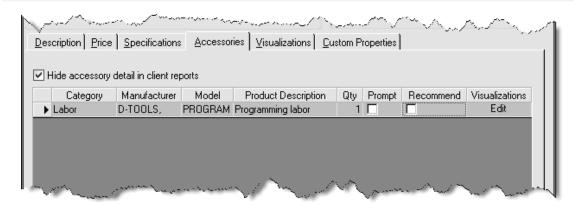
1) Open the Product Properties for a processor and click the Accessories tab:



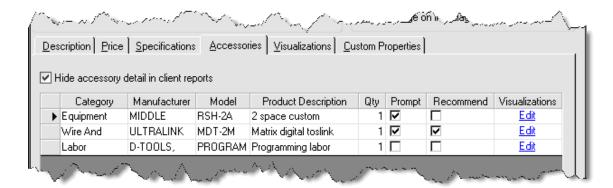
2) Click the [Add] button. The Add Product form will open:



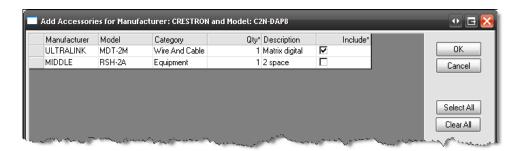
3) Use the filters to select the Labor Product you wish to add click **[OK]**. The Product will display in the grid on the **Accessories** tab. Uncheck the "**Prompt**" and "**Recommend**" checkboxes.



4) Repeat steps 2-3 to add the remaining two Accessories. For the interconnect cable don't uncheck anything, for the rack shelf uncheck the "Recommend" checkbox.



5) Add the Product to a Project. The Add Accessories for Manufacturer form opens:



The Labor Product that did not have the "Prompt" box checked is not listed in the prompt box shown above and it will automatically add to the Project. The "Include" box on this form is not pre-checked for the rack shelf because the "Recommend" box was unchecked.

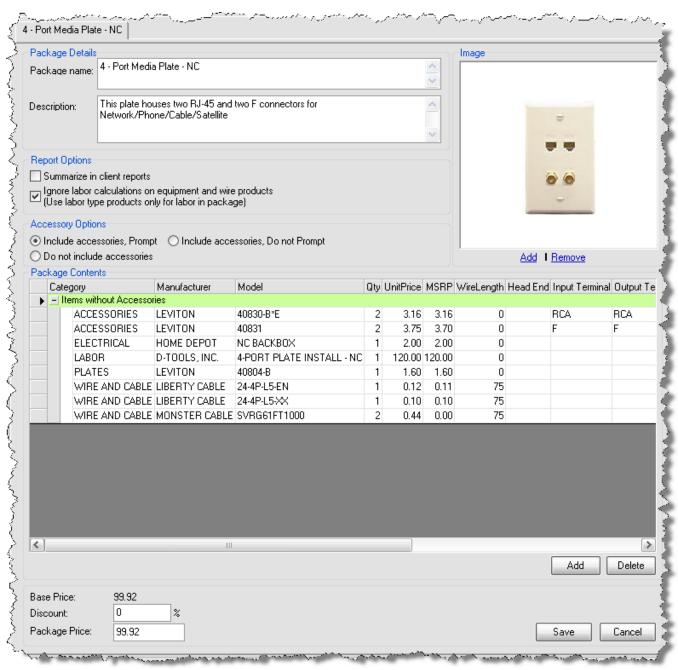
Assigning Locations to Accessories

Accessories inherit the Location and Zone assigned to the "parent" Product. See "Assigning Locations and Zones" on page 299.

Packages

Packages are a group of Products that provide a convenient way to add multiple Products a Project at one time. The price of the Package is the sum of the Products in the Package and the labor calculated for a Package is the sum of the labor for each Product in the Package. Discounts may also be applied Packages to provide special pricing.

Package Form



A **Package Name** is required, the **Description** is optional. Products that you add to a Package may have Accessories associated with them and you may or may not want Accessories included in the Package. The "Accessory Options" section allows you to select the desired accessory behavior for each Package.

The **Reports Options** section has two options:

- 1) **Summarize in Client Reports** Only the Package Name and Description will show in Line Item reports, unless you override this option. See "Report Parameters" on page 485 for more detail.
- 2) Ignore Labor Calculations on Equipment and Wire Products this option ignores all labor calculations for all non-Labor Products in the Package. It is assumed that you would add a Product of Category "Labor" to the Package to account for the labor. See Labor pg. 137.

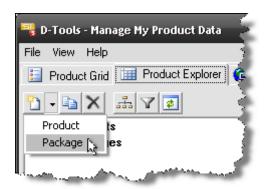
In the 'Package Contents" section of the form you can **[Add]** or **[Delete]** Products as well as adjust the price of the Package.

Creating a Package within the MMPD

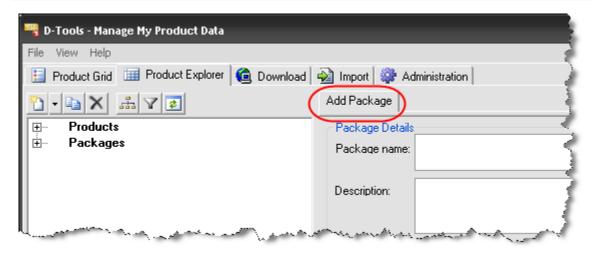


Example: You want to create a 4-Port Media Plate Package that contains the back box, a faceplate, four inserts, and four wires. You are trying to hit a specific price of \$100 for the Package including labor (minus taxes).

 Open MMPD and click the Product Explorer tab. Click the Add Product or a Package dropdown arrow next to the button and select Package:



An Add Package tab has been added to the interface



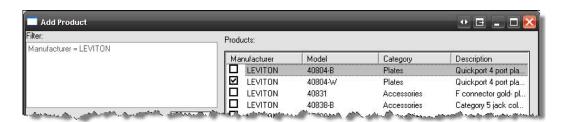
2) Type in a Package name and a Description (optional):

3) Under Accessory Options check both the "Summarize in Client reports" and "Ignore Labor Calculations on Equipment and Wire Products" boxes.

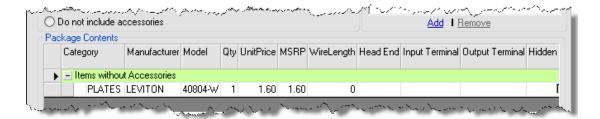
"Summarize in Client reports" is selected so that plate detail will not show on the reports. There is no need for clients to see that much detail on a plate Package. "Ignore Labor Calculations on Equipment and Wire Products" is selected to allow a flat labor rate to be assigned to each plate by using a Product of Category "Labor". Otherwise the labor would be calculated based on the hours associated with each piece of equipment and units (ft) of wire.



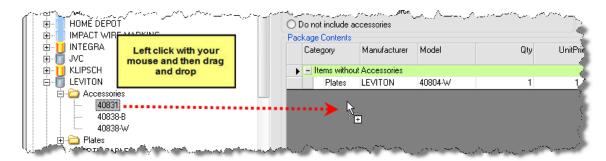
4) Click [Add]. The Add Product form will open. Select a Product and then click [OK].



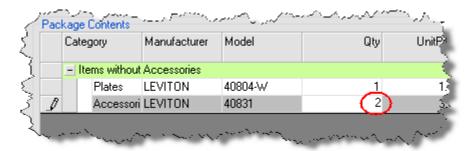
The Product is added to the "Package Contents" section:



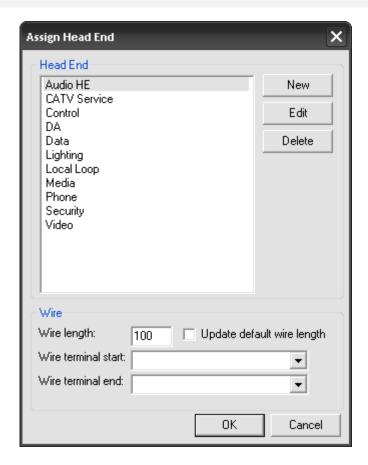
5) Continue adding Products the back box, inserts, etc... Another way to add Products is to drag and drop them from the Product Tree. In this step the F connector inserts for the plate are added to the Package:



6) Adjust the quantity to two for the F connector insert by clicking in the field and typing:

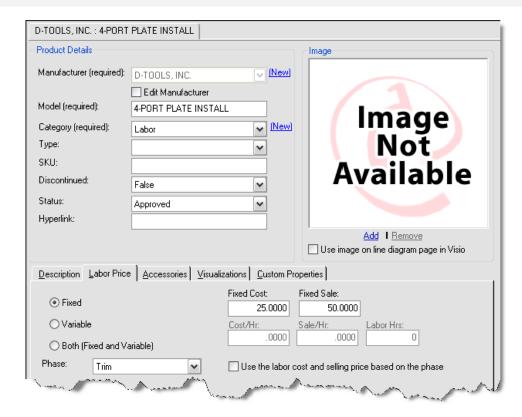


7) Add the wire. The only difference when adding wire is that you will be prompted with the **Head End** form if it is a "**Rough-In**" wire.

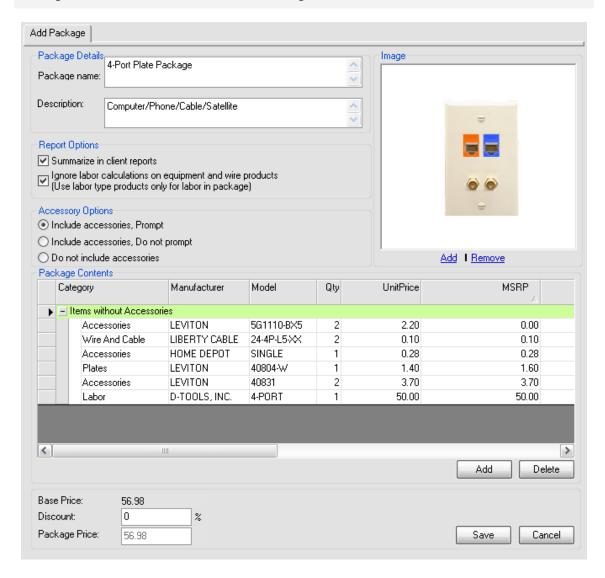


8) Pick a "general" Head End and Wire length. These can be changed when adding the Package to a Project.

9) After adding your wires, add a labor product to the Package. The labor product in this example has a fixed price of \$50 (as shown below).

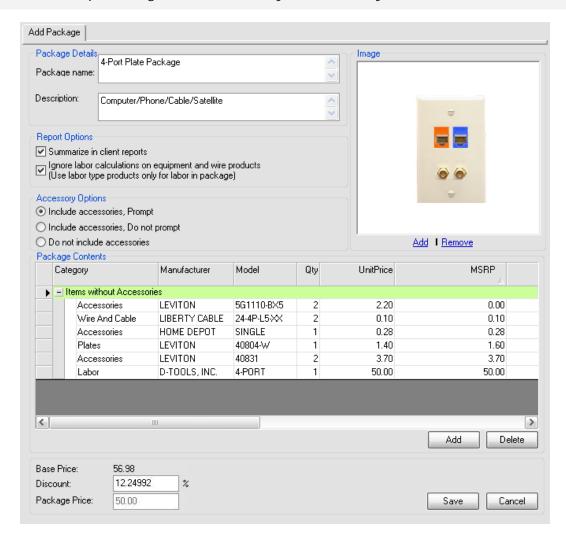


Once all of the Products and the optional jpg **Image** have been added to the Package, it will look similar to the following:



The Base Price does not include Labor, Tax, Misc Parts% or Equipment +/adjustments. Labor and taxes only calculate when the Package is added to a Project.
This is true even for Products of Category "Labor" that are in the Package.

Looking back on the criteria for this Package, we need to adjust the Base Price to \$50 so that the total price of the Package including Labor (but excluding sales tax) equals \$100. To make this adjustment, type "50.00" in the "Package Price" field. The Discount percentage will automatically calculate for you:

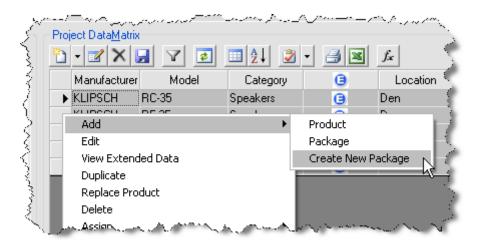


10) Click [Save] when finished.

Creating a Package within a Project

There are a couple of ways to create a Package from within a Project. The first way is within the Project DataMatrix (PDM).

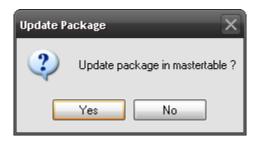
Select the Products in the PDM that you want in the Package (hold down Ctrl to select multiple Products). Move your cursor over one of the selected Products then **right-click->Add->Create**New Package.



The D-Tools Packages form opens. Fill in a Package Name and a Description if desired and click **[OK]** when done.

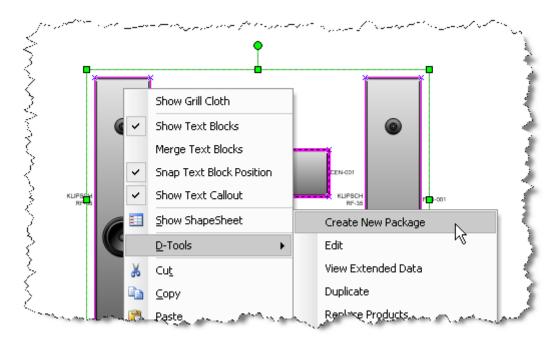


You will be prompted to update the MasterTable.



The second way to create a Package within a Project is by selecting Products on a drawing page in Visio or a sheet in AutoCAD.

To select multiple shapes use the **Ctrl** key or you can left mouse click and marquee select the items. In the shot below, I have selected all items in a surround system, then right-click->D-tools->Create New Package:

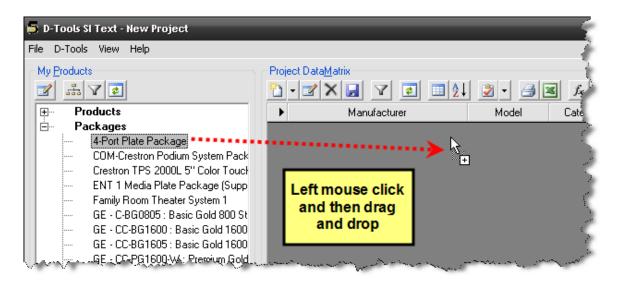


The D-Tools Package form opens as shown in the previous example.

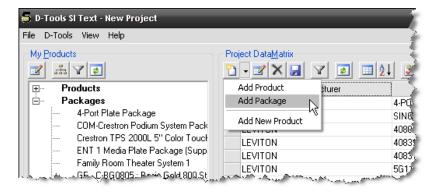
Adding a Package to a Project

Within a Project there are three ways to add a Package.

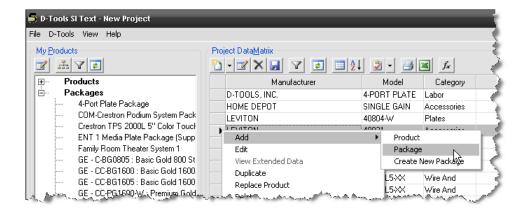
1) **Drag and Drop** – Packages are listed at the bottom of the Product explorer section of each the interface. You can left mouse click and then drag and drop the Package over to the Project DataMatrix.



2) The second way to add a Package to a Project is to click the dropdown arrow next to the button and select **Add Package**. The Package Properties form will open and you may make your selections.

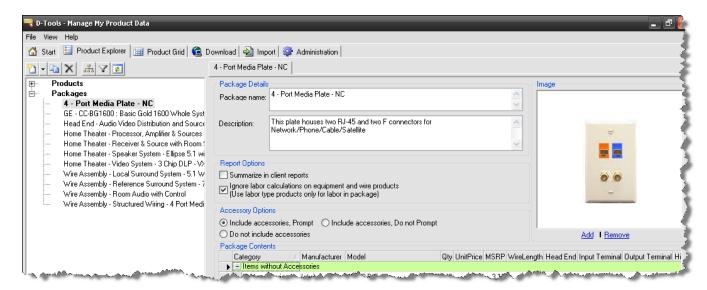


3) A third way to add a Package is to right-click any Product in the PDM and select **Add-**>**Package**. The Package Properties form will open and you can make your selections.



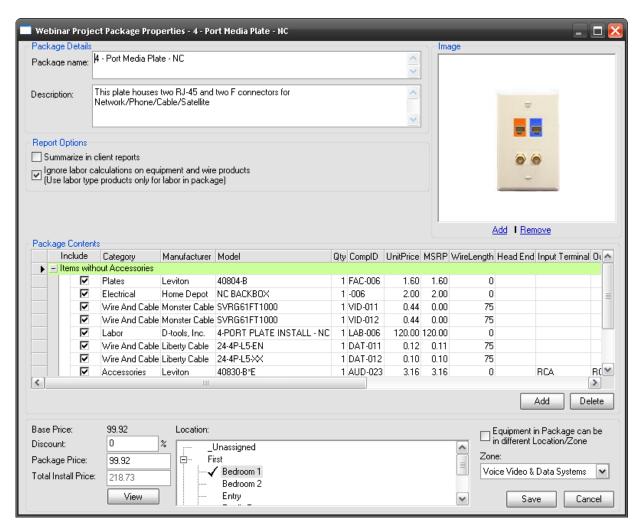
Editing Package within the MMPD Interface

Edit Packages through MMPD by selecting the Product Explorer tab. Double-click the Package from the Product Tree and then make changes:



Editing Packages within a Project

Double-click the Package name in the PDM, the Packages Properties form will open.

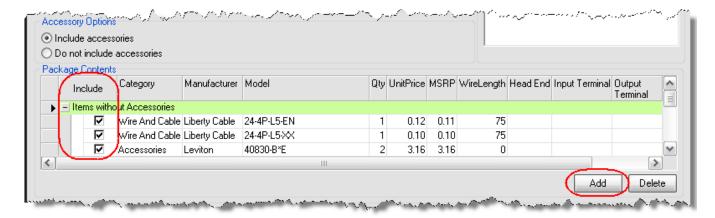


Make changes and then click **[Save]**. You will be prompted whether or not to update the MasterTable with your changes:



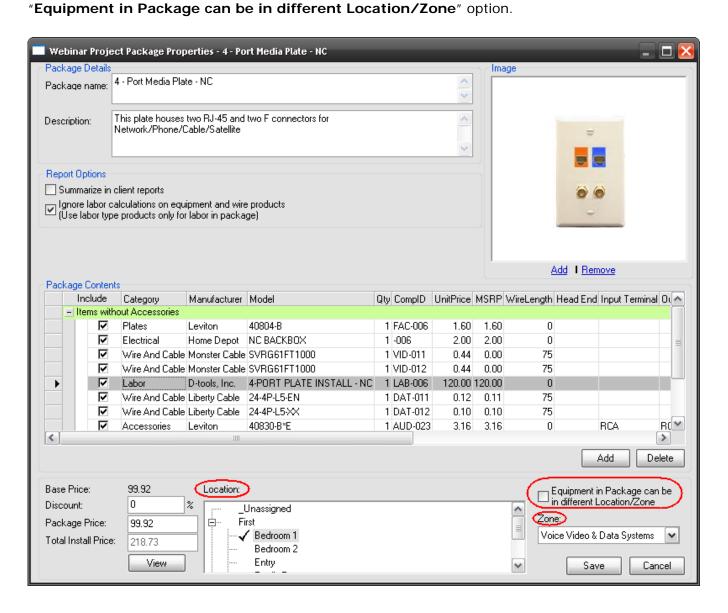
Editing Packages when adding to a Project

When using the Add Package from within a project, you can uncheck any products you don't want added to the project or you can use the **[Add]** button to add additional products to a package on the fly:

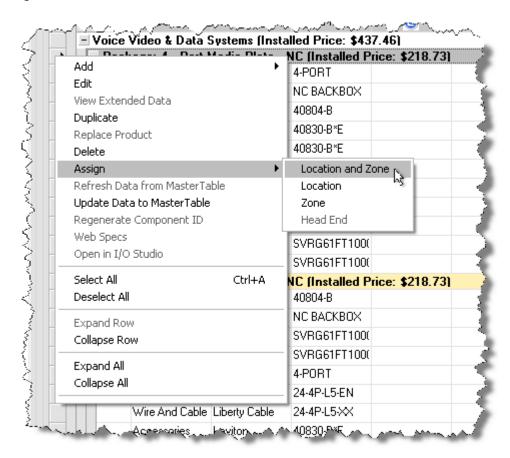


Assigning Locations to Packages

There is a Location section on the Packages **Properties** form that allows you to select a Location and Zone for the Package. If not all items in a Package are being installed in the same location, for example a security Package where the sensors will be in different locations, there is the

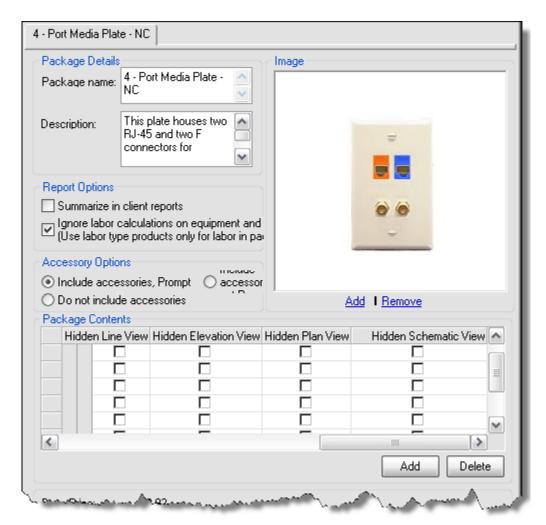


When this box is checked, you would not assign the Locations on the **Package Properties** form, you would assign the Locations to the Products in the **PDM**.



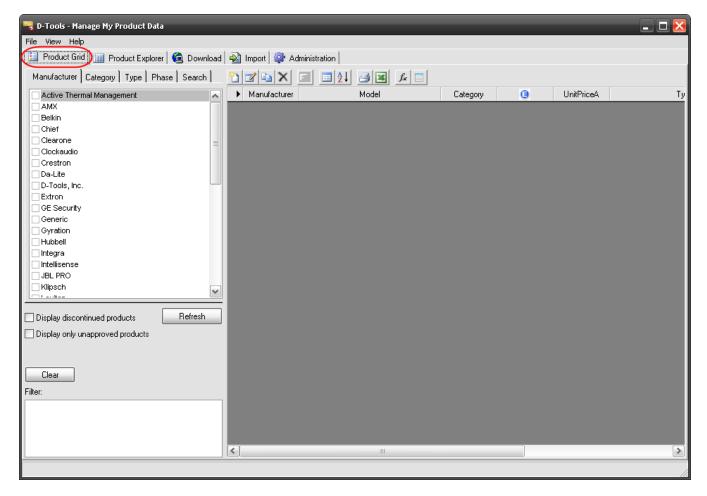
Additional Package Properties

By default, all items in a Package drop on a Visio page when a Package is dragged from the PDM to a drawing page. If you scroll all the way to the right in the "Package Contents" section of the Package Properties form, you will see columns and checkboxes for each of the four drawing page types in Visio: Line, Elevation, Plan, and Schematic. These checkboxes allow you to override the default action and <u>not</u> have a shape drop for a Product on a particular drawing page type in Visio. This may save you the step of having to remove unwanted detail from the drawings when the package is placed.



If you create a package that is used a lot, it may be worth the effort to use the above technique to manage what is shown on the drawings when a complete Package is placed on a particular view. However a similar result is achieved by dragging individual Products from the Package to the particular drawing page using the PDM.

Product Grid



One way to manage the Products in your database is through the **Product Grid** screen. This screen allows you to see multiple Products in your database in a grid format. From this screen you can add, edit, copy, and delete any Product in your database.

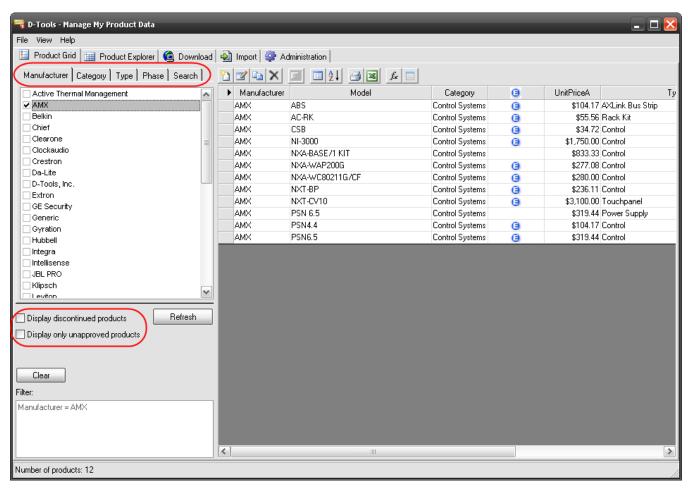


You cannot manage Packages on this interface. Use the **Product Explorer** interface to edit Packages.

You can filter your Products using the Manufacturer, Category, Type, Phase and Search tabs on the

112 Application Setup Wizard

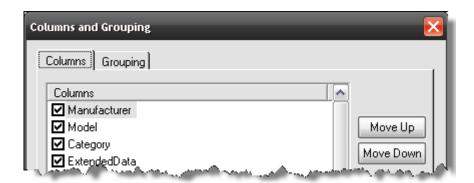
left-hand side of the screen. You also have the options "Display discontinued products" and "Display only unapproved products".



Along the top of the grid you have the following option buttons: [Add Product], [Edit Product], [Copy Product], [Delete Product], [Add and Remove Columns, Groups], [Sort], [Print], [Export], [Update Price], and [Open in I/O Studio].e

-Add a new Product to your MasterTable database
-Copy an existing Product
-Delete an existing Product
- Refreshes the Groups displayed in the grid. This button is inactive until you choose to group the products in your grid, see the next option.

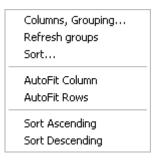
——......Add and Remove Columns, Groups - this option allows you to modify the grid layout. This opens a form:



......Sort - you can sort up to three levels deep, ascending or descending



You can also access the Columns/Grouping, Refresh Groups, and Sort options by right-clicking any column heading. When you right-click a column heading, you will see some additional functions:



Right Click Command	Description
AutoFit Column	Resizes the selected column to the width of the longest string
AutoFit Rows	Resizes all rows to the same height
Sort Ascending	Sorts the selected column by value: lowest to highest (alternative = left mouse click once in a column heading)
Sort Descending	Sorts the selected column by value: highest to lowest (alternative = left mouse click once in a column heading)



....Print - prints the contents of the Product Grid



..Export - this allows you to export the contents of the Product Grid to an Excel spreadsheet.

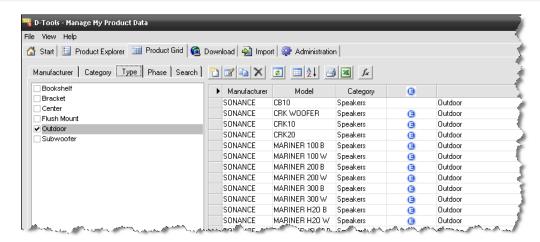


... Update Price - this option allows you to update multiple Products at one time



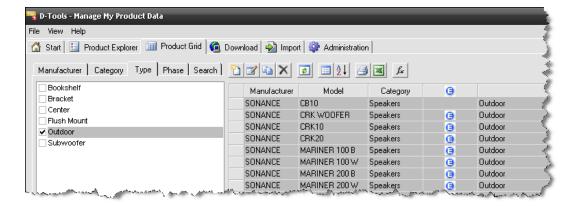
Example: You want to change the markup on all of your Sonance outdoor speakers to 40%.

Use the tabs to select: Manufacturer = Sonance, Category = Speakers, Type = Outdoor. The Product Grid will filter based on the criteria.

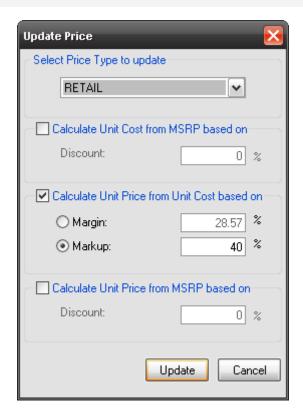


Our MVP data partners have asked that we not show cost data if possible.

Select the products you want to update. To select multiple products use standard Windows selection controls by holding down **<Shift>** or **<Ctrl>** on your keyboard while selecting with the mouse.



Click ____. The Update Price form will open:

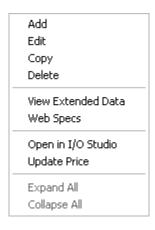


Select what Price Type you are updating and enter a Markup as a percentage (40 = 40%) then click [Update].

Den in I/O Studio – this will launch the I/O studio for one or multiple products selected in the grid. See the Specifications Tab section on page 77 for details.

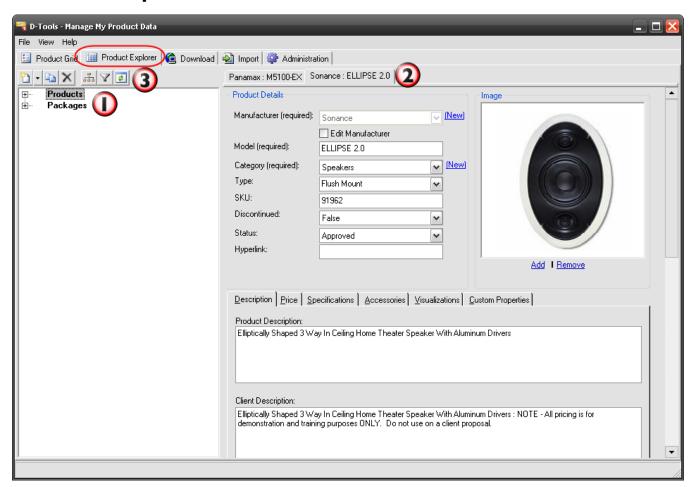


You can also access many of the functions described above by right-clicking any row in the Product Grid. When you right-click a row, you will see some additional functions:



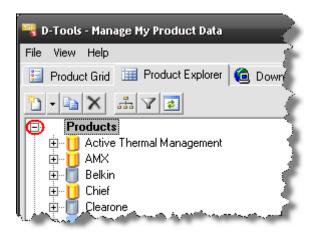
Right Click Command	Description
View Extended Data	Resizes the selected column to the width of the longest string
Web Specs	Resizes all rows to the same height
Expand All	This expands all [+] symbols displayed in the PDM (groupings)
Collapse All	This collapses all [+] symbols displayed in the PDM (groupings)

Product Explorer



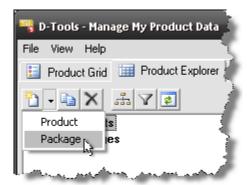
This interface allows you to view both the Products and Packages in your database. To open a Product or Package from the **Product Explorer** interface, double-click on the Model number or

Package Name in the tree on the left-hand side of the interface . You can expand the [+] symbols to view your data:



Each Product or Package that you have open will display on its own tab on the right-hand side of the screen 2. There are buttons 3 along the top that allow you to add, edit, copy and delete any Product or Package from your database. You also have the option to change the Hierarchy of how your Products display as well as Filter your Products to narrow down your search.

....Add a new Product or Package to the MasterTable database. Use the arrow to add a Package.



-Edit an existing Product
-Copy an existing Product
-Delete an existing Product
-Manage your Product Explorer use to determine the hierarchy in which your Products display

......Refresh your Product Explorer



Example: You want to display only the Speakers that are in your database and you want them to display by Type->Manufacturer->Model.

Click the button. The Filter Product Selection Tree form will open:



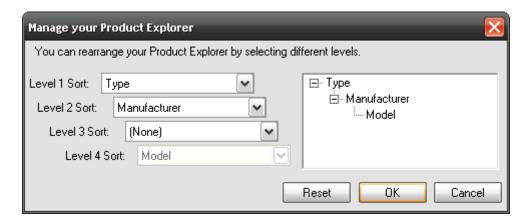
Click the **Category** tab, click the Speakers checkbox and then click **[OK]**. Notice that your selected Filter options display in the "Filter:" section of the form.



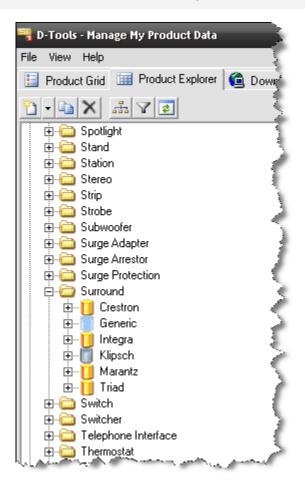
Click the button. The Manage your Product Explorer form will open.



Use the dropdowns to select the following configuration then click [OK].



Click the [+] next to Products and the interface will only show Speakers and the first level of the hierarchy is Type. Click the [+] next to any Type to see the next level (in this example, the next level is "Manufacturer").

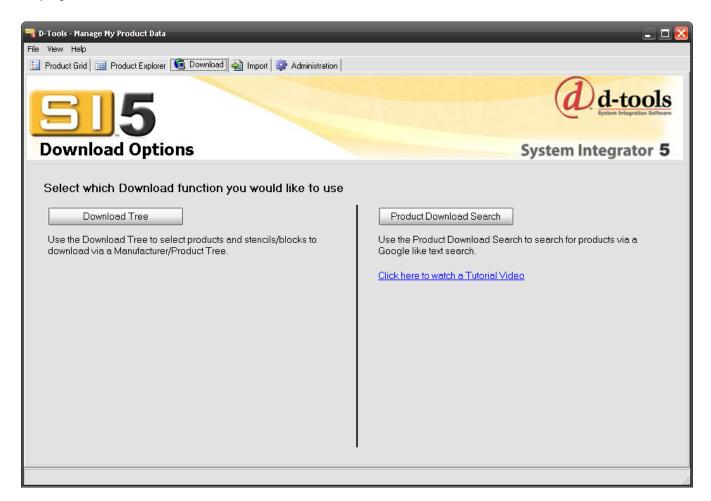


Adding Products to Your Database

Downloading Products

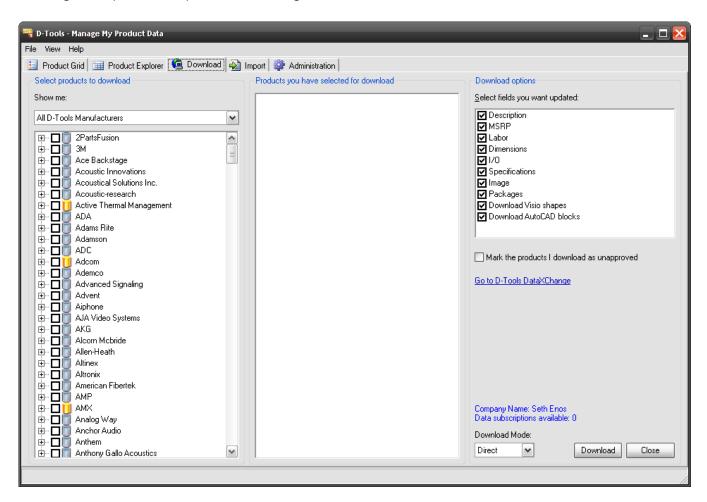
Downloading data is one method for adding Products to your database. There are two types of data available for download: MVP Manufacturers and Subscription Manufacturers. The MVP (Manufacturer Vantage Point) data is free. Subscription Manufacturer data is available for download only if your company has opted for D-Tools' Data Subscription service. A gold symbol indicates an MVP manufacturer while a silver symbol indicates a Subscription Manufacturer.

To download data, open the MMPD interface and click the **Download** tab. The following screen will display:

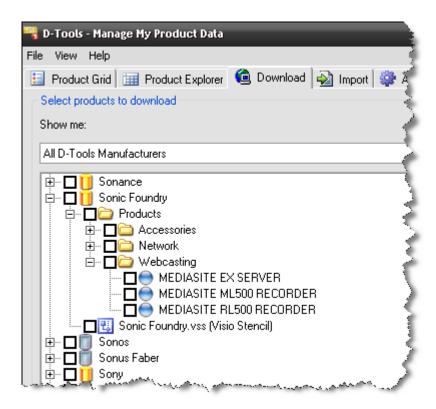


Download Tree

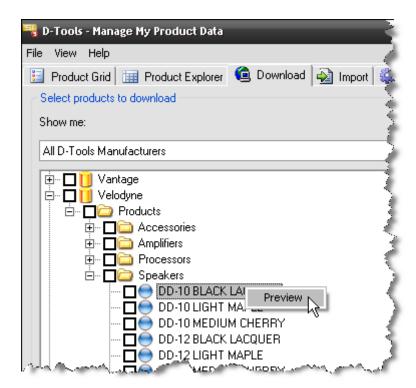
Clicking this option will open the following screen:



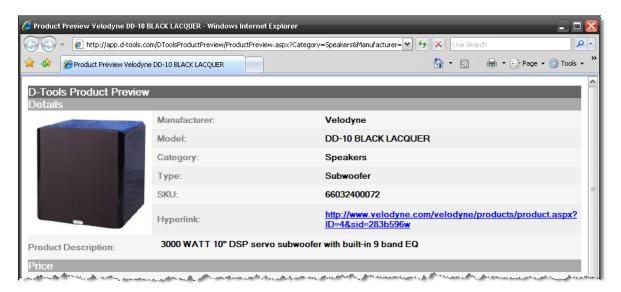
Show me: This dropdown allows you to select: "All D-Tools Manufacturers" or "New and Updated Content for My Manufacturers". "All D-Tools Manufacturers" displays everything that is available for download and "New and Updated Content for My Manufacturers" filters the list to only the manufacturers that are currently in your database. This section of the screen displays all of the data that D-Tools has available for download. You can expand a manufacturer name to view a list of categories followed by a list of model numbers. Some manufacturers may have a Visio Stencil or an AutoCAD drawing available for download:



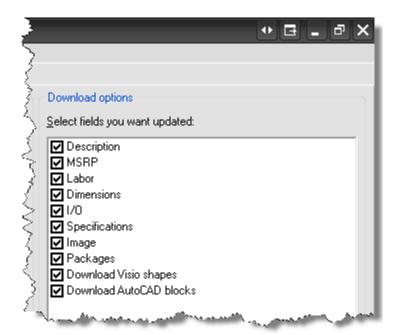
You can preview the data for any Product prior to downloading. Right-click the Product and choose "Preview":



A web browser will open and display a preview of the data.



Download Options: this section of the screen allows you to select what data fields you wish to download/update. On your initial download, leave all checked but when updating existing data, uncheck any data fields you do not want updated. Use caution if you are updating data because you are at risk of overwriting changes you may have made to your data post download.

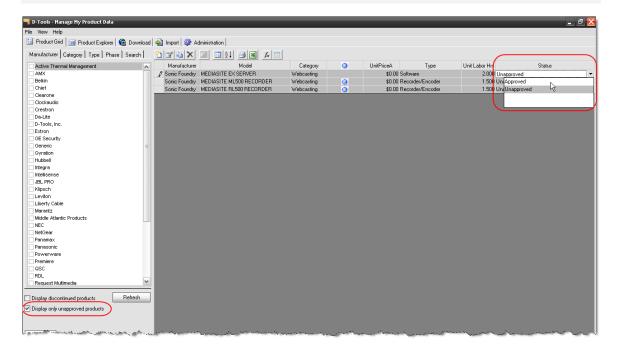


Mark downloaded records as unapproved: This will flag the Products you are downloading so that they will not be synchronized through LANSync. This allows you to approve the data before releasing to all users.



To quickly review and approve Products:

- 1) View Products in the Product Grid screen.
- 2) Check the box "Display only unapproved products"
- 3) If you do not see the Status column, click it to add it to the view
- 4) Select the Products you wish to approve
- 5) Select the dropdown and click "Approved" as shown below

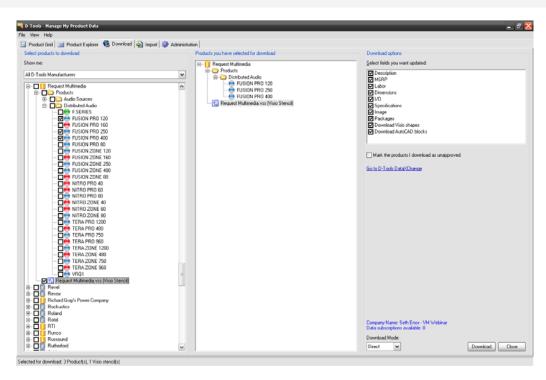




Example: You want to download all the products that you sell for a particular manufacturer.

Open MMPD, select Download and filter with the "Show me products for:"

dropdown if desired. In this example I chose Request Multimedia->Distributed Audio->Server. I then checked the three Models that I sell (they display in the "Products you have selected for download" section). Notice that there is a Visio Stencil available for download. Since this is the initial download for this manufacturer, all fields should remain checked in the "Download options" section.



Click [Download]. When finished, you will get a "Download Complete" message.

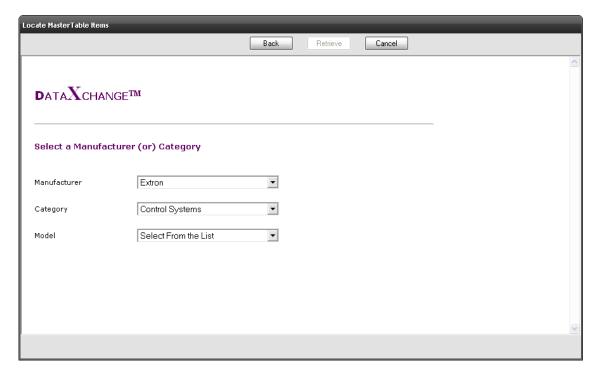


Another option for downloading products is to click the "Go to D-Tools DataXChange" link. DataXChange is a database hosted by D-Tools, Inc. that allows all users of it to share data. Data from your machine that does not already exist in the DataXChange will be transferred to the database so that other users can download that data. In exchange, you have unlimited access to download any product data from the DataXChange database that you choose. This service is free.

Data in the DataXChange database is not verified or modified by D-Tools, Inc. As always, verify the validity of any data that you download.



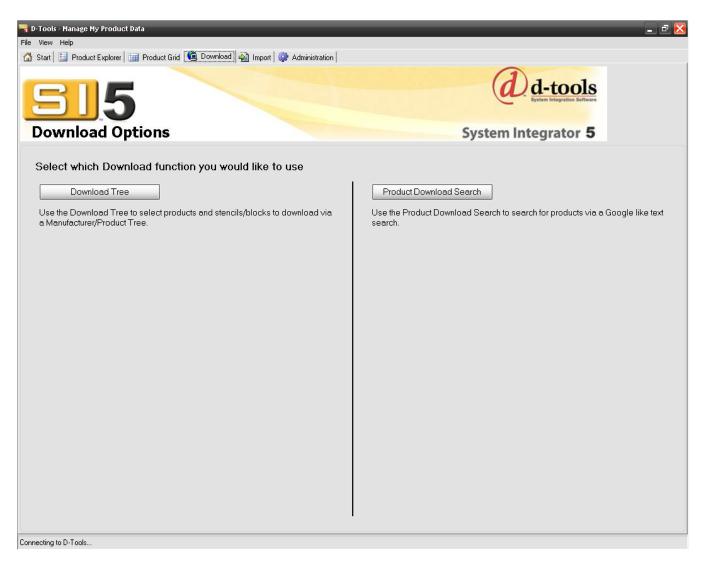
Once you accept the rules, you can choose a Manufacturer, Category, and Model of the product you wish to download.



Once you've selected the product, click **[Retrieve]**. The Product Properties form will open so that you may edit the product if desired.

Product Download Search

Instead of using the Download Tree, you may opt to use the Product Download Search.



Clicking this option will display the following interface:



There are four things you can search for: Products, Packages, Stencils and Blocks, and User Contributed Data. There are buttons along the top of the form and these options are also available from the View menu:



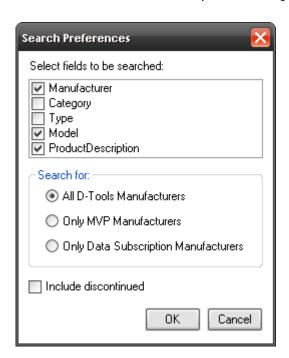
This interface defaults to the **[Products]** download screen. This interface allows you to search for products in the D-Tools database that are available for download.



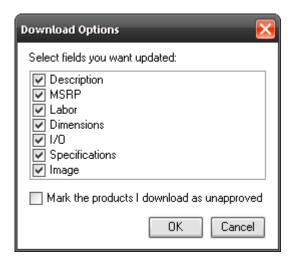
MSRP: When expanded, you can set minimum and maximum pricing criteria for your search.



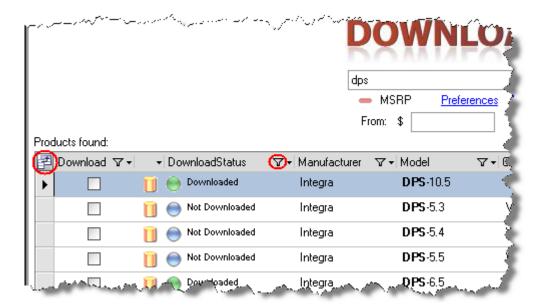
Preferences: Allows you to choose what fields are searched, what type of data (MVP or Data Subscription), and whether or not to include discontinued products in your search.



Download Options: Allows you to choose what fields will be downloaded. You will most likely leave all of these checked on your initial download. You also have the option of marking the products you download as unapproved. Unapproved products do not synchronize with LANSync.



Products that are found that match your search criteria are displayed in the grid. You can choose what fields display by clicking the Field Chooser button and the columns can be sorted or filtered

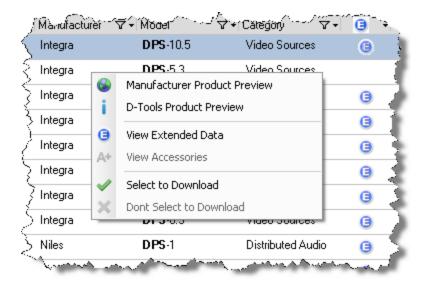


You can change the position of the columns by dragging and dropping or by using the arrow in the column heading to swap column positions:

There are checkboxes next to each product as well as [Select All]/[Clear All] buttons along the bottom of the screen:



You can also select or deselect a product for download by right-clicking. This menu offers a few additional functions as well:



Manufacturer Product Preview: launches a web browser directed to the manufacturer's website for this product

D-Tools Product Preview: launches a web browser directed to a D-Tools server that shows the data that we have for the product

View Extended Data: launches a web browser directed to a D-Tools server that shows what additional data we have for the product such as brochures, manuals, and images. This option is for Data Subscription users only

View Accessories: displays additional products if the product is pre-accessorized

You have two options for downloading: Direct or EZ Match

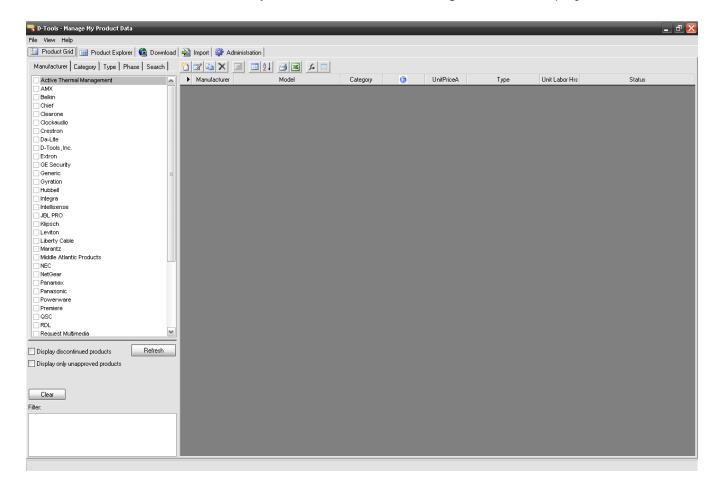


"Direct" will download the products to your local SI 5 database. "EZ Match" will pull the data down into the EZ Match interface. Use this option if you are updating existing data in your database or if you want to merge data from the D-Tools download to data that you may have entered into SI 5 manually. See "Importing via EZ Match" pg. 149 for functionality.

[Packages] allows you to download manufacturer specified packages (only some manufacturers provide us with package data). [Stencils and Blocks] allows you to search for and download any available manufacturer specific Visio stencils and AutoCAD blocks. The functions available on these screens are similar to those on the Products screen. [User Contributed Data] is another way to get to DataXChange.

Adding Products via the Product Grid

Another way to manually add a Product is through the **Product Grid** screen. Open the MMPD interface and click the **Product Explorer** button. The following screen will display:



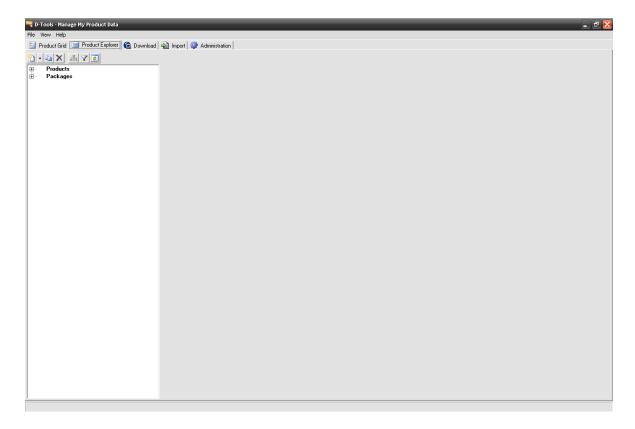
Click and the following form will open:



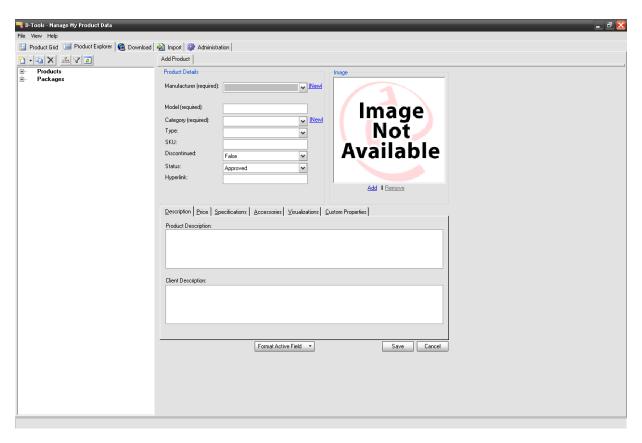
Enter the information on the various tabs for the Product you wish to add to your database. There are three required fields, eight recommended fields, and the rest are optional. The required fields are **Manufacturer**, **Model**, and **Category**. The recommended fields are **Phase**, **Unit Labor Hrs**, **Unit Cost** (for at least one of the Price Types), **Unit Price** (for at least one of the Price Types), **Taxable**, **Height**, **Width**, and **Depth**. When finished, click **[Save]**.

Adding Products via the Product Explorer

To add a Product manually to your Master Table database, open the MMPD interface and click the Product Explorer button. The following screen will display:



Click . An **Add Product** tab is added to the right side of the screen:



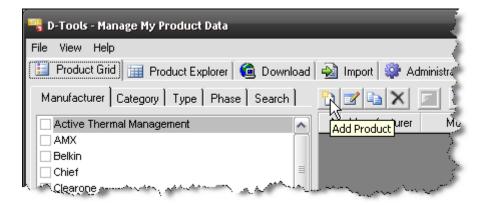
Enter the Product's data following the guidelines in the Product Grid section above.

Labor Products

Another way to add labor to a Project is to add a Labor Product (also called Labor Items or Labor Line Items). A Labor Product is a product in your database that is assigned to the Category "Labor". These are commonly used to add programming and other non-install related labor to a Project. However, you may choose to use Labor Products to estimate all labor for a project if your project managers are involved in the estimating process. It really depends on how you wish to run your business.

Creating a Labor Product in your Database

In the Manage My Product Data (MMPD) interface, select the Product Grid tab (can be done from Product Explorer as well). Click the Add Product button:



Select "Labor" from the Category dropdown. And fill in at least the required fields:



Fill out this form as you would for any other Equipment that you add to your database. However, this form is slightly different than that of other Equipment in your database, primarily due to the Labor Price tab.

There are four options for the pricing for this Labor Item:

Fixed – applies whatever value entered in the Fixed Sale field. There are no hours associated with Fixed Labor. This is good for marking up fixed price subcontract labor, such as the use of a third party programmer or wire pull crew.

Variable - calculates Sale/Hr x Labor Hrs

Both - calculates Fixed Sale + Sale/Hr x Labor Hrs

The fourth option is the "Use the labor cost and selling price based on the phase" checkbox. This option calculates the labor values based on the rates for the selected Phase x Labor Hrs and. When this option is checked the Variable fields gray out except for the Labor Hrs field. This option charges the Base, Misc, Mgmt., and Design rates that you have set for the Phase.

When you **①** check "Use the labor cost and selling price based on the phase", the **②** Cost/Hr and Sale/Hr fields are grayed out and not used in the calculations. The **③** "Fixed Cost" and "Fixed Sale" are added to in the labor calculations in the "Programming" phase. The total labor selling price is displayed in the "Install Price" field **④**.



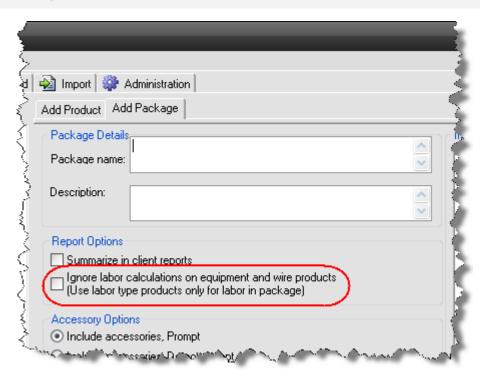
Click the [**View**] button **1** to see a detailed breakdown of all the elements that make up the Labor Product "Installed Price".





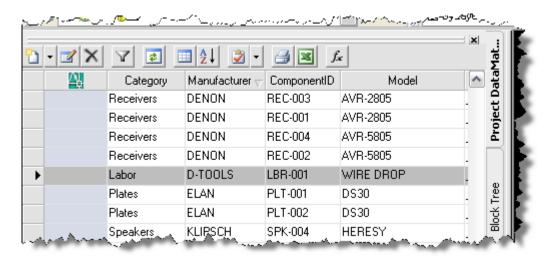
In the example above, the model "Programming" is broad. You would use this if you plan to add one Labor Line Item to a project to account for the programming. Once the item is added to the PDM, you would then modify the number of Labor Hours on the item to account for the entire project, i.e. — 30 hours. If you plan to add a Labor Line Item as an Accessory to an item in your database, for example a processor, you would to create a specific Labor Line Item for the number of hours involved. This way you don't have to modify the Labor Line Item within each project. For detailed information regarding Accessories, see the Accessories section of this guide.

Labor Line Items are often used in Packages. If you do not want Labor to be calculated for each individual item in a Package, you would check the box shown below. For detailed information regarding Packages, see the **Packages** section of this guide, page **93**.



Adding Labor Line Items to a Project

These items are added to project the same way as any other item from your database. They do show as line items in the PDM as opposed to the "behind the scenes" labor calculations for each item in a Project.



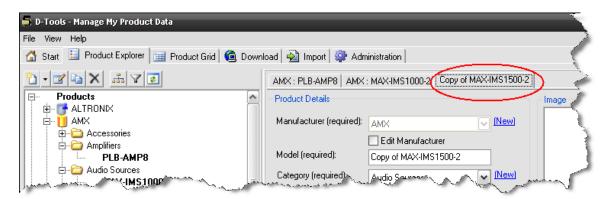
Copying Products

Yet another way to add a Product to your database is by copying another Product that already exists in your database. This is an easy way to save you the trouble of entering redundant data between similar Products.

From either the **Product Explorer** screen or the **Product Grid** screen, select the Product you want to copy and click. A copy of the Product will be opened and available to edit. The only differences between the copied Product and original are that the model number has "Copy of" added to the field (of course this editable).



If you are on the **Product Explorer** screen, the copy of the Product will not open in a separate form; instead a tab is added to the display area:



Importing Products

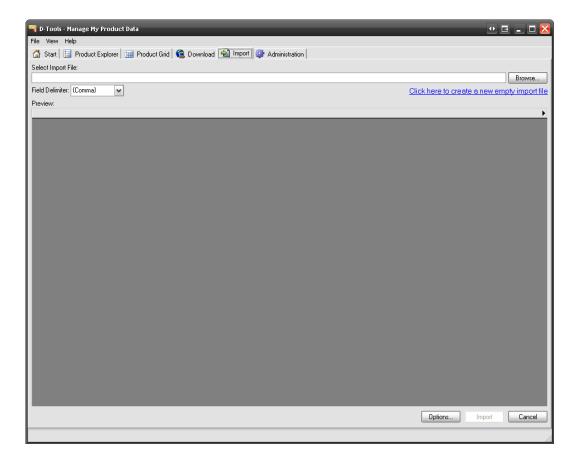
By importing an Excel spreadsheet you can add multiple Products to the database at one time. You can use your own spreadsheet or you can use our template. When you click the Import tab in the MMPD interface, you have three options: [CSV Import], [EZ Match], and [DMPI Import].



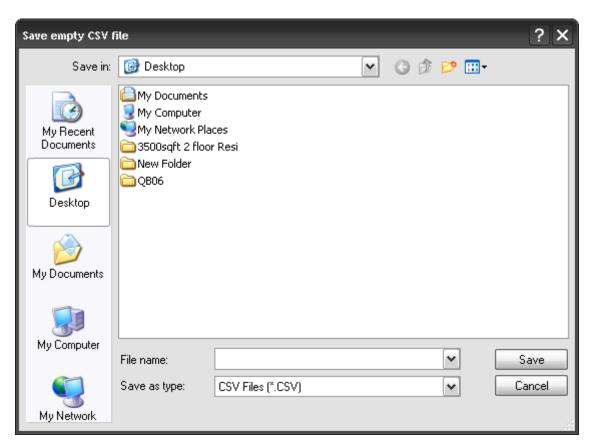
The Import Template

144 Application Setup Wizard

Open the MMPD interface, click the **Import** tab, and then click the **[CSV Import]** button. The following screen will display:



Click the "Click here to create a new empty import file" link. The "Save empty CSV file" from will open:



Select your save location, enter a file name and click **[Save]**. Excel will open the file you created.

Edit the form and Import the data into your **SI 5** database.



At this point, there are only three required fields: Manufacturer, Model, and Category. Make sure that the Category is spelled exactly as it is in SI 5. If the Category is misspelled you will be prompted to create the Category:



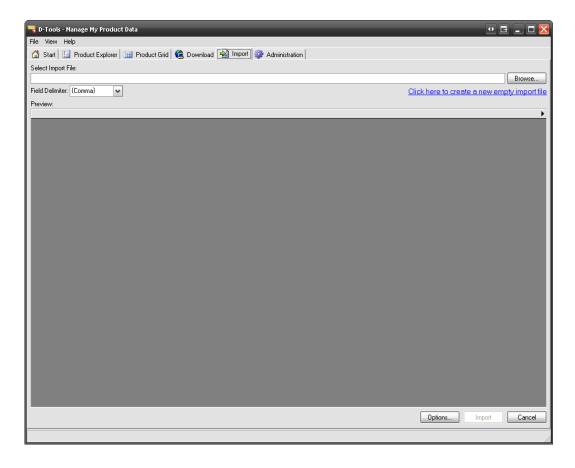
Clicking [No] will void the import while clicking [Yes] will open the New Category form:



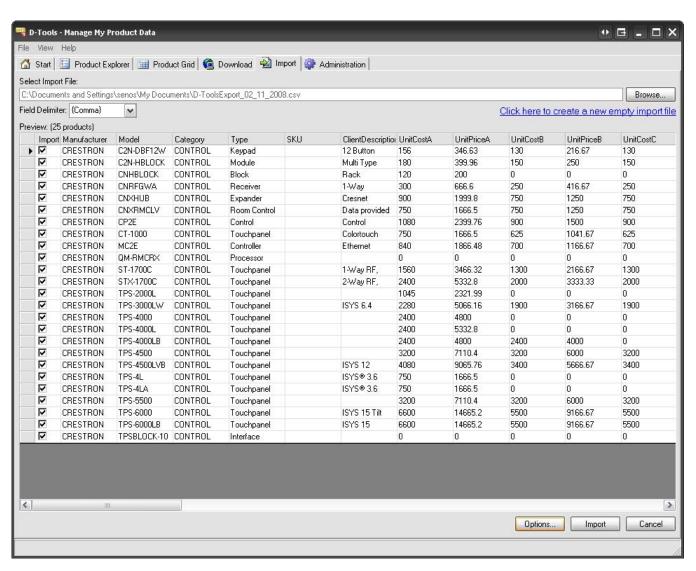
Enter an ID and select Type: Equipment, Labor, Speaker, or Wire.

Importing via CSV Import

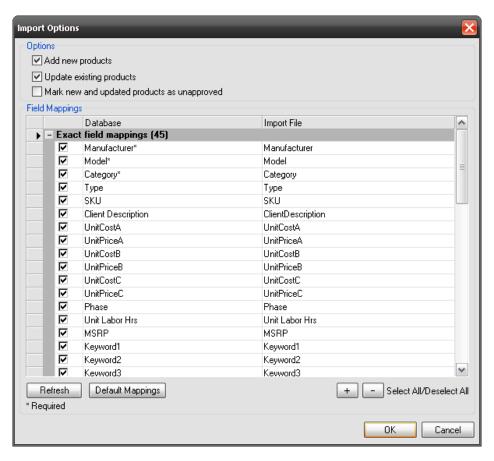
1) Open the MMPD interface, click the **Import** tab, and then click the **[CSV Import]** button. The following screen will display:



- 2) Select your "Field Delimiter" from the dropdown to match the format of your spreadsheet: Comma, Semi-colon, Tab, or Pipe. If you are using our template, leave this field set to Comma.
- 3) [Browse...] to your file. The Products in the spreadsheet will display in the grid.



4) Click **[Options...]**. The Import Options form will open:



5) Select the Options, Fields to Import, and Field Mappings (if you are using our template, there is no need to change anything in the Field Mappings section) then click **[OK]**.

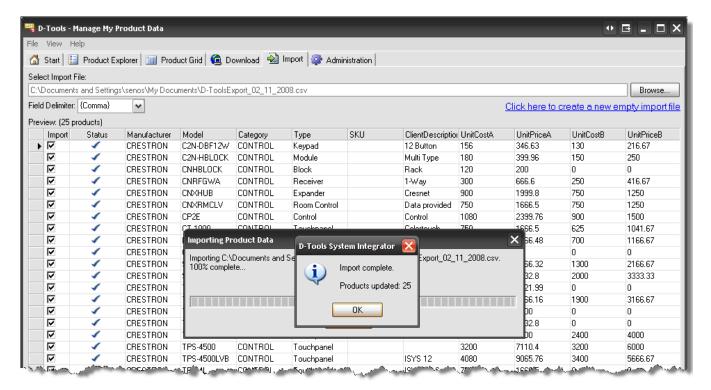


If this is your initial import for the products in your spreadsheet, leave all the fields checked in the "Field Mappings" section. However, if you are importing an update to your existing data, e.g. a price change, only select the fields in the spreadsheet that you actually modified. This will prevent you from accidentally overwriting a field. There are so many ways to edit data in SI 5, there is no way to guarantee that other fields haven't been modified at some point so be very aware of what you are importing.

6) Click [Import]. You will be prompted to backup your database:



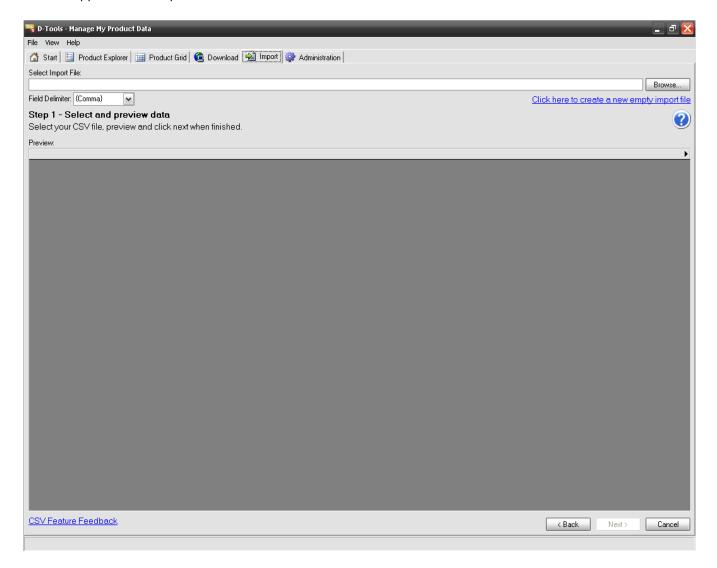
When the import is complete you will be notified:



Importing via EZ Match

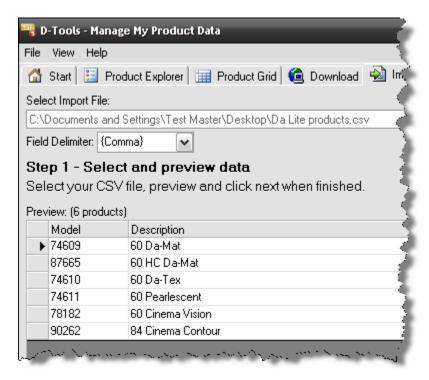
EZ Match allows you to import a spreadsheet where Category values are not present. This option is nice for when you have a spreadsheet directly from a manufacturer or even from another application. Most other applications do not provide a Category field, or if they do, they may not match your SI 5 Category list. Category is a required field in SI 5 so this option allows you to assign category during the process. When you click the [EZ Match] button on the main Import screen, the following screen will display:

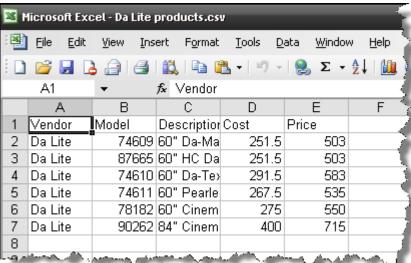




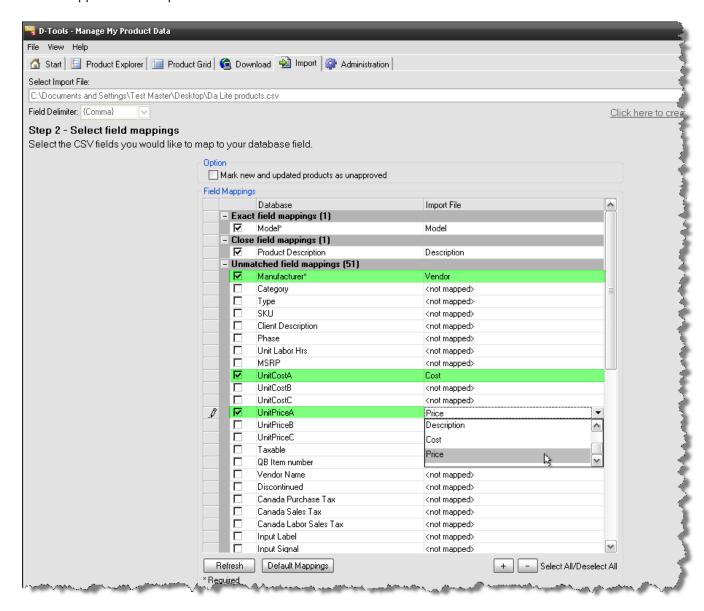
This looks very similar to the CSV import but the steps are different. The text on the form helps guide you through the process. Click <u>here</u> to see a video demonstration.

Step 1 is to browse to the .CSV file you want to import. From my CSV file, only two columns were mapped to the SI 5 database: Model and Description.

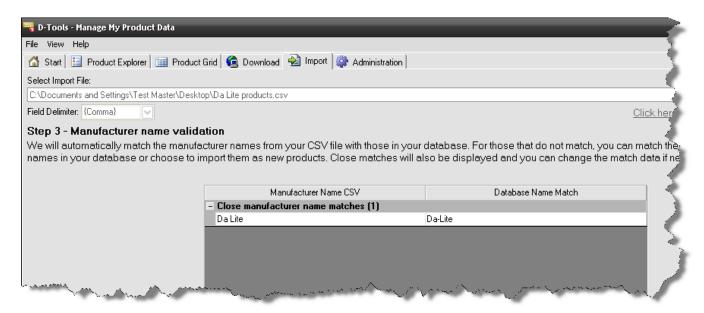




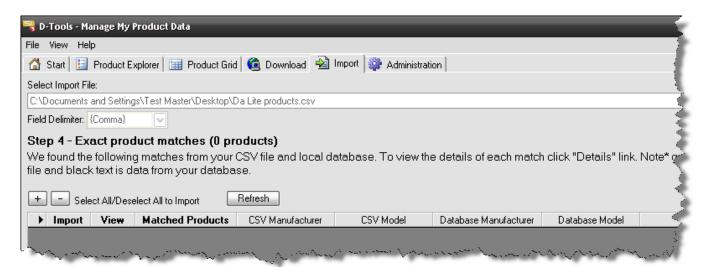
Step 2 allows you to see what fields match exactly, which are close, and which are unmapped. You can override or assign new mappings using the dropdown menu in each row.



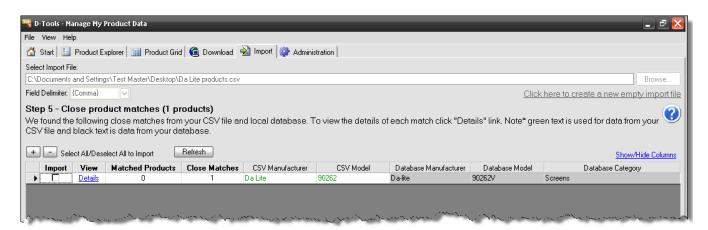
Step 3 will show you either exact matches or close matches for the manufacturer names in your spreadsheet:



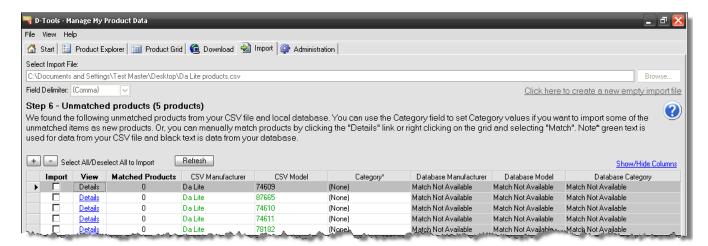
Step 4 shows you exact matches to existing products in your SI 5 database, in my example I have none.



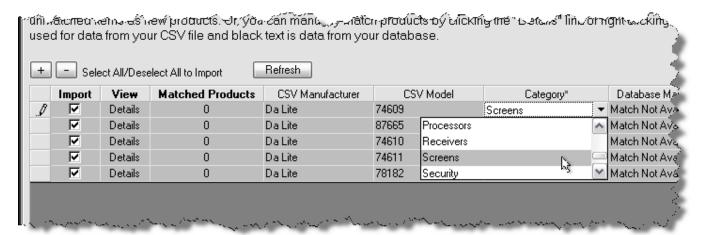
Step 5 will show you close matches to existing products in your database.



Step 6 shows you unmatched products from the spreadsheet.

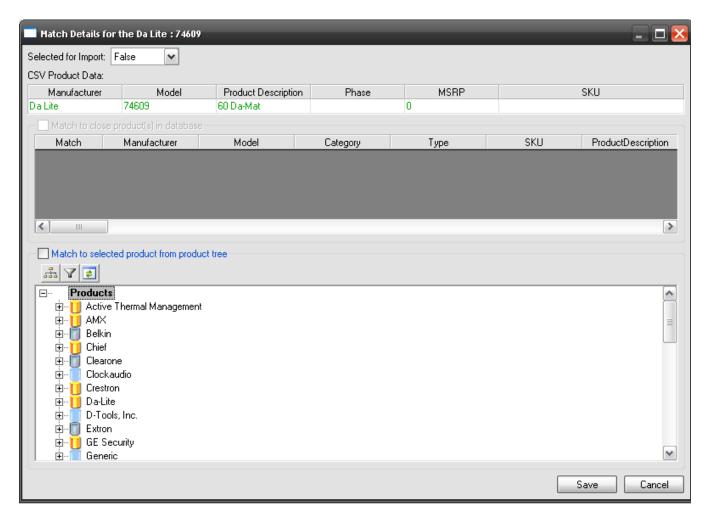


If you can't find the products via the Details link, discussed below, you still need to assign the products a Category, one of SI 5's required fields. Use the dropdown in the Category column for one or multiple products:



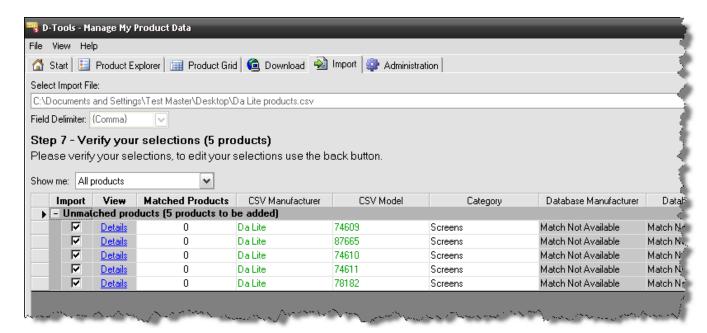
In steps 4-6 you have the following common options:

<u>Details</u> – this link in the View column opens a window that allows you to choose any other product from your database to match the selected import record.



Select All/Deselect All buttons allow you to choose the products to import. You can also individually check the desired rows.

Step 7 allows you to verify your selections for import, when ready, click the [Import] button:



You will receive a confirmation of the import:



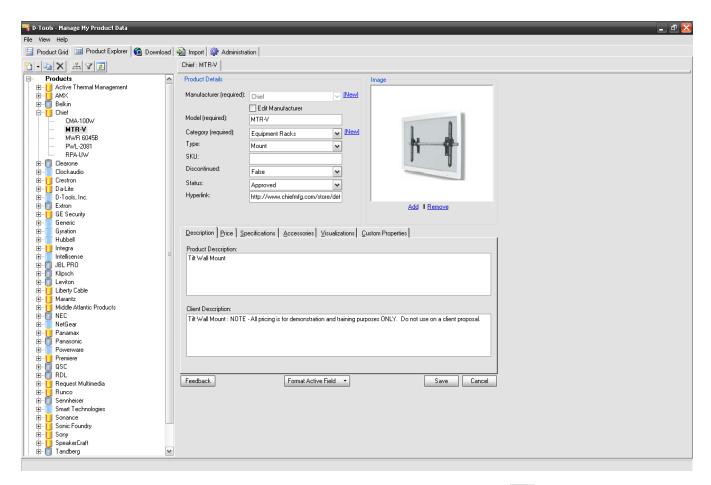
Importing via DMPI Import

D-Tools SecureConnect provides an automated way for MVP manufacturer partners and the D-Tools user community to communicate directly from within D-Tools System Integrator software. Use SecureConnect to request your confidential dealer pricing file from your authorized manufacturers, or use it to contact a manufacturer directly to become a dealer or request more information. MVP members can respond confidentially through their web portal environment directly to any requests. SecureConnect creates value for D-Tools MVP manufacturers and D-Tools users by establishing an easy-to-use communication vehicle that can be accessed by the D-Tools system integrator community. For more information, please contact mvp@d-tools.com

Editing Products

You can edit Products either in the **Product Explorer** or **Product Grid** screens.

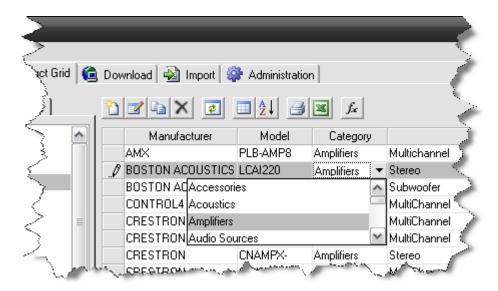
In the **Product Explorer** screen, select a Product in the **Product Tree** and either click or double-click the Product so it is displayed as a tab on the right side of the screen. Make changes and then click **[Save]**.



In the **Product Grid** screen, select a Product in the grid and either click or double-click the Product. The Product Properties form will open and be editable.



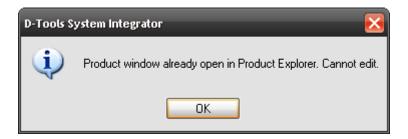
Another way to edit Product in the **Product Grid** screen is by editing directly in the grid instead of opening the **Product Properties** form. Many fields will have a dropdown menu of options when you left-click in the field:



If you are wanting to edit a field that does not have a dropdown menu in the grid, left-click once in the field and then press **[F2]** on your keyboard. This will put a cursor in the field.



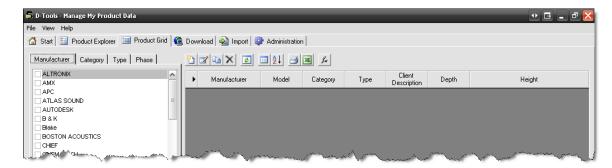
You cannot have the Product Properties open for edit for the same Product in both the **Product Explorer** and **Product Grid** screens. If you attempt, you will see the following message:



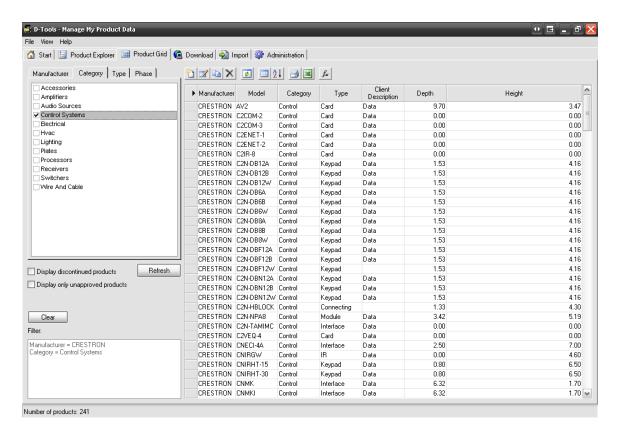
Exporting Products

A way to edit multiple Products at one time is to export your data to an Excel spreadsheet. This is particularly useful for updating prices for a large number of Products.

Open the MMPD interface and click the **Product Grid** tab. The **Product Grid** screen will display:

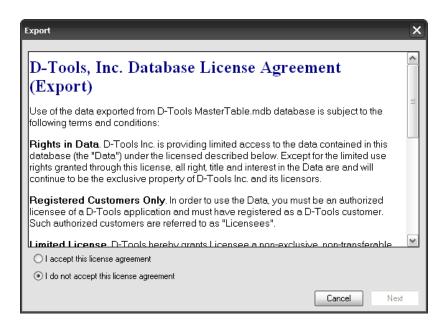


Use the tabs to filter your Products to the ones you want to export. The Products will display in the grid:

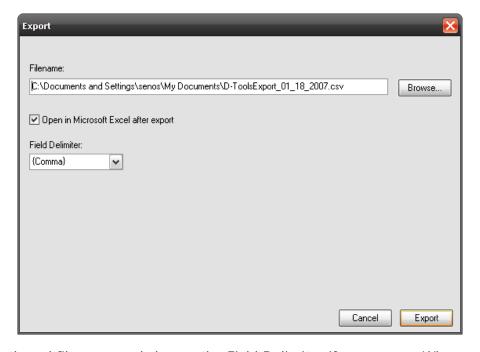


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Click . The Export form will open.



Accept the license agreement and click [Next]:



Choose your path and filename and change the Field Delimiter if necessary. When ready, click **[Export]**. If you left the "Open in Microsoft Excel after export" options checked, Excel will launch and the file will be ready for editing.



After you have made your modifications to the spreadsheet, follow the instructions in the Import Products section of this guide to import your changes. See **Importing**

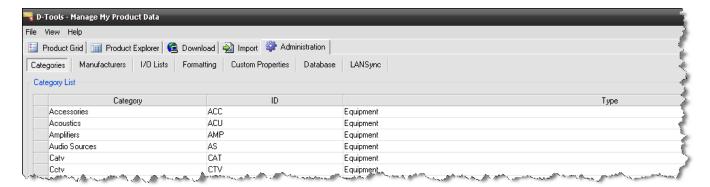
Administration

This section of the MMPD interface offers many options to customize and maintain your database. There are six "sections": **Categories**, **Manufacturers**, **I/O Lists**, **Formatting**, **Custom Properties**, and **Database**. To access this screen, click the **Administration** in the MMPD interface. The "sections" are listed as buttons beneath the main tabs.



Categories

[Categories] allows you add, edit, or delete Categories from your database. There are [Add] and [Delete] buttons. If you want to edit a field, click once in the field and the press [F2] on your keyboard or double-click in the field.

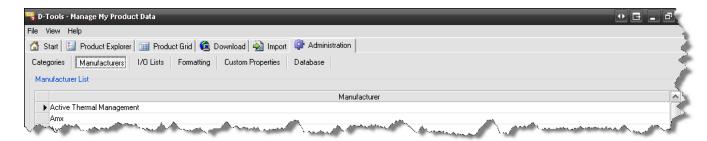




We don't recommend that you modify the existing Categories in **SI 5**. You will lose links to Visio Stencils and AutoCAD Drawings if you change the name of an existing "stock" Category. If you create your own Categories, you may wish to create Visio Stencils and/or AutoCAD Drawings for the Categories. See the Visio/AutoCAD sections of this guide for info.

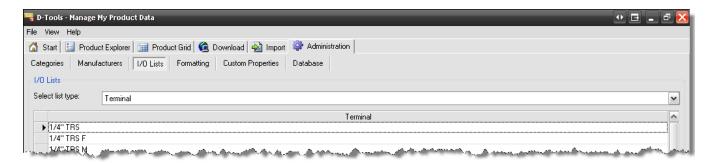
Manufacturers

[Manufacturers] allows you add, edit, or delete manufacturers from your database. There are [Add] and [Delete] buttons. If you want to edit a field, click once in the field and the press [F2] on your keyboard or double-click in the field.

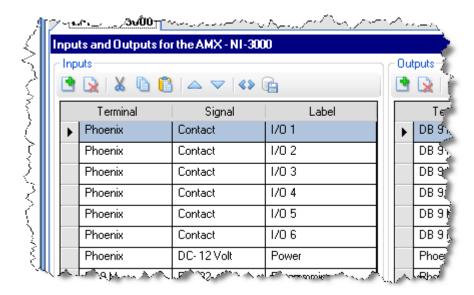


I/O Lists

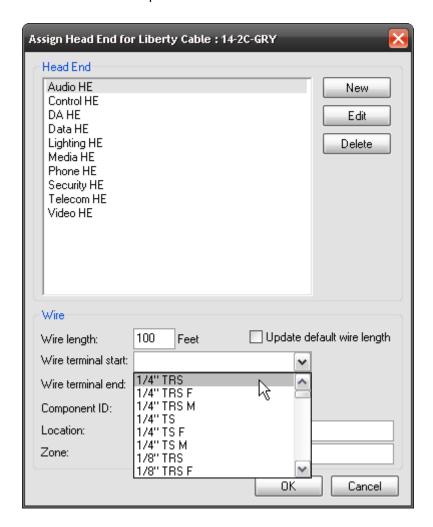
[I/O Lists] allows you add, edit, or delete inputs and outputs from your database. There are [Add] and [Delete] buttons. If you want to edit a field, click once in the field and the press [F2] on your keyboard or double-click in the field. Inputs and outputs in SI 5 are composed of three parts: Terminal, Signal, and Label. Select which one you would like to edit from the "Select list type" dropdown.



These **I/O Lists** are used in two places in **SI 5**. The first and most obvious place they are used is when editing the inputs and outputs for Products in your database via the I/O Studio:



The second place that the **Terminal** list is used is on the Assign Head End dialog. These values are passed to the Bulk Wire Termination Report:

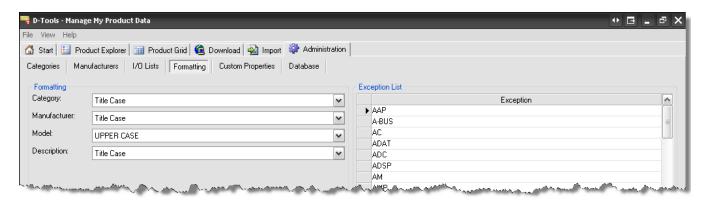




The Assign Head End dialog opens for Products added to a Project that are of Category "Wire and Cable" and of Phase "Rough-In".

Formatting

This tab allows you to set the default case settings for **Category**, **Manufacturer**, **Model**, and **Description** for consistency throughout the **SI 5** application. The *Exception List* section is used for abbreviations and acronyms that you do not want to be affected by your case settings.



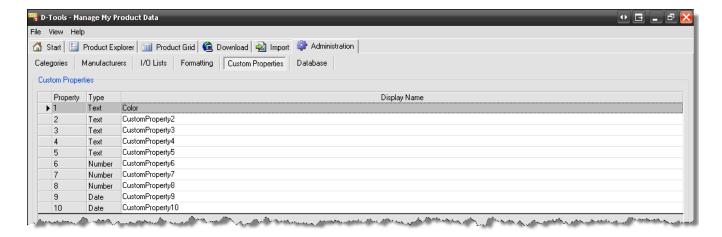


These settings take precedence over what you enter in those four fields for a Product.

Example: You create a new Product in your database and you type "Surround X28" in the **Model** field. The **Formatting** for the **Model** field is set to "UPPER CASE" as in the screenshot above. When you print your reports, the **Model** for this Product will display as "SURROUND X28".

Custom Properties

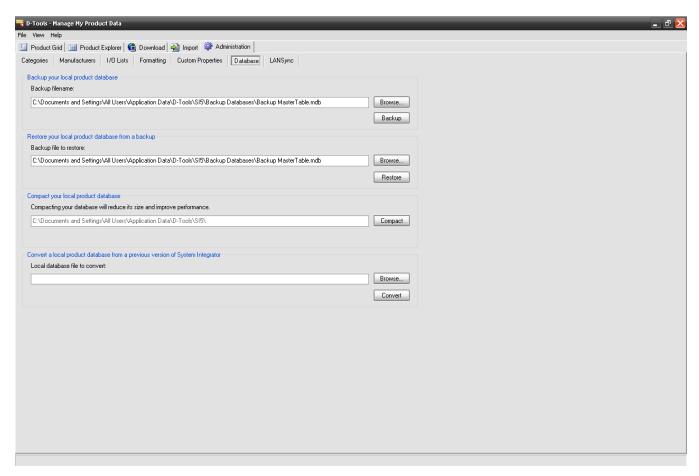
Custom Properties is where you can rename the ten **Custom Properties** for Products in your database. The first five in the list are formatted for text, the next three are formatted for numbers, and the last two are formatted for dates. Custom Properties are not used or reported by SI5, however with the ability to now easily generate custom reports you have find many uses for the Custom Properties. To edit a field, click once in the field and the press **[F2]** on your keyboard or double-click in the field.



Database

Database Management has four sections:

- 1) Backup your local Product database.
- 2) Restore your local Product database from a backup.
- 3) Compact your local Product database.
- 4) Convert a local Product database from a previous version of System Integrator.



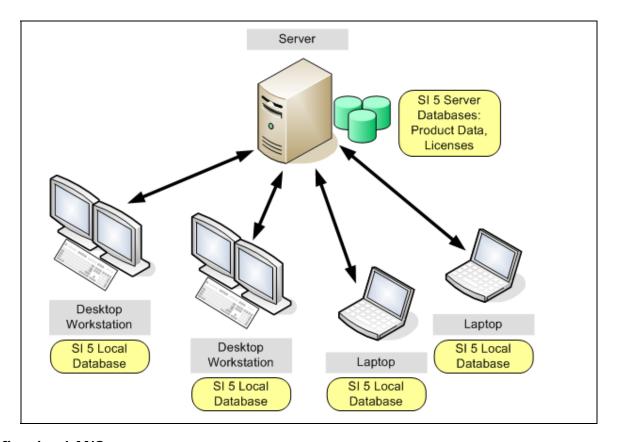
The local backup functions are not overly useful and will not likely be used much. The main way to backup your SI 5 data is via the SI 5 Administration Console. See the SI 5 Installation and Administration Guide for details.

LANSync

LANSync is the name of the synchronization functions within SI 5. The primary function of LANSync is to allow you to keep your **Product Data** consistent on all PCs running SI 5.

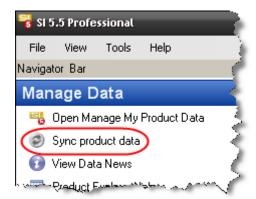


The graphic below represents a typical LANSync configuration:

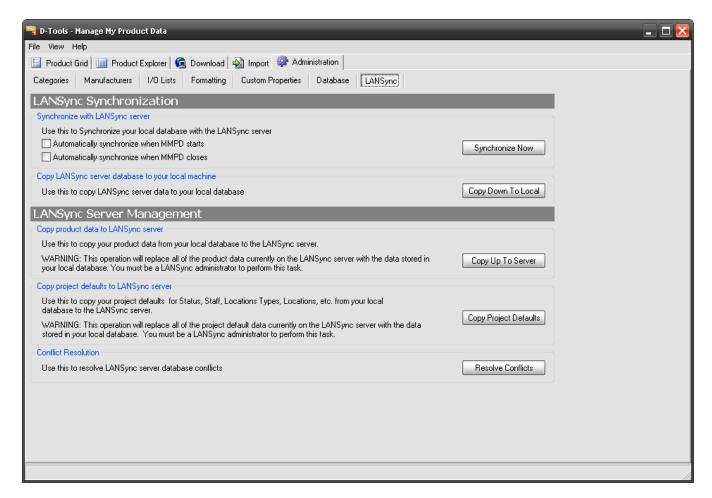


Configuring LANSync

When you initially installed and configured SI 5, you already configured LANSync when you performed the "Sync product data" step in the Start Here guide. Everyone followed the instructions on the Start Here doc and in the SI 5 Installation and Administration Guide, right? Right.



Here under the LANSync tab in the MMPD interface you have functions that allow you to reconfigure your data on the server should you need to.



The steps for re-configuring LANSync are listed below. Following these steps is a description of all of the LANSync functions on this page.

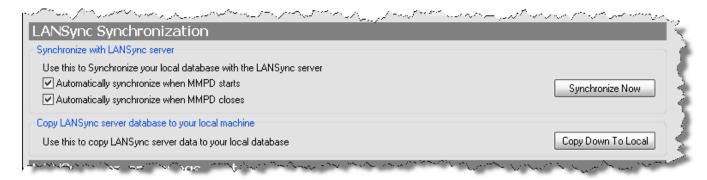
From the machine with the most accurate database:

1. Click [Copy Up To Server].

On all other machines:

2. Click [Copy Down To Local].

LANSync Synchronization

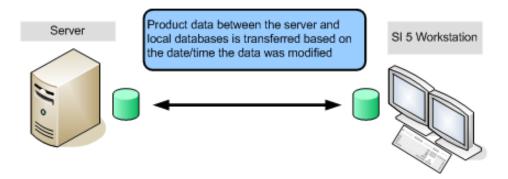


Synchronize with LANSync server – we recommend that you check both of the boxes:

"Automatically synchronize when MMPD starts" and "Automatically synchronize when MMPD closes". This saves you the trouble of having to remember to synchronize. When you open and/or close MMPD, you will be prompted to sync:



If you want to manually synchronize, click **[Synchronize Now]**. When you synchronize, data between your local database and the SQL database are compared and updated with the most recent data based on the date/time stamp:

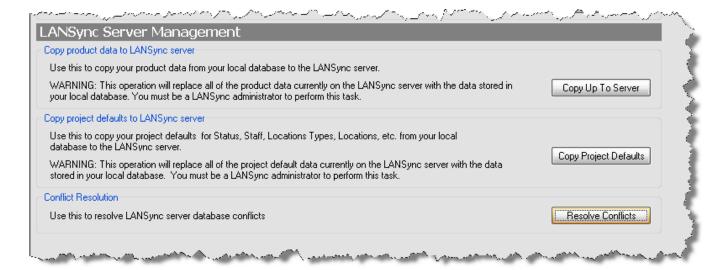


The [Synchronize Now] button and the "Sync product data" link in the Navigator perform the same function:

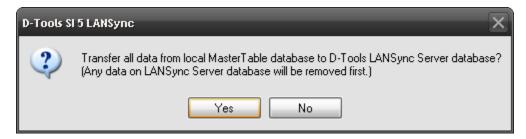


Copy LANSync server database to your local machine – the [Copy Down To Local] button will copy the contents of the database on the SQL server to your local database. This action must be done on all machines following the use of the [Copy Up To Server] function (see below).

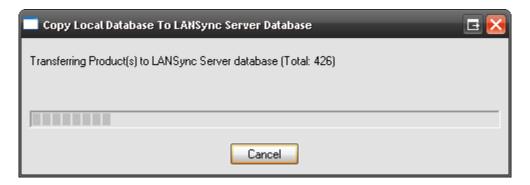
LANSync Server Management



Copy product data to LANSync server – clicking [Copy Up To Server] will copy the records in your local database to the database on the SQL server. This step must be performed in order for LANSync to operate and is generally only done once, during the initial setup of SI 5. This step should be performed on the machine that has the "best" or "most current" database. The data that is transferred is your Product data, Phases, Tax Rates, and Client List. When you click this button, you will asked to verify the action:



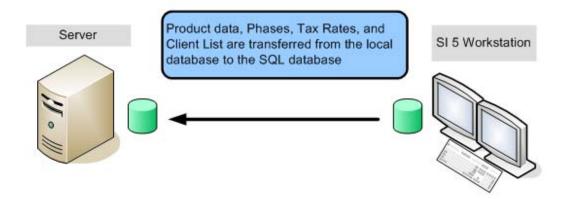
Progress will display:



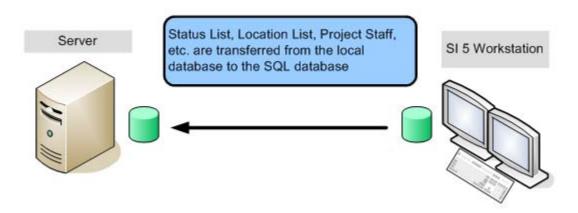
You will be notified when this completes:



Below is a graphic representation of what just happened:



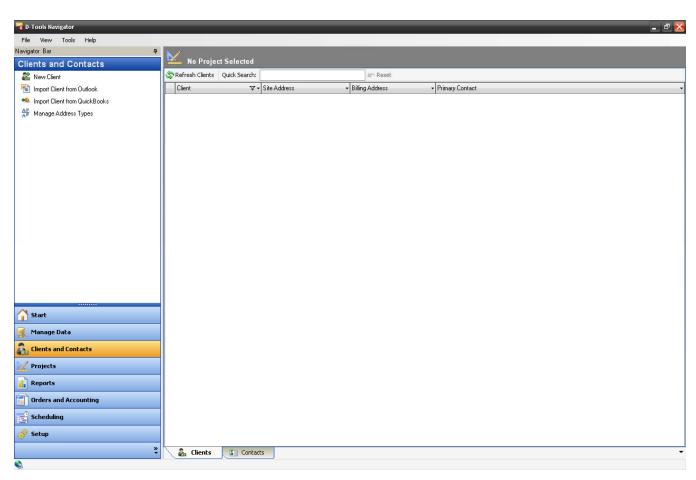
Copy project defaults to LANSync server – clicking [Copy Project Defaults] will transfer data that is not synched automatically from your local database to the SQL database. Examples of this data are Status List, Location List, Project Staff, etc. This would only be done from a machine where the data has been verified and a decision has been made to share this data with all users. If changes are made to the data under the **Setup** tab in the Navigator after you have established your data on the server, you must use this function to push the changes to the server as the "Project Defaults" are not synchronized every time you use the sync function in SI 5. However, after using this function, the very next time a machine synchs, the "Project Default" data will be transferred to their machine.



Conflict Resolution – Click **[Resolve Conflicts]** to check to see if any conflicts occurred during synchronization. Conflicts are rare but can occur when the following scenario takes place:

The date is 6/26/2007. The data on the SQL database has a Date/Time Stamp of "6/25/2007 5:35 PM" from the previous day's work. Reed and Seth arrive at work, open MMPD, and synchronize with LANSync on each of their machines. Reed edits the pricing on a few items in the database at 11:59 AM and then heads out the door to lunch, leaving MMPD open on his machine. Seth edits the same items at 12:35 PM and then synchronizes. When he synchronizes, the data that was edited was pushed out to the SQL database with a Date/Time Stamp of "6/26/2007 12:35 PM. Reed returns from lunch and decides to synchronize. The edits to the data that Reed made earlier are pushed out to the SQL database with a Date/Time Stamp of "6/26/2007 11:59 AM" which is earlier than the date of the data on the server ("6/26/2007 12:35 PM"). This is a "Conflict".

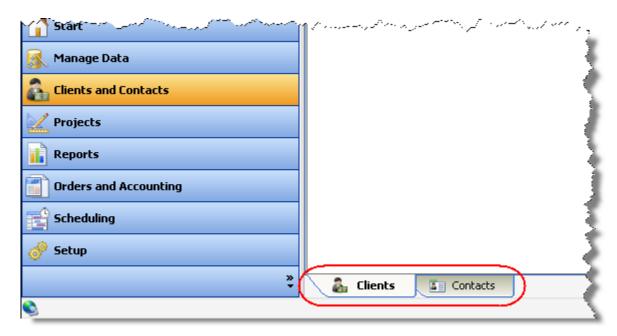
Clients and Contacts



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The Clients and Contacts button in the Navigator opens the interface for adding/editing/deleting Clients and Contacts within SI 5. A Client is considered and entity like a business or a company and Contacts are individuals. Clients and Contacts are only available for edit when you are working online.

There are two tabs along the bottom of the interface: Clients and Contacts.

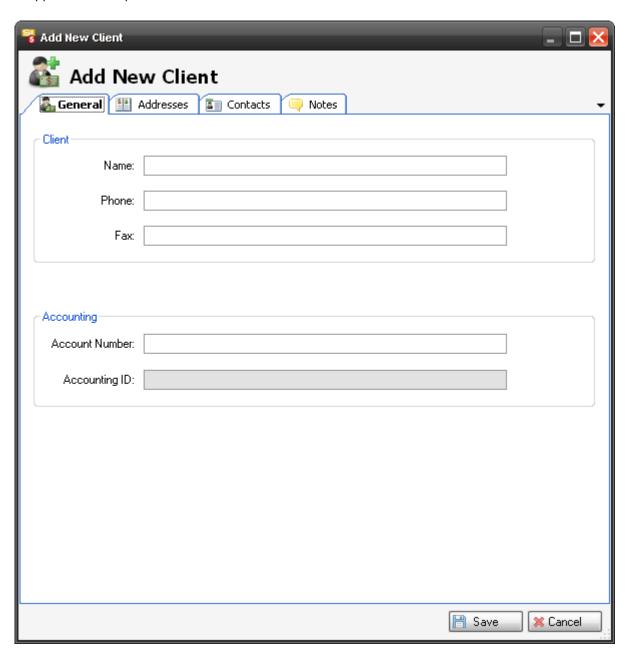


The left side of the screen contains a Navigation Bar with functions that vary depending on which tab you have selected and whether or not you have a Client or Contact Selected in your list. First we discuss the functions available to you for **Clients**.



Adding/Editing/Deleting a Client

When adding or editing a **Client** the form is the same and will be referred to as the Add New/Edit Client form. This form has four tabs: General, Addresses, Contacts, and Notes. To add or edit a **Client**, click the appropriate link and the Add New/Edit Client form will open:

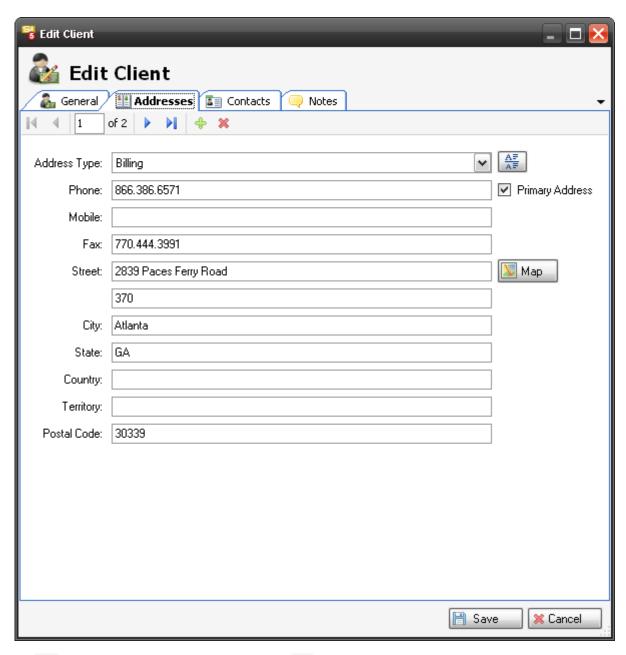


The **General** tab, as shown above, has fields for: Name, Phone, Fax, Account Number, Accounting ID.

Field	Description
Name	Client name
Phone	Client phone number
Fax	Client fax number

Field	Description
Account Number	If you wish to identify a Client by a number use this field
Accounting ID	This field auto-generates when you import a Client from QuickBooks

The **Addresses** tab allows you to enter as many addresses for the Client as needed.

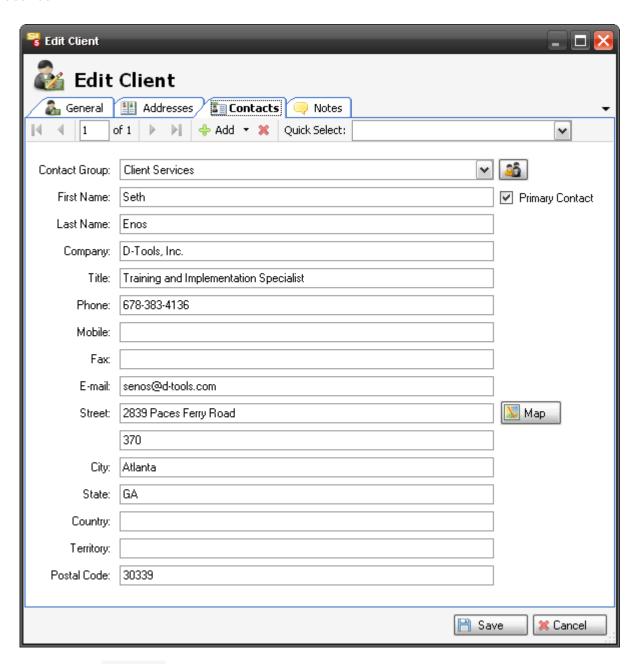


Use the $\stackrel{\clubsuit}{=}$ button to add an address and the $\stackrel{\thickapprox}{=}$ button to delete an address. You can view your addresses by using the navigation buttons $\stackrel{\blacksquare}{=}$ $\stackrel{\blacksquare}{=}$ $\stackrel{\blacksquare}{=}$ $\stackrel{\blacksquare}{=}$. To add or edit the Address

178 Application Setup Wizard

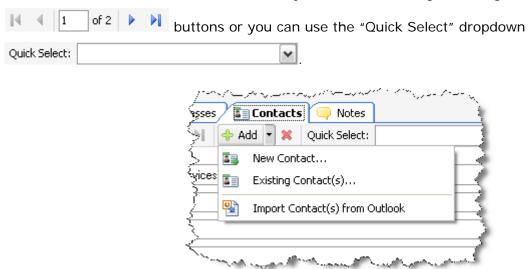
Type list use this button . There are Only one address can be the primary address for a Client and is designated by a checkmark "Primary Address". The button will launch IE in its own window and display Google Maps for the address.

The **Contacts** tab of the Add New/Edit Client form allows you to add as many Contacts to a Client as desired.

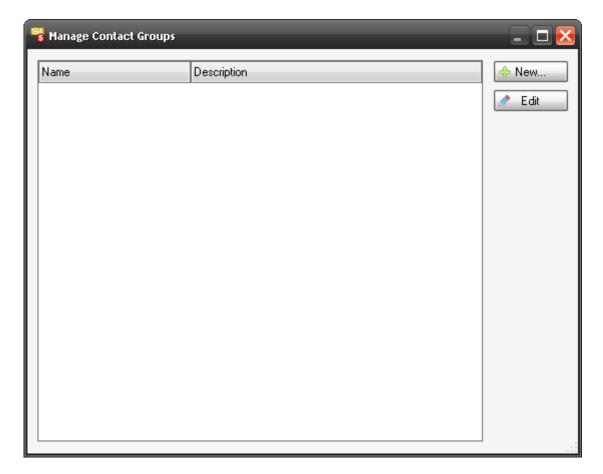


You can click the ** button to manually enter a **Contact** or you use the dropdown arrow to associate an existing **Contact** to the **Client** or you can import **Contacts** from Outlook. Use the

button to delete a Contact. You can view your Contacts using the navigation



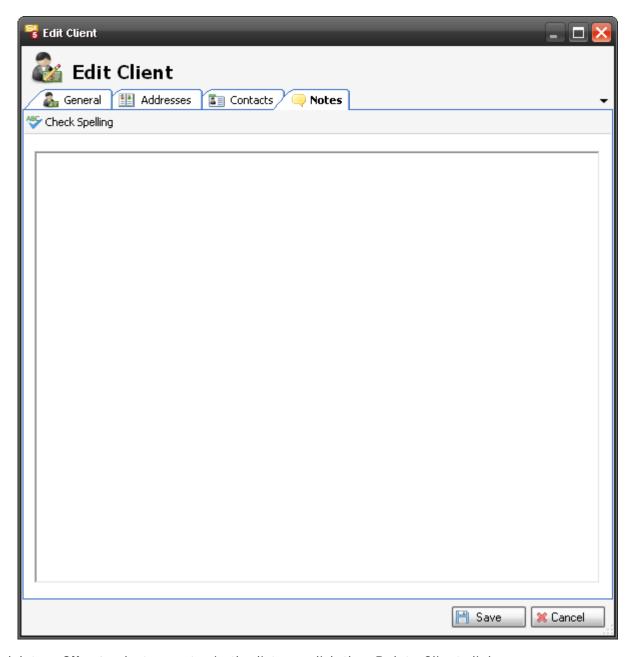
Contacts must be assigned to a **Contact Group**. You can Add/Edit your **Contact Groups** by clicking the button.



When you click either the [New] or the [Edit] buttons, the following form opens.



The **Notes** tab of the Add New/Edit Client form is one big editable field and there is a spell check function.



To delete a **Client** select an entry in the list can click the "Delete Client" link.

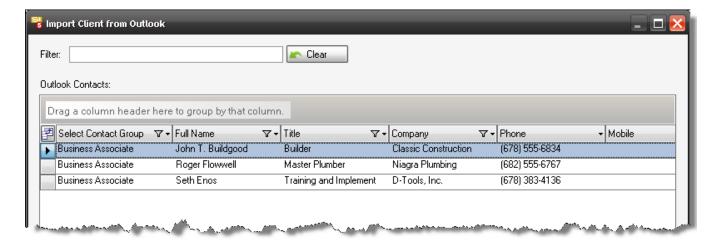
Import Client from Outlook

When you click this link, the first thing that will appear will be a message from Outlook letting you know that a program is trying to gain access Outlook. Click the checkbox, select a time, and click [Allow]:

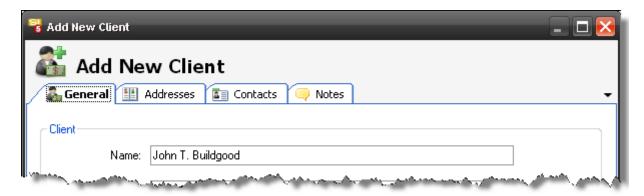


The Import Client from Outlook form will open. Select a Contact from the list and click the





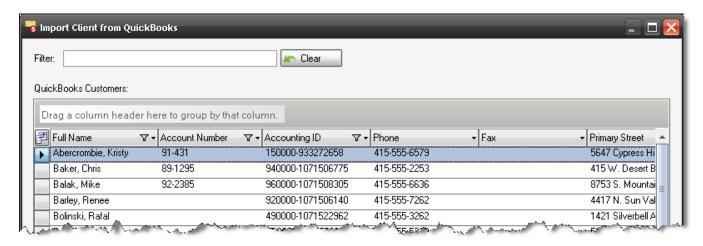
The Add New Client form will open for any changes you wish make:



Import Client from QuickBooks

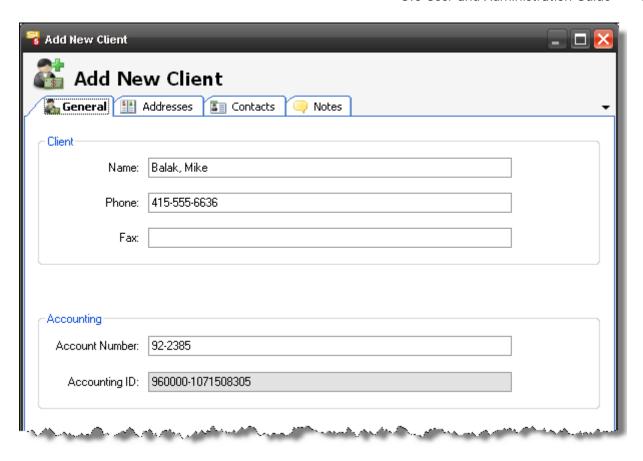
Your company must have a QuickLinks license in order to use this functionality and you must have the "Allow QuickLinks" permission assigned to your Group. See **QuickLinks** on pg. **582** for info as well as the SI 5 Installation and Administration Guide for information on permissions.

When you click the option "Import Client from QuickBooks" the following form will open:



Select the QuickBooks Customer from the grid and click the mort one QuickBooks Customer to an SI 5 Client at a time.

The Add New Client form will open in case you wish to make any changes. When done, click the button.

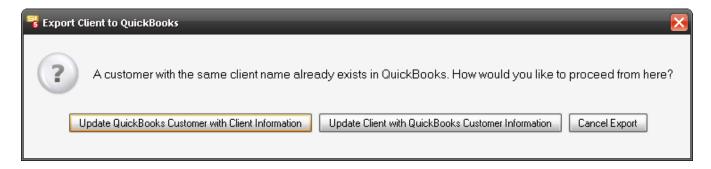


Export Clint to QuickBooks

Your company must have a QuickLinks license in order to use this functionality and you must have the "Allow QuickLinks" permission assigned to your Group. See **QuickLinks** on pg. **582** for info as well as the SI 5 Installation and Administration Guide for information on permissions.

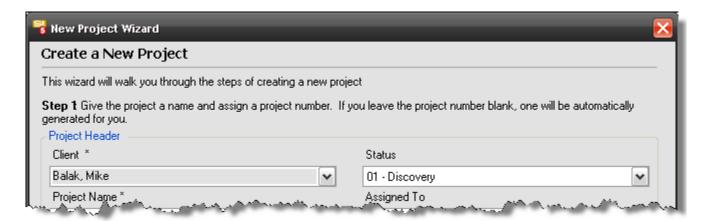
This will export a Client from SI 5 to a Customer in QuickBooks. There is no form, just a message that the operation completed. If a Customer exists in QuickBooks of the same name, a form will give you options.





Create New Project for Client

This link will open up the New Project Wizard with the Client name and address information already filled in. The Primary Contact information will be populated in the Project Contact and Staff section of the wizard:



Send an E-mail

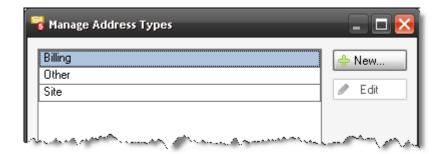
You must have Outlook 2007 installed for this function. This will open up a new Outlook email addressed to the primary Contact for the Client.

Create an Appointment

You must have Outlook 2007 installed for this function. This will open up a new Outlook Appointment addressed to the primary Contact for the Client.

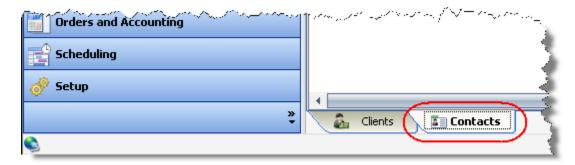
Manage Address Types

This allows you to add to the stock list of Address Types in SI 5. The three types in the stock list are Billing, Site, and Other and these three are not editable.

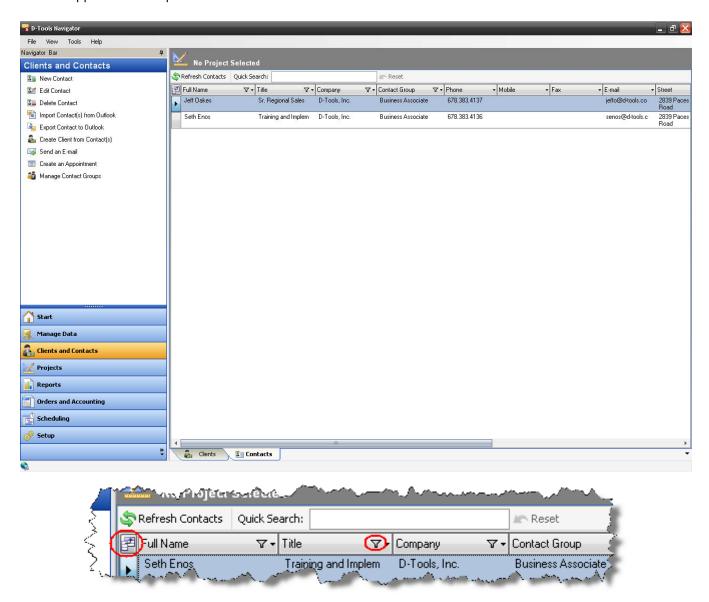


Adding/Editing/Deleting a Contact

Make sure that you have the Contacts tab selected:



The interface is similar to the Clients interface. You can move columns around, click the Field Chooser button to change what displays, and filter most columns:



The functions for Contacts are similar to those of Clients as well:



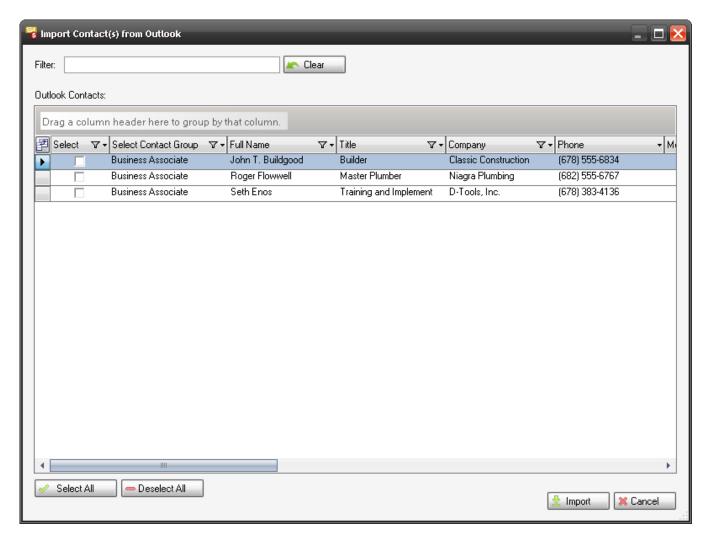
When you click the New Contact link the Navigation bar, the following form opens:



A Contact Group is required and you can modify your list using the button. The button will launch IE in its own window and display Google Maps for the address.

Import Contact(s) from Outlook

This form is similar to the one for importing Clients but you may import more than one Contact from Outlook:



Export Contact to Outlook

This function will open a Contact entry in Outlook. You must choose to Save in Outlook or the transfer is not complete.



Create Client from Contact(s)

This function opens up the Add New Client form with the Contact tab already filled in. Fill out the rest of the form then click Save.

Send an E-Mail

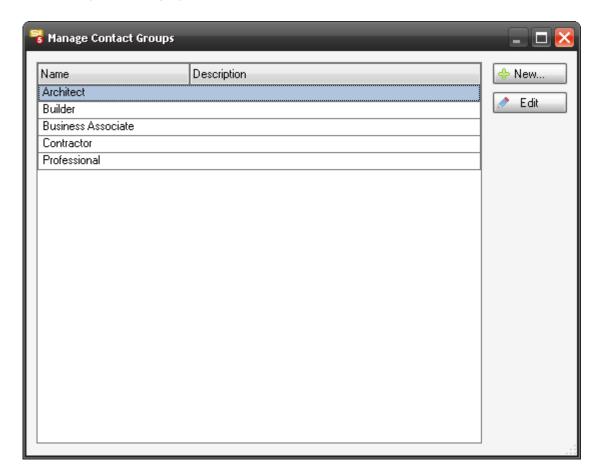
You must have Outlook 2007 installed for this function. This will open up a new Outlook email addressed to the Contact.

Create an Appointment

You must have Outlook 2007 installed for this function. This will open up a new Outlook Appointment addressed to the Contact.

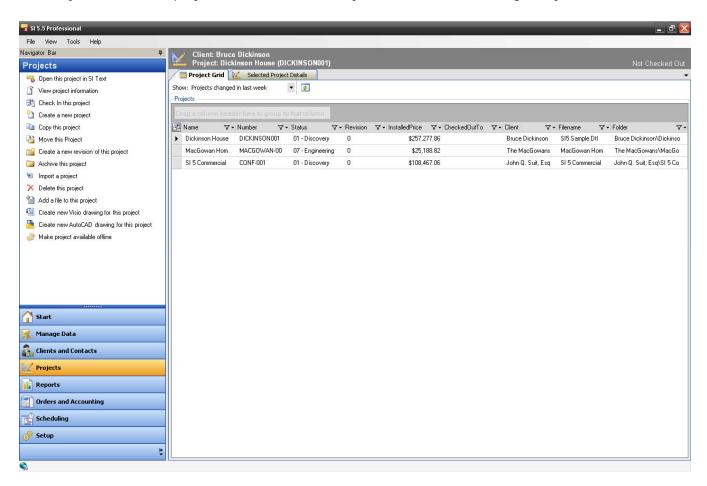
Manage Contact Groups

This is another way to manage your Contact Groups:

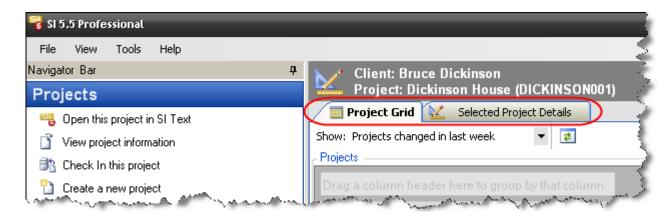


Projects

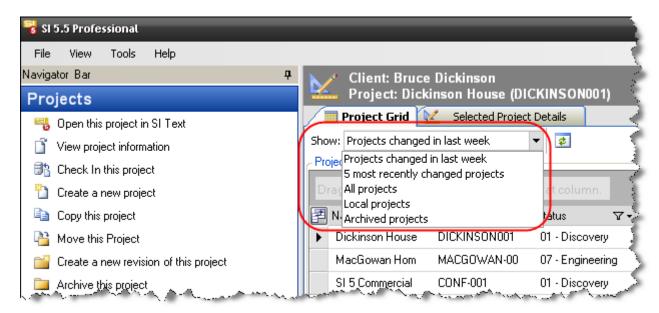
The Projects button displays a screen that allows you to create and manage Projects.



The display area has two tabs: Project Grid and Selected Project Details:



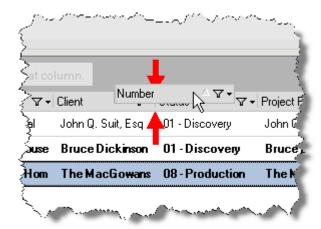
The **Project Grid** tab section lists all of your projects based on your selection from the Show dropdown menu. There are five options in the list: Projects changed in last week, 5 most recently changed projects, All projects, Local projects, and Archived projects:



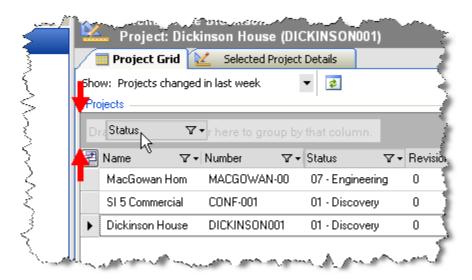
All of the columns in either section can be sorted ascending or descending when you click the header for the column. The translucent arrow () indicates the sort order:



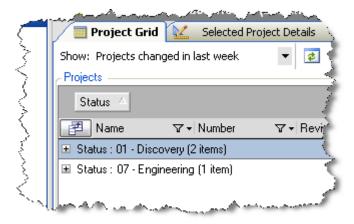
Other functions are shown in the screenshot above. Click the button to add/remove columns from the grid. Click the button to filter the column. Click the button to swap a columns position with another column. You can also move columns around by dragging them:



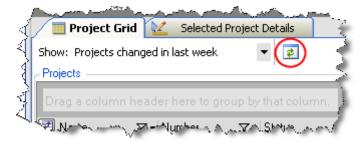
If you wish to group your projects by a column heading, drag the column to the "Drag a column header here to group by that column" area. To reverse this simple drag the column header outside of the area:



The Projects area view will change:

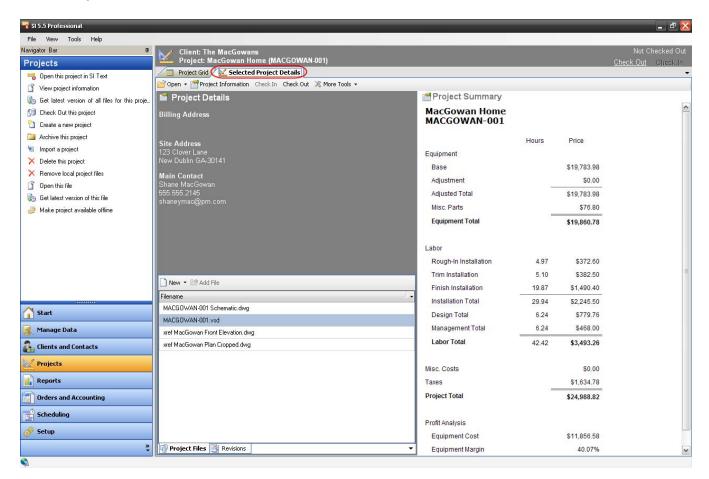


There is a refresh button along the top of the screen that will refresh your project list:

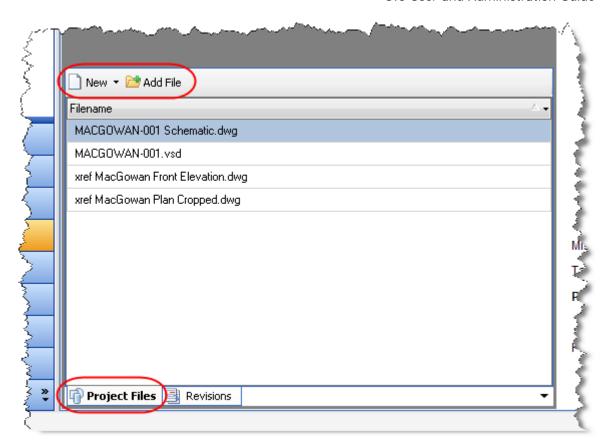


The **Selected Project Details** tab displays information about the project in three sections; Project Details, Project Summary, and the Project Files/Revisions section:

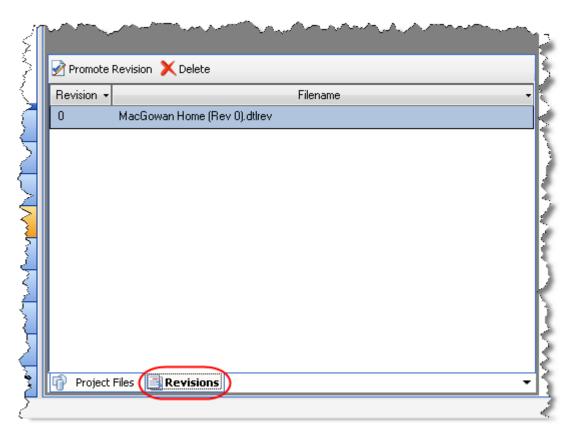
196 Projects



When the **Project Files** tab is selected, all of your Visio, AutoCAD, and "other" files are displayed. You can use the **[New]** button to add Visio or AutoCAD drawings or you can use the **[Add File]** to add any other files such as .pdf files or Word docs. A project must be checked out to add files. See **Project Functions** pg. **205** for details on these functions.



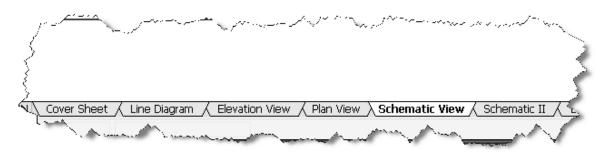
The **Revisions** tab shows all revisions for a project and you can "Promote Revision" or Delete any revisions in this interface. See **Project Functions** pg. **205** for details on these functions.



Project Files

Every SI 5 Project starts out with one Project file and the file extension for this file is .dtl. This file is considered "THE" Project file or "Current" revision. When opened, this file opens in the SI Text interface. Every Project in SI 5 can have only one .dtl file. And only one .dtl file may exist in the same folder.

Once the .dtl file exists for a Project, you can create as many Visio or AutoCAD files for the Project as you wish. Visio files have a file extension of .vsd and AutoCAD files have a file extension of .dwg. For Visio files, multiple drawing pages may exit in one Visio file as shown below:



For AutoCAD files, each drawing page exists in a separate .dwg file, e.g. **JF125 Audio Schematic.dwg**, **JF125 Video Schematic.dwg**, **JF125 First Floor Plan.dwg**, etc. (The "JF125" is an example of a "unique tag", the file names will be discussed in an example below).

File Naming Convention

There is no mandatory naming convention for Project files in SI 5. However, coming up with a naming convention could prove to be extremely useful. Establishing a common "tag" for each file name could prove vital for identifying which files are associated with a Project. If you've ever "lost" a file before, and you have, you know that having a meaningful search string can save you time when you "misplace" a file. Establishing a file naming convention is highly recommended.

In addition to a Project file naming convention, a naming convention and folder hierarchy standard should be established as well. The default folder structure for SI 5 is C:\Documents and Settings\username\My Documents\D-Tools SI5 Projects\Client Name\Project Name where "username" is your Windows login name.

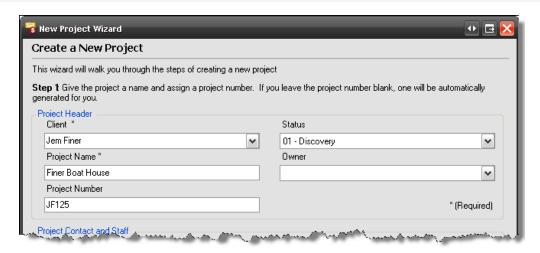
VISTA: C:\Users\username\Documents\D-Tools SI 5 Projects\Client Name\Project Name.

Key Fields: Client Name, Project Name, Project Number

When creating a Project, there are two required fields: Client Name and Project Name. Project Number is optional but useful. Because these fields are very "project specific", they make excellent choices for use in a file naming convention.



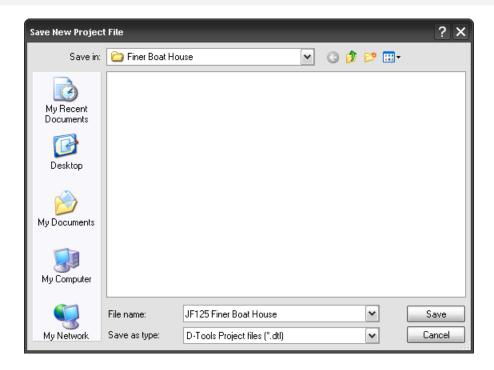
Company XL uses the Client and Project Name fields to establish their folder hierarchy. They establish Project Numbers in their accounting software. They create a Project for Jem Finer's boathouse. In step one of the new projects wizard, they type in the Client Name and Project Name as shown below and enter the Project Number (for instructions on creating a Project see "Creating an SI 5 Project" page 224):



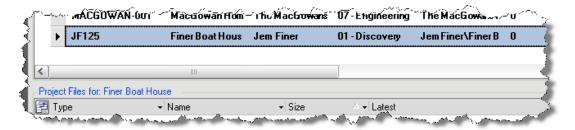
When they get to step 10 and **[Save]** the Project, the save location in the form is pointing to the following folder: C:\Documents and Settings\username\My Documents\D-Tools SI 5 Projects\Client Name\Project Name.

VISTA: C:\Users\username\Documents\D-Tools SI 5 Projects\Client Name\Project Name.

They designate all file names to begin with the Project Number so they can easily track what files are associated with a Project. Since this initial file creation is for THE Project file (.dtl), their standard also requires that the Project name follow the Project number for this file as shown below.



After saving the Project file, it shows in the Projects tab of the Navigator:



They keep all of their Visio drawings on pages within a single Visio Project file so they only create one. Their convention for the Visio file in which they intend to do their drawing pages is the same as for the main .dtl file (the Project Number followed by the Project Name, in this case: **JF125 Finer Boat House.vsd**).

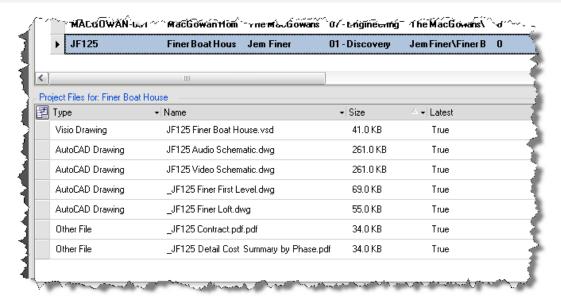
They choose to create two schematic drawings in AutoCAD for this project, one for the audio, and one for the video systems. Their convention for naming these files is to use the Project Number followed by a description of the drawing. In this example they create two files: **JF125 Audio Schematic.dwg** and **JF125 Video Schematic.dwg**.

They received a couple of floor plans from the architect and will use these on Plan drawing pages. They are AutoCAD .dwg files and they are named: **0_1 Finer First Level.dwg** and **0_2 Finer Loft.dwg**. Their standard states that all non-SI 5 files are stored together in the same location as the SI 5 files. To differentiate non-SI 5 files from SI 5 files, they use an underscore (_) before the Project Number in file name. These files above were renamed: _JF125 Finer First Level.dwg and _JF125 Finer Loft.dwg

They also keep copies of all reports that they present to clients in .pdf format with all of the SI 5 files. They name these in a similar fashion as above, i.e. _JF125 Contract.pdf and _JF125 Detail Cost Summary by Phase.pdf.

See "Viewing a Report" starting on page 488 for details on creating .pdf copies of reports

Once they have created and added all of the files, the project files display in the Navigator as shown below:



Project File Location(s)

SI 5 Projects can be composed of multiple files. All files for a Project must be stored together in the same folder. Managing how and where you store your Project files is up to you, so make sure you develop and maintain a strategy for Project file management.

Local Projects Folder

Every SI 5 is install must have a local Projects folder. The default location for this folder is:

202 Projects

XP: C:\Documents and Settings\username\My Documents\D-Tools SI5 Projects

VISTA: C:\Users\username\Documents\D-Tools SI 5 Projects

*username= your Windows login name

You will have a local projects folder for each unique user login, however, they will all share the same local database.

Within this folder, all Project files must be in their own folder. You can have as many subfolders within the root of the default Projects folder as you wish.

Server Projects Folder

When you installed your SI 5 Server Components, a shared project folder was created on that machine, see the SI 5 Installation and Administration Guide for details. This is where project reside when they are "checked in". See Checked In vs. Checked Out on pg. 203. Project files transferred to the server maintain the folder structure of the local Projects folder.

Project File Rules Overview

SI 5 provides maximum flexibility in file naming. As a result this puts the responsibility on the user to adhere to good file management practices.

1) There can only be one .dtl file for a Project. It is THE Project file or "Current" revision and it is what opens when you launch the SI 5 Text interface. In every Project folder there can be only ONE .dtl file.

All Project files must be stored in a subfolder within the default Projects folder. They can be stored in any number of subfolders but they cannot be stored in the root of the default Projects folder. Expressed another way: C:\Documents and Settings*username\My Documents\D-Tools SI5 Projects\Howard Stern\Manhattan Flat\Kitchen Upgrade\HS100 Kitchen Upgrade.dtl is fine, while C:\Documents and Settings*username\My Documents\D-Tools SI5 Projects\HS100 Kitchen Upgrade.dtl is not acceptable.

VISTA: C:\Users*username\Documents\D-Tools SI 5 Projects\Client Name\Project Name

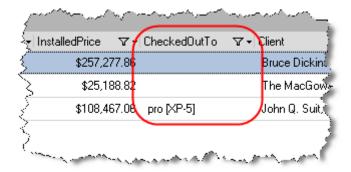
2) Two different users cannot have the same project open at the same time for edit. For example, you may have the following files created for a Project: SE024 Beach House.dtl, SE024 Beach House Line.vsd, SE024 Beach House First Level Plan.dwg. You cannot have one user

working on SE024 Beach House Line.vsd and one user working on SE024 Beach House First Level Plan.dwg at the same time.

- 3) On any given machine, you can have as many Projects open at the same time in the SI Text interface. Each Project will open in its own instance of the SI Text Interface.
- 4) On any given machine, you can have as many Visio Project files open at the same time as you wish. The limitation is that only one Visio Project file per Project may be open at the same time. The individual Visio Project files will open in sub-windows within one instance of Visio. For example, you can have the following files open at the same time SE024 Beach House Line.vsd, HS100 Kitchen Upgrade.vsd open at the same time but can not open SE024 Beach House Elevation.vsd while SE024 Beach House Line.vsd is open.
- 5) On any given machine, you can have as many AutoCAD Project files open at any given time as long as the files are for the same Project. Each AutoCAD file opens in its own instance of AutoCAD. For example: you could have SEO24 Beach House First Level Plan.dwg, and SEO24 Beach House Second Level.dwg open at the same time but you can not open HS100 Kitchen Upgrade Lighting Schematic.dwg until you close all of the other Project files open in AutoCAD.

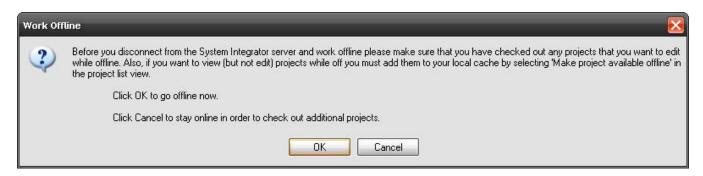
Checked In vs. Checked Out

It is important to understand that there are two main "states" of an SI 5 Project: checked in or checked out. When a user checks out a project, they have the ability to modify the project. Other users will see the project in the Lookup grid but will only be able to open the project in Read-Only mode. When a project is checked out to a user it is indicated in the CheckedOutTo column in the Project Grid. The user's login name will display followed by their machine's name in brackets:



It is important that you check out any projects that you wish to work on prior to taking yourself offline. An example of when you would take yourself offline would be if you are working on a laptop and wish to work away from your office network. When you choose to take yourself offline you will see the following prompt reminding you to check out any projects that you wish to edit while offline:

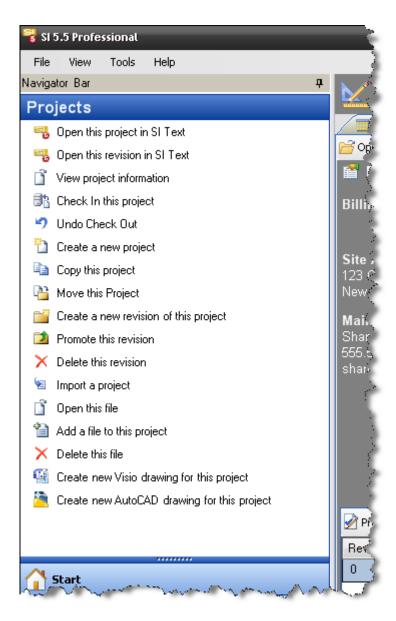
204 Projects



If you want to be able to review but not edit a project while you are offline, you must use the "Make project available offline" function.

Project Functions

The functions that display in the Navigation Bar will vary depending on whether the project you have selected is checked in our checked out and whether you are on the **Product Grid** tab or the **Selected Project Details** tab. The following sections will detail all possible functions.

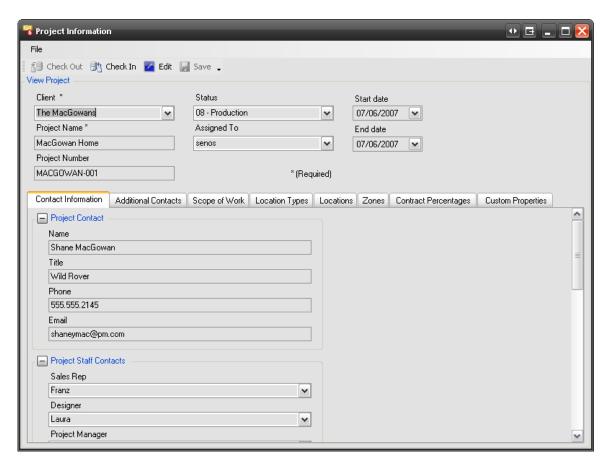


Open this Project in SI Text – this launches the project in the SI Text interface. The SI Text file is the "main" or "primary" file associated with every project. This interface does not show any drawings that have been created for the project.

206 Projects

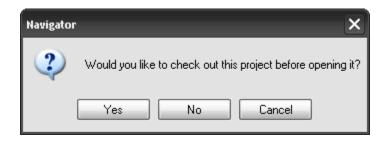
Open this revision in SI Text – opens the selected revision in the SI Text Interfaces. Revisions are read-only.

View Project Information – opens a window that displays all of the information related to the selected Project. You can Check Out/In the project or Edit any of the information:



Check In this Project – this will check the project in to the server. You must do this for most of the Orders and Accounting and Scheduling functions.

Check Out this Project – this will check out the project from the server to your local machine. You must do this to edit a project. If you attempt to open a project that is "checked in" you will be prompted to check out the project before opening. If you choose **[No]**, the project will open in a Read-Only state.



Undo Check Out - this function is here as a safety measure. This allows you to essentially discard any changes that you have made locally and restore the status of the project on the server to "checked in". This would be used if you made a mistake while working on a project. This may also be used if a project was checked out to a machine that no longer exists (crashed, got stolen). You will see the following prompt when you select this option:

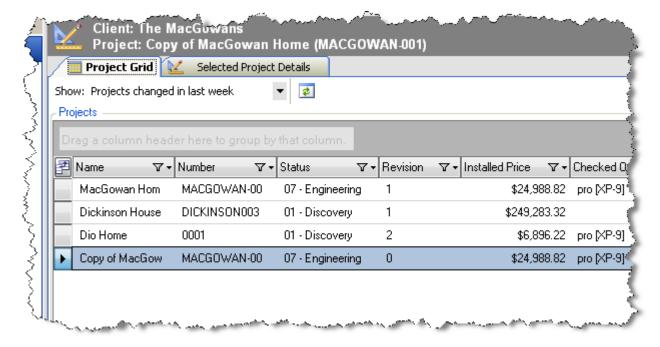


Create a New Project - this begins a ten step wizard that is detailed in the Projects section of this guide, see "Creating an SI 5 Project" on page 224.

Copy This Project - allows you to make a copy of the selected Project. You will be prompted to choose a folder to store the Project files. Although you have the option to create the file anywhere you want, you should create a folder within your default Projects folder. We recommend sticking with the Client Name->Project Name Format. If you are copying a project for the same client, you should create a new folder under the existing Client Name folder. There can only be one .dtl per folder, see **Project File Rules Overview** on pg. **202**.



This creates a copy of all of the Project files. All project files will retain their names. The Project name will have "Copy of" added to it. Only the most current revision of the project will be copied:

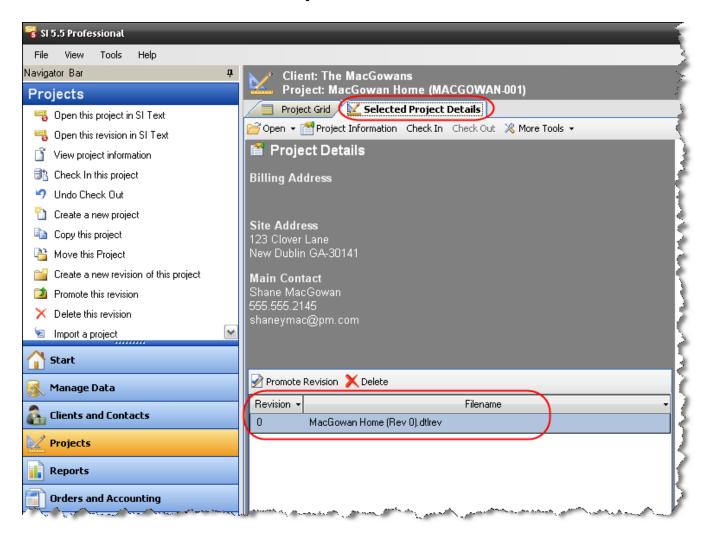


Move this Project – this allows you to move a project to a new folder. This is the **ONLY** method of moving project files that is supported by D-Tools. **DO NOT** manually move files around. When you move a project, it should still reside in the same folder where you store you SI 5 projects.

Create a New Revision of This Project – this creates a revision of the selected Project.

When a project is created it is by default Rev 0. When the first revision is made, Rev 0 is stored

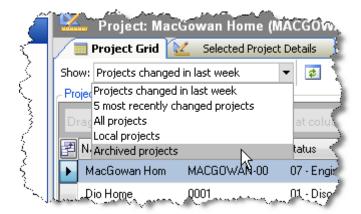
and a new copy of the project is created called Rev 1, or Current Project. This process is repeated each time a revision is created. As shown below, the current revision number is incremented and the next revision becomes the Current Project.



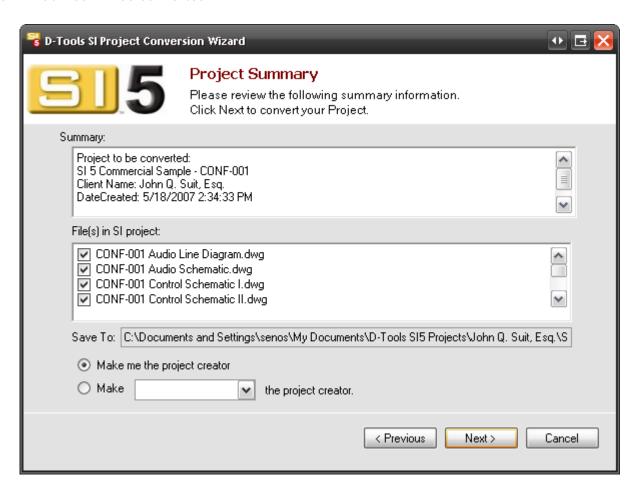
For more information on revisions (and visual representations), see "Change and Revision Management" on pg 247.

Delete this revision – This function will delete the selected revision.

Archive this project – This function will archive the project. In order view your Archived projects you must select that view:



Import a project – this allows you import a project into the SI 5 application. A wizard will open where you browse to the .dtl file for the project. Once the .dtl is selected, a Project Summary will show what files will be converted:



If the project is in a format from a previous version of SI it will be converted to SI 5 format during the import.



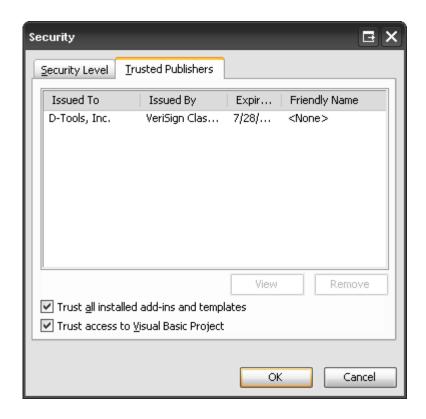
If you are converting an SI 4 project that has Visio or AutoCAD files associated with it, those applications will open during the conversion process. Prior to conversion,

you must make some changes to your Visio settings.

- 6) Open Visio and select Tools->Macros->Security...
- 7) Verify that your Security level is set to Medium or Low:



8) Click the Trusted Publisher tab and check the "Trust access to Visual Basic Project" option.

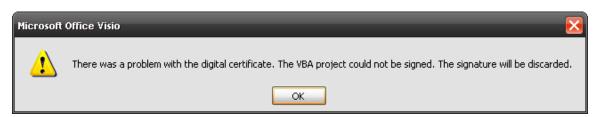


9) Click [OK].

10) Close Visio.

During the conversion, you will be prompted by two messages shown below. Click **[OK]** for both messages:

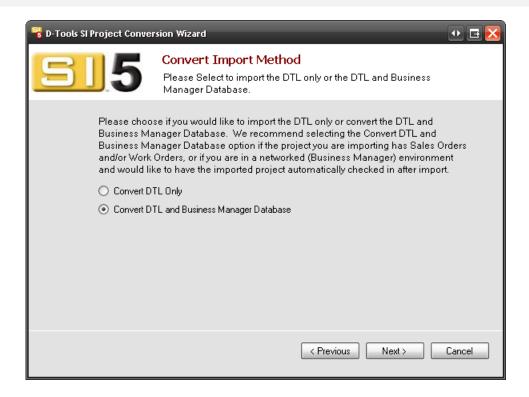






If you were using Business Manager in SI 4, you have the option of converting just the project file or converting the project files and the SQL data (Sales Orders, Work

Orders) for the project. Revisions for the project will NOT be converted. This is due to the new format for Revisions in SI 5.



When you select "Convert DTL and Business Manager Database" and click [Next], you are then prompted to select the location of your SI 4 database. The dropdown will list the machine names of all the machines on your network that have instances of SQL installed. Select the machine name of the "server" machine you were using for SI 4. If you used the default MSDE SQL Server that was included with the SI 4 LANSync install you will need to add "\DTOOLSMSDE" after the machine name. In the example below, the machine where my SI 4 SQL instance is located is named "DT4136". The User Name and Password are automatically filled in for you on this form.



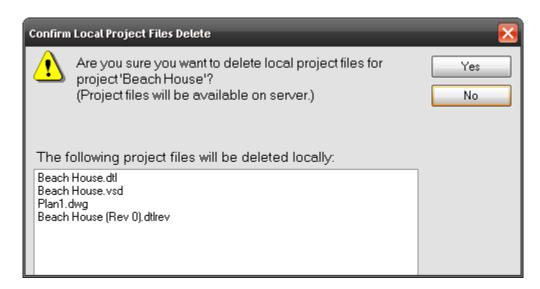
Open this file – opens the selected file.

Add a file to this project – when you click this option, you will be prompted whether you are sure

Delete this Project – when you click this option, you will be prompted whether you are sure



Remove local project files – use this option if you just want to remove the local project files from your machine. You would use this if you wanted to clean up hard disk space on your local machine. The project still exists on the server.



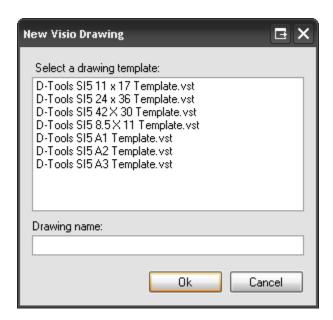
Add a File to This Project – This allows you to store additional files for the selected Project in the same folder as the Project Files other than "SI 5 linked" files. Examples: .pdf files, AutoCAD floor plans, etc.



Definition time – "SI linked" means that the file has a connection to the main SI 5
Project file for a Project (the .dtl file). There can be only one .dtl file per Project in SI
5. When a drawing file, either Visio (.vsd) or AutoCAD (.dwg) are created using the
"Create new Visio/AutoCAD drawing for this project" functions (described below),
those files are considered "SI linked". You may, however, choose to have .vsd and
.dwg files for a Project that are NOT "SI linked". These files would be ones not
created from within the Navigator interface, i.e.- they were created directly in Visio
and/or AutoCAD launched externally of SI 5.

Delete This File – This will delete the selected file from the project. This can be used for Visio, AutoCAD or other files associated with a project.

Create New Visio Drawing for This Project – This will create a new "SI 5 linked" Visio file for the Project. You will be prompted to select a template:





In SI 5, you can have multiple Visio project files for a Project. You can choose to do all of the drawing pages in one Visio file or you may choose to do the drawing pages in separate Visio files.

Example: You may choose to have one file SE024 Enos Home.vsd that has all of the Plan, Line, Elevation and Schematic pages or you could have a separate Visio file for each drawing page: SE024 Enos Home AV Schematic.vsd, SE024 Enos Home First Level Plan.vsd, etc.

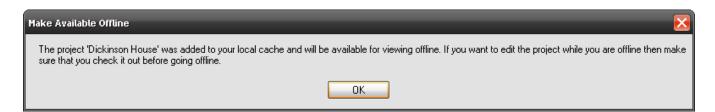
The stock templates that ship with SI 5 have six pages but you can easily create your own Templates. For information on creating a Visio template see Creating SI 5 Visio Templates on pg. 400.

Create New AutoCAD Drawing for this Project - This will create a new "SI 5 linked" AutoCAD file for the Project. You will be prompted to select a template:



Get latest version of this file – this updates the local project files with the latest project files from the server without checking the project out. This function should be used if you wish to have the latest project files on your machine and do not want to check out the project from the server.

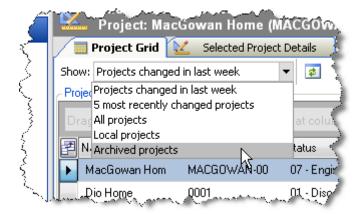
Make project available offline – this will cache the project locally to your machine in a readonly state. This will allow you to view the project while disconnected from your network. If you want the product to be editable while you are offline, you would use the "Check Out this project" function rather than this one. You will see the following message when you use this function:



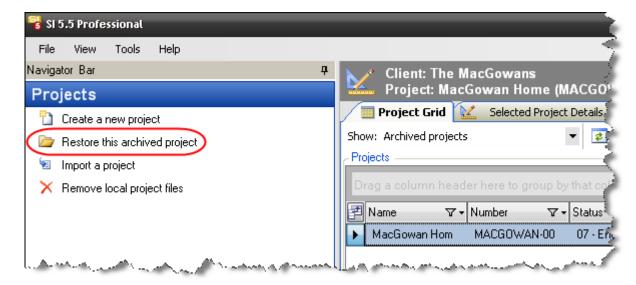
Restore this archived project – This function will restore an archived project to an active project.

Example: You have archived a project that you wish to restore an active project.

1) On the Projects tab within the navigator, select to show "Archived Projects":

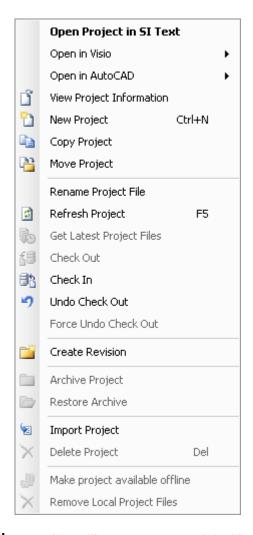


2) Select the archived project that you wish to restore and click "Check Out this project":



Project Task Pane Right Click Options

You can also access these options by right-clicking anywhere in the Projects section of the **Display Area**. There are some additional options on this right-click menu that are not available in the **Task Pane**:



Open in Visio->New Drawing – This will create a new Visio file for the Project.

Open in AutoCAD->New Drawing – This will create a new AutoCAD file for the Project.

Refresh Project – This will refresh the Projects section of the **Display Area**. Use this function if you do not see the expected values for the project: Installed Price, Status, etc.

Force Undo Check Out – This is for Administrators of SI 5 that need to undo the check out of a project that was checked out by another user (see the SI 5 Installation and Administration guide for information on setting a user as Administrator). This function will check a project in to the server without any of the changes that were made while it was checked out. This would be used if a project was checked out to a machine that no longer exists (crashed, got stolen). You will see the following prompt when you use this function:



Standard SI 5 Client Server Rules

SI5 uses an intelligent file management process to determine which files will move between client and server. The following is a high level description of this interaction.

- 1) Projects can only be checked out by one user at a time.
- 2) Projects must be checked out to Add files to the project
- 3) Reports can be run on projects that are checked out by another user.
- 4) The first time a project is checked out, all dtl and dtlrev files are copied to the local projects folder.
- 5) Drawings and Other Project files are copied to the Local folder when:
- 6) User opens the file
- 7) User executes the "Get Latest" command
- 8) Only files that have changed will be copied to/from the server. If you modify the Project File and check in the project, the Dtl file will be copied the server. If you open this project before it is modified by another user, the local project file will be used and no data is copied from the server.

Files and Projects

All file management will be handled in the Navigator. The Import Project function on the Projects tab of the Navigator allows the user to browse to SI 4 and SI 5 projects to import. SI 4 project will be converted to SI 5 format during this process.

Only one application (Text, Visio or AutoCAD) can be open at a time for a given project.

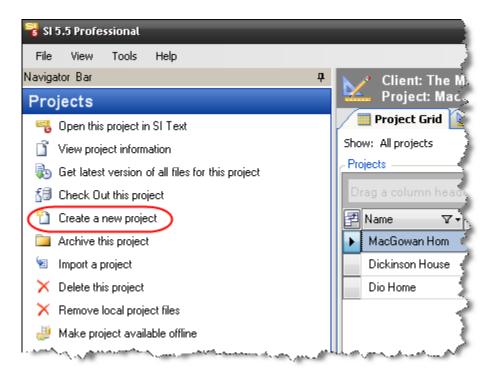
Text dtl files and Visio vsd files have similar functionality. In Text and Visio you can have multiple projects open but only one file can be open per project at a time. In AutoCAD you can have multiple drawings (dwg files) open for the same project but only one project can be open at a time. To create a new project you can select Create Project, or go to File - New Project, or use right click - New Project.. The Project Information dialog will open. After entering the data, a dtl file for the new project will be created. Visio and AutoCAD files can then be created by right clicking New AutoCAD or New Visio, or by selecting New AutoCAD or New Visio from the Explorer bar on the left.

File Classifications	Ext	Server Action	Description
Project File	DtI	Standard SI5 rules apply. (see below)	This file contains data for the Current Revision of a project. There can only be ONE Project file in a project folder. This file can be read by most report writers and Office applications such as Excel.
Project Visio File	vsd	Standard SI5 rules apply.	One or more Visio files created with SI5 Visio Interface. These files are considered "linked" to the Project File. These files must live in the same folder as the Project File.
Other Visio File	vsd	Standard SI5 rules apply.	Visio files created outside of SI5 and added to the project using the Navigator > Projects > "Add a file to this project" function. There is no way to distinguish these files from Project Visio Files. These files must live in the same folder as the Project File.
Project AutoCAD File	dwg	Standard SI5 rules apply.	AutoCAD files created with SI5 AutoCAD Interface. These files are considered "linked" to the Project File. These files must live in the same folder as the Project File.

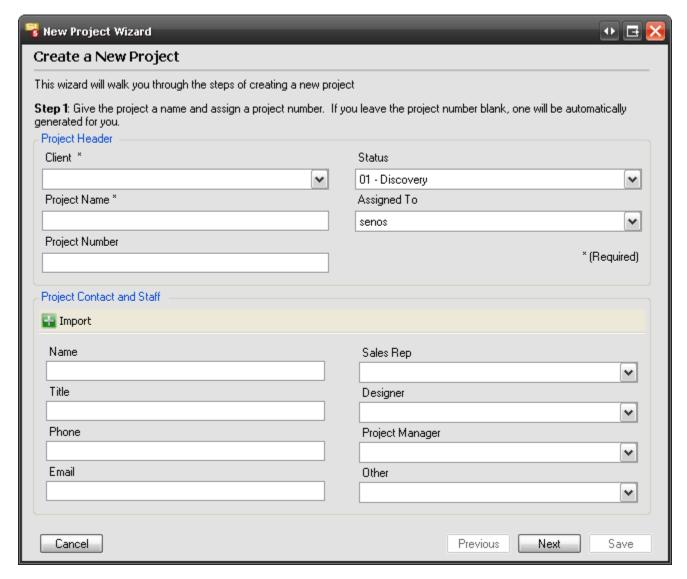
File Classifications	Ext	Server Action	Description
Other AutoCAD File	Any	Standard SI5 rules apply.	AutoCAD files created outside of SI5 and added to the project using the Navigator > Projects > "Add a file to this project" function. There is no way to distinguish these files from Project AUtoCAD Files. These files must live in the same folder as the Project File.
Other Project Files	Any	Standard SI5 rules apply.	Files added to the project using the Navigator > Projects > "Add a file to this project" function. These files must live in the same folder as the Project File. Folders cannot be added to a project.
Project Revision File	dtlrev	Standard SI5 rules apply.	Project File of a specific Revision
Revision Zip File	zip	Standard SI5 rules apply.	Includes all Project Visio and Project AutoCAD files zipped into one folder. These are created by the system each time a new revision is created.
Other Files/Folders not "added" to the project via the Navigator interface.		Not managed by SI5. These files will not be copied to the client by SI5.	The user may choose to store other files and folders on the server within the project folder. These could include, client photos, architectural drawings, cut sheets or any other data that needs to be stored with a project. These files and folders will not be visible within the SI5 interface. Check-in/out of these files are not controlled by SI5.

Creating an SI 5 Project

To create an SI 5 Project, launch SI 5 and then click the Projects tab. Click the "Create a new project" link in the **Project Tasks Pane**.



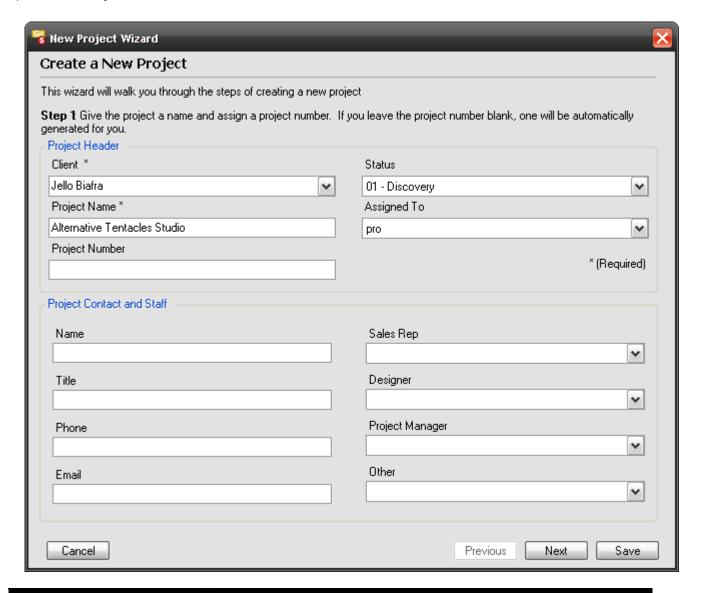
The New SI 5 Project wizard will open:



Use the **[Previous]** and **[Next]** buttons to navigate between the steps of the wizard. At any time during these steps, click **[Save]** to save the Project.

Step 1: Project Information

There are two required fields at this point: Client and Project Name. It is also advised that you provide a Project Number.

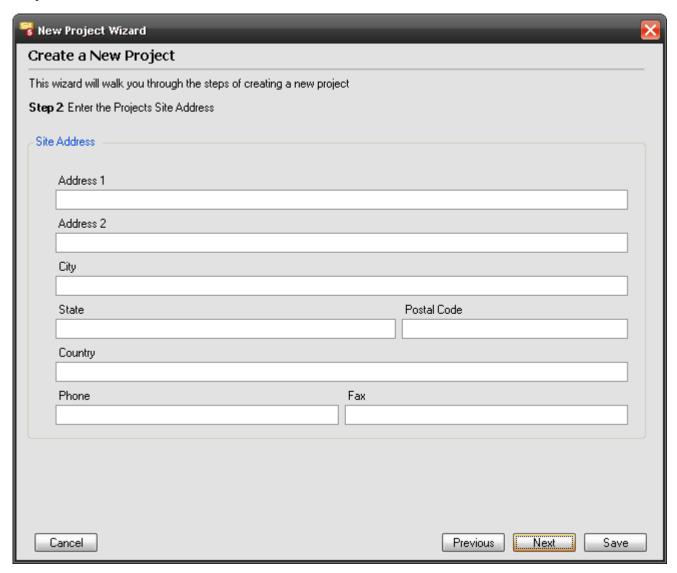


Item	Description
Client	Who the Project is for
Project Name	This should be descriptive enough to be able to identify the Project
Project Number	This can be any String of your choosing. If you leave this field blank, a Project number will be generated based on your

Item	Description
	settings for Project Number ID. (see " Project Number Format: " on page 55 for more information about Project Number ID
Status	This is a dropdown list to identify what milestone you are at in a Project's lifestyle. (see "Project Statuses:" on page 46)
Assigned To	This is the person within your organization that is responsible for this project. It is up to you to define "Responsible".
Name	This is where you fill in the name of the decision maker for a Project. This field will automatically populate on the client signature line in reports.
Title	The title of the person you entered in the Name field.
Phone	Phone number of the person you entered in the Name field.
Email	Email address of the person you entered in the Name field.
Sales Rep, Designer, Project Manager, and Other	These are dropdown lists to identify who in your company is involved in the Project. (see "Staff Types and Members:" page 45).

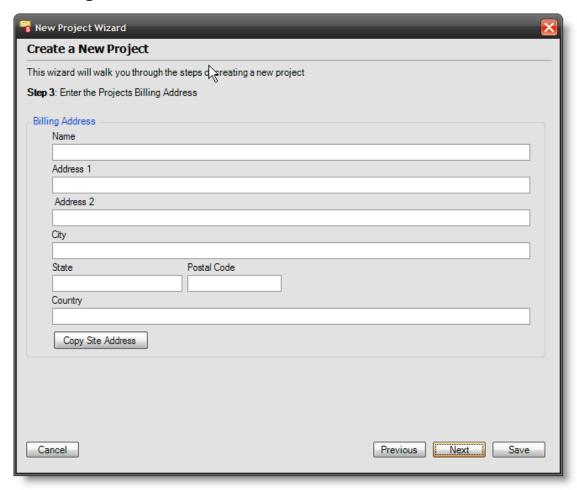
If the Client already exists under Clients and Contacts within SI 5, many of the above fields will populate with information from the Client. See **Clients and Contacts** on pg. **173**.

Step 2: Site Address



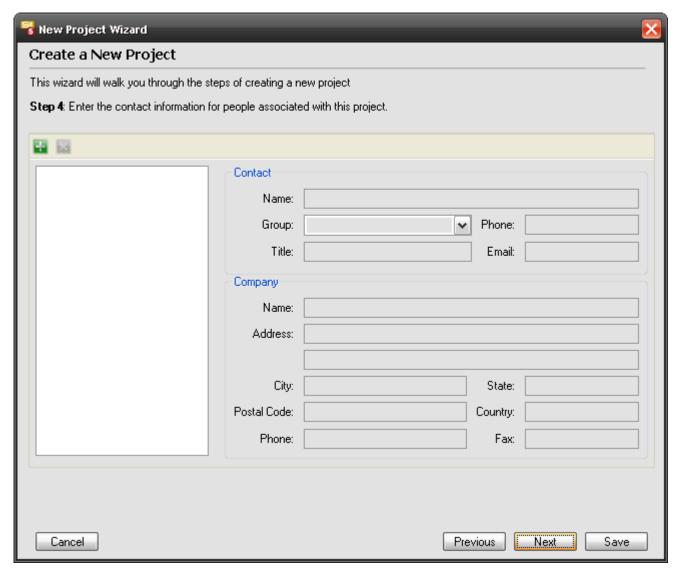
Fill in all appropriate fields for the Project's site address. If you used the **[Import]** button on the last step, and you had address information in Outlook, these fields will be filled in. This address will show on many client reports.

Step 3: Billing Address



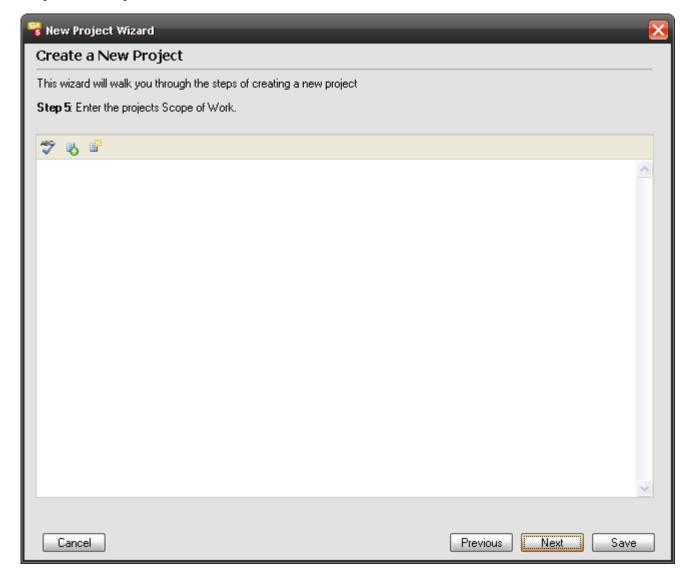
Fill in all appropriate fields for the Project's billing address. Select **[Copy Site Address]** if the Site address and the Billing address are the same.

Step 4: Project Contacts



You must have your Contacts setup under Clients and Contacts in order to enter them here, see Clients and Contacts on pg. 173. Use the to add to the list. To delete a contact, select them in the list and click the button. The "Group" dropdown allows you to identify who the contact is. (see "Staff Types and Members:" page 45).

Step 5: Scope of Work

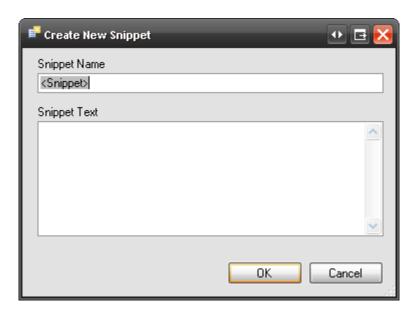


Entering a Scope of Work is optional. The contents of this field will print on the Scope of Work client report. This form has a spell check that you can run by clicking the button.

You can type in this field; copy and paste in this field, or use snippets. A snippet is a section of text, usually a paragraph. Create snippets for commonly sold Packages that you have created in SI 5. (see page 93 for information on "Packages")

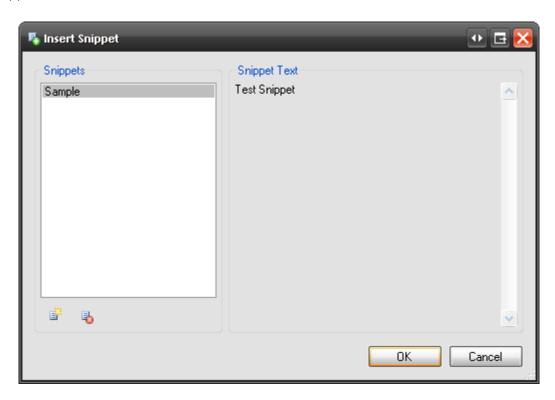
232 Projects

To create a snippet, click the button. A window will open:



Enter a name and then the text. You can copy and paste in this field.

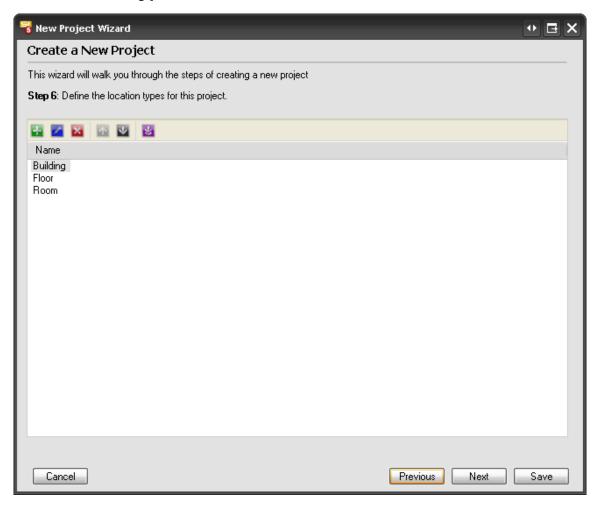
To add a saved snippet to the Scope of Work statement, use the **b**utton. This will open the Insert Snippet form:



To add a snippet to the Scope of Work statement, select the snippet from the column on the left and click **[OK]**.

To create a new snippet from this form use the button. To delete a snippet from your saved list, select the snippet in the column and click the button.

Step 6: Location Types



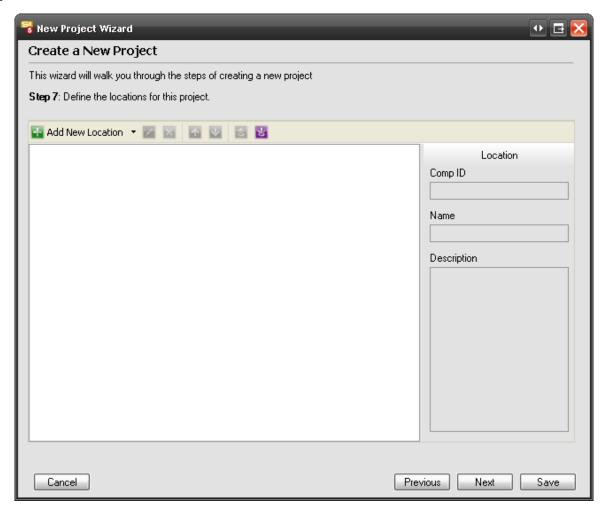
You can use up to five levels to identify your Location Types hierarchy. In the screen shot above, only three levels have been added to the Location Types hierarchy: Building, Floor, and Room.

Use the Use the , , to add, edit, and delete Location Types and use the to move Location Types up and down in the list. These buttons are handy because this is a hierarchy and should flow from the top down. In the screen shot above, the Location Types hierarchy of Building->Floor->Room is proper but a hierarchy of Building->Room->Floor would not be proper.

If you have saved Location Configurations, you can use the button to import them. See Step 7 below for more information.

See "Location and Zone Configuration" on page 241 for more information on managing Location and Zone Information.

Step 7: Locations



This step is where you add the locations for a Project. A location can and should be assigned to every Product that you add to a Project to identify where the Product is being installed.

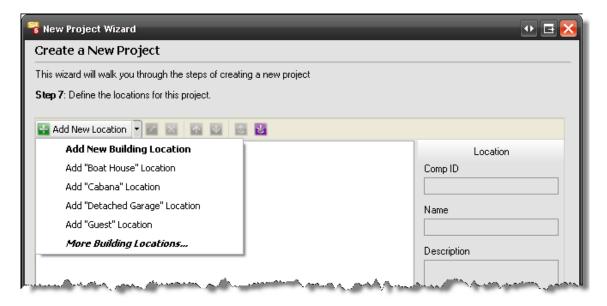
The first Location that you can add must be related to your top level Location Type. For example, if you have a Location Type hierarchy of Building->Floor->Room, you must first add a Building Location before you can add any Floor Locations.

To add a Location, click the Add New Location button. If you just click the button, a field will become available:



Any name that you type in this field will apply to the Project but will not be saved in the default Locations list. (see page 47 for info on "Location Types and Locations:")

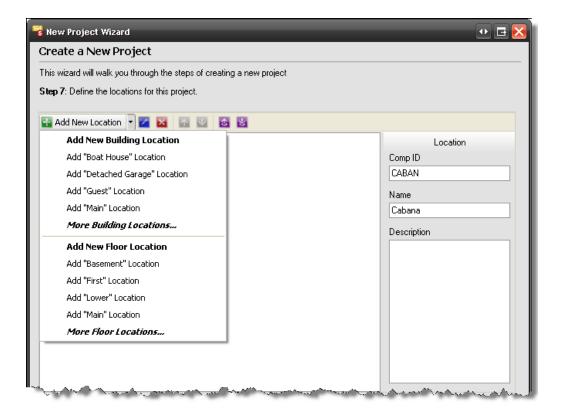
To add a Location name to the default list or to choose from existing saved Locations, click the arrow next to this button:



Only four Locations will list. To get the complete list of your default Locations select "More *Location Type* Locations...". This will open a box where you can check multiple Locations at once:

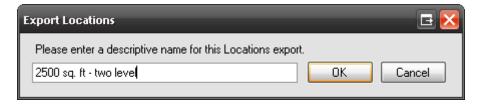


Once you add at least one Location name for a Location Type, you will see the next available Location Type in your hierarchy listed in this dropdown as well:

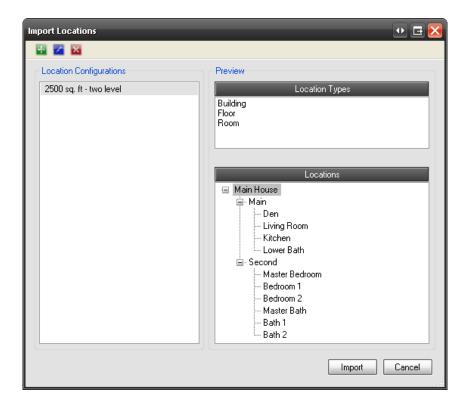


Use the and to edit or delete Locations that you have added to the Project. Use the buttons to move the Location names up or down in the list. The buttons are used to

Export/Import Location Configuration. A Location Configuration is essentially a template that can be imported to any project. When you click the button, you are prompted to enter a name:



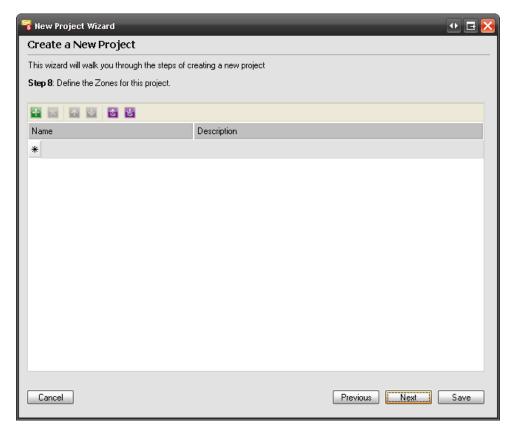
When you click the ${\color{red}\mathbb{Z}}$ button, you can select from your previously saved Location Configurations:



There are three fields for every Location: Comp ID, Name, and Description.

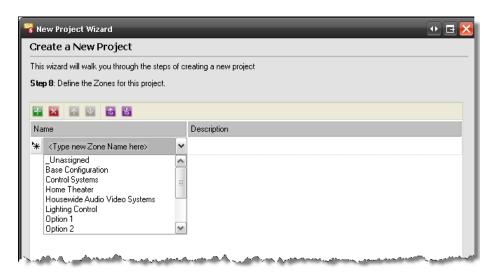
Item	Description
Comp ID	This is a required filed and is usually an abbreviation of the name. This field will have the default value of the first five characters of the Location name but you can override this default if you wish. You may wish to use the Comp ID field in your Component ID format.
Name	Enter the name of the Location. This is a required field.
Description	This is an optional field. Describe the Location.

Step 8: Zones



This where you can add the Zones for a Project. (see page 48 for info on "Zones:")

Use the and buttons to add or delete Zones for the Project. Use the buttons to move the Zone names up or down in the list. When you click the button, you have the option of adding a new Zone name or you can use the dropdown in the Name field to select a Zone name from your default list:



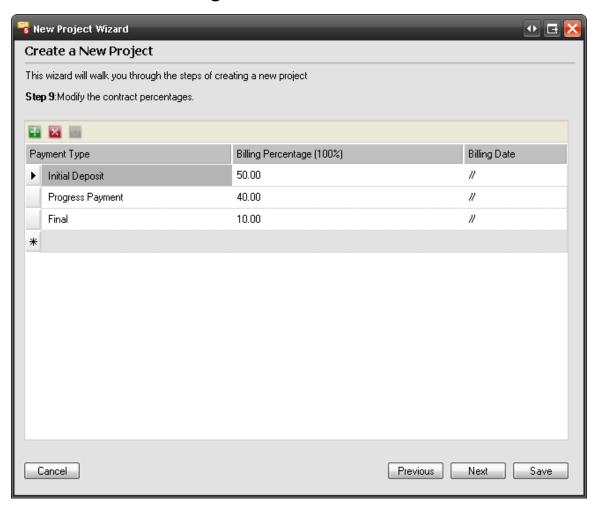
For Zones, the Name field is required, the Description field is optional.

The buttons are used to Export/Import Zone Configuration. A Zone Configuration essentially a template that can be used imported to any project. When you click the button, you are prompted to enter a name:



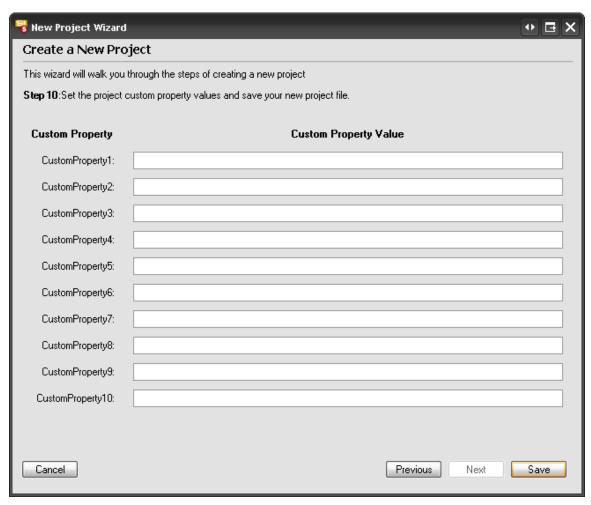
When you click the **button**, you can select from your previously saved Zone Configurations.

Step 9: Contract Percentages

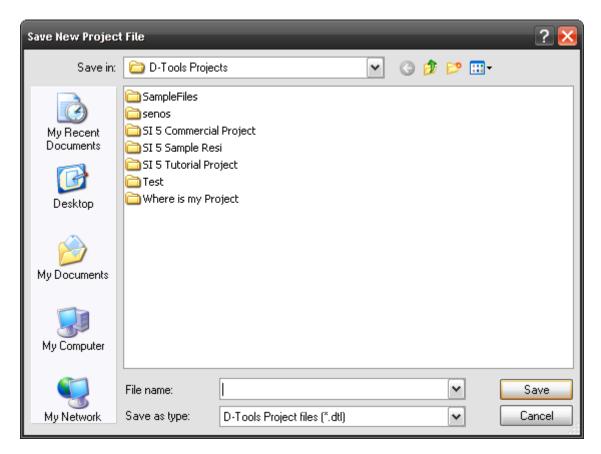


The list for contract percentages will display your default settings. Use the and buttons to add or rows. To edit any field, left-click in the field. Use the to repopulate this grid with your default contract percentage values.

Step 10: Custom Properties



This step is where you can add any information to the Project Custom Properties that you have defined. (see page 46 for more information on "Project Custom Property Name Settings:") In order to finish creating the Project, you must click **[Save]**. You will be prompted to choose a location to save the Project:



Once the Project is saved, it will display in the Projects Grid.

Location and Zone Configuration

A consistent pain point within SI regarding the creation of projects has been the need to re-create location structures and zone lists for every project. Historically, this has been handled by users creating a "base" project and then using the "Import System" functionality in order to pre-load the locations and zones desired for a project. While this works, it leads to the user having a number of projects in SI that exist solely for the purpose of acting as templates for project location structures. Within SI5 we have implemented the ability to save and consume Location and Zone configurations.

An SI user can save the location structure or zones for any given project as a configuration. The user is not limited to the number of configurations they can save or how they are named. It should be noted that the configurations must be named, but the name does not have to be unique.

Users will only be allowed to import configurations only into new projects or projects that currently have no items in the bill of materials. Importing configurations into existing projects would have a

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massive impact on the items that exist in a project, therefore, it has been deemed out of scope for this functionality.

Users can save configurations from new projects or existing projects.

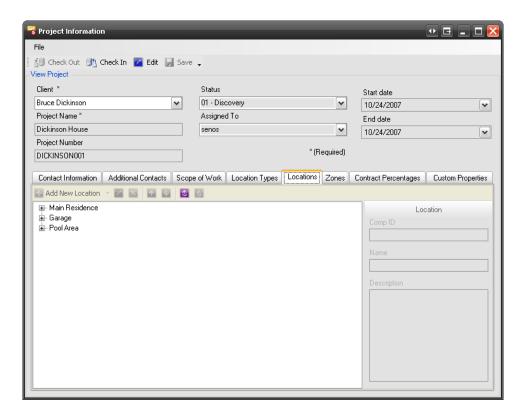
Creating Location and Zone Configurations

As stated above, a user can save configurations from an existing project or a new project.

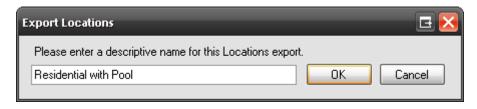
Saving a Configuration From and Existing Project

The following steps demonstrate saving a configuration from an existing project:

- 1) Open SI5 Navigator, Selects "Projects".
- 2) Select "View Project Information".
- 3) Navigate to the "Locations" or "Zones" tab.



- 4) Click the "Export Location/Zone Configuration" toolbar button.
- 5) Enter a "Name" for the configuration and click "OK"



6) Repeat for Zones on the Zones tab.

Saving a Configuration From a New Project

The steps for saving a configuration are effectively the same. With the following exceptions:

- 1) The user will launch the "New Project Wizard"
- 2) Add zones/locations to the project.
- 3) Pick up at step 4 above. Please note that a user will not be able to save a zone/location configuration unless one or more zones/locations exist in the project.

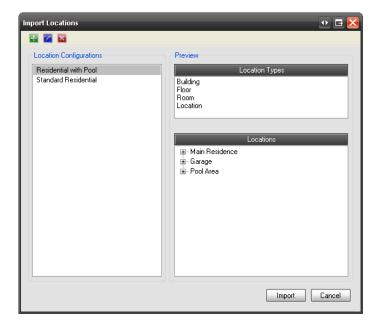
Using a Configuration in a Project

As stated above, a once a configuration has been saved, the user will be able to use this configuration when creating new projects or on an existing project that has no items in the bill of materials.

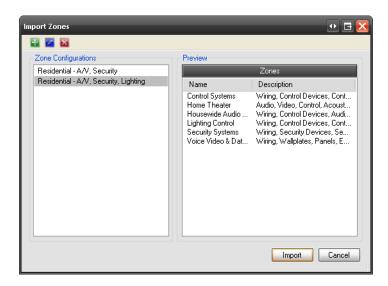
The steps for consuming a configuration in a project are as follows:

- 1) Open SI5 Navigator, Selects "Projects".
- 2) Select "Create a new project"/"View Project Information".
- 3) Step through the project wizard (or navigate to the proper tab).
 - a) On the Locations (or Location Types) Step:
 - i) Click the "Import Location Configuration" toolbar button.
 - ii) Select the configuration to use in the project. Please note that you can preview configurations. Also, locations and location types must be consumed together as the locations are tied to the defined types.

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- iii) Click "Import" to add the locations to your project.
- b) On the Zones Step
 - i) Click the "Import Zone Configuration" toolbar button.
 - ii) Select the configuration to use in the project. Please note that you can preview configurations.



iii) Click "Import" to add the zones to your project.

Additional Functionality of the "Import" Screens

When looking at existing configurations, users have the opportunity to do the following tasks:

- 1) Rename a configuration.
- 2) Deleting a configuration.
- 3) Adding configurations from an external file.

Adding Configurations From External Files

Location and Zone configurations are stored in XML documents. The configurations exposed through the UI are stored in the following files:

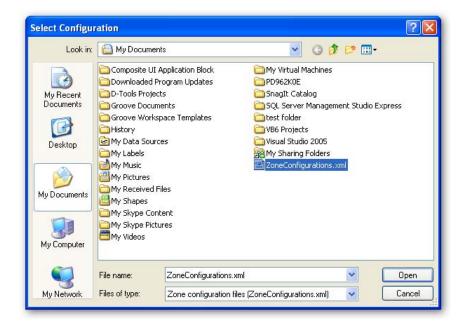
- Location Configurations:
 C:\Documents and Settings\All Users\Application Data\D-Tools\SI5\LocationConfigurations.xml
- Zone Configurations:
 C:\Documents and Settings\All Users\Application Data\D-Tools\SI5\ZoneConfigurations.xml

These files may be sent to other users (manual process). The users can then choose to replace their existing file or add the configurations contained in the file received.

The steps to add the configurations to your existing configurations are as follows:

- 1) Copy the new file to disk (anywhere except the locations listed above).
- 2) Click the "Add Configurations from File" toolbar button.
- 3) Browse to the received file.

Please note: The only file that can be selected for locations has the name "LocationConfigurations.xml" and zones; "ZoneConfigurations.xml".



4) Click the "open" button once the file has been selected.

Please note: If the file is invalid (format or otherwise), the user will receive the following message:



General Functional Notes

- Once saved, configurations are not directly modifiable in version 5. That said, if a user
 wants to modify a configuration, they may import it into a new project (as outlined above),
 make the necessary changes, save it as a new configuration (outlined above), and delete (if
 they choose) the old version of the configuration.
- As stated above, configurations cannot be imported into existing projects unless there are no items in the projects bill of materials.
- Configurations are per machine installation, not per user on a machine.

Change and Revision Management

SI5 supports a linear sequential design and engineering process. Only one person at a time may modify a project. It is possible to engineer two or more projects and combine them into one. However, once combined, only one person at a time may modify the project. Change occurs continuously throughout the complete process from conception to completed red lined drawings. Proper change management can mean the difference between chaos and a well controlled project. More importantly, managing and documenting change is necessary to keep the client informed and to improve your chances of getting paid in a timely fashion.

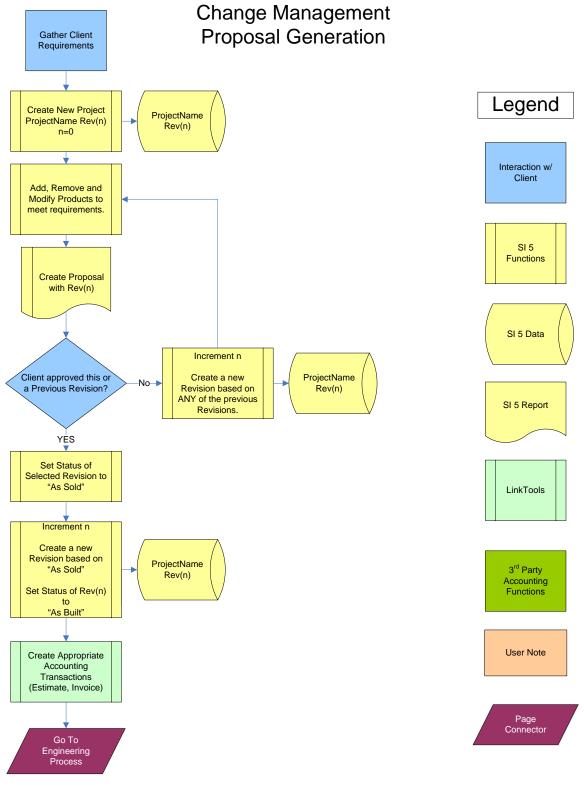
SI5 introduces some major enhancements to the revision control and change management process. In SI5 you can now:

- 5) Create revisions for any reason, not just for Change Orders, such as managing multiple proposal revisions.
- 6) Allow one revision to track the As-Sold items and another revision to track the As-Built. More on this later)
- 7) Make any previous revision the current revision.
- 8) View and explore the differences between any two revisions (Difference View). The view will allow you to see what changed such as:
 - a) Added / Removed Products
 - b) Modified Product cost or selling price
 - c) Changed Phase information
 - d) Labor Rates or Factors
 - e) Diff Factor
 - f) Misc Parts
 - g) Equipment +-
 - h) Changed Global factors
 - i) Tax
 - j) Equipment +-
 - k) Misc Parts

- 248 Projects
 - I) Misc Costs
- 9) From the Difference View you can select any subset of what has changed and
 - a) Run Difference Report
 - b) Create Change Order
 - c) Run Change Order report
 - d) Create Sales Order
 - e) Create Work Order
 - f) Reverse out any change

Proposals

As you know clients can be very fickle. You may create several proposals before the client settles on a particular set of functionality. You will be able to pick any previous revision from which to create a new Current Revision and apply the new set of requirements. Pick the previous revision that makes it easiest to complete the proposal. For instance, deleting is always easier than adding. Also at any time the client may wish to know what changed from one proposal to the next. With SI5 you will be able to manage this process and provide the answers to the client's questions. The following chart is a high level view of the proposal process in SI5.



(Does Not Include Accounting Integration Work Flow)

The Proposal Process

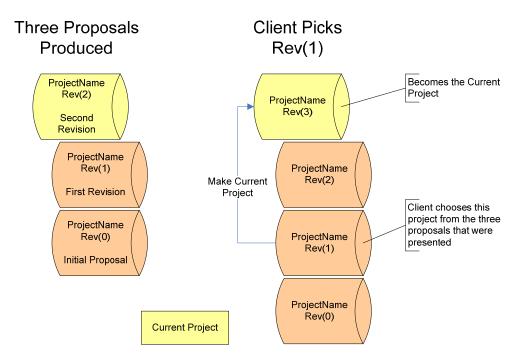
- 1) Gather requirements
- 2) Create a New Project (This will be Rev(0))
- 3) Client Information
- 4) Statement of Work (Restatement of requirements)
- 5) Products
- 6) Review labor hour forecast with the Project Manager
- 7) Review projected profit analysis with Senior Management
- 8) Present proposal to the client
- 9) If the client approves the design then move to the Engineering Process. If not, create a Current Revision from a previous revision that makes the best starting point for applying the new requirements. Go to Step 3. If the client wants to see what changed between any of the revisions, use the Difference View to run a "Client Difference Report"

Compare Revisions Processes: ProjectName Rev(3) Difference Report Change Order Report **Customized Report** Compare ANY Two ProjectName Revisions and show Rev(2) Sales Order the Difference Work Order Reverse Transaction Compare ANY Two ProjectName Revisions and show Apply changes to a Previous Revision Rev(1) the Difference Accounting Reconciliation Report ProjectName Revision Difference Rev(0) (What Changed) Item1 Added Item2 Added Item3 Added Current Project Choose the Items vou wish process Item4 Modified Item 5 Removed

10) Once the client chooses the revision to implement, set the Project Status on that revision to "As Sold". You will need to identify the "As Sold" revision later in the process if you ever need to implement a Change Order.

11) Create a new revision from the "As Sold". This will become your Current "As Built" Project. All future revisions will be considered the As Built project. Changes in the As Built do not affect the price of the project and are not included in the As Sold revision. Change Orders will affect both the As Sold and As Built revisions. This will be covered later.

Make a Revision the Current Project



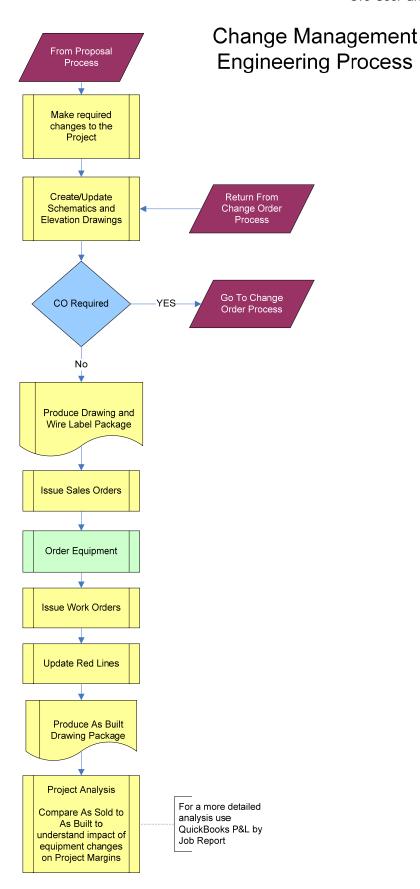
Engineering Process

There are two types of change that may occur during the delivery of a project

- 1) Client Change: Change in scope that is reflected on a Change Order report and is paid for by the client,
- 2) Internal Change (Engineering Change): Change that is generated as a result of engineering and order management processes. These types of changes include
- 3) Change in wire detail as engineering drawings are refined.
- 4) Substitution of functionally equivalent parts (proposed product on back order)
- 5) Redesign yielding the same functionality in a more cost effective solution (value engineering).

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The following chart is a high level view of the engineering process.



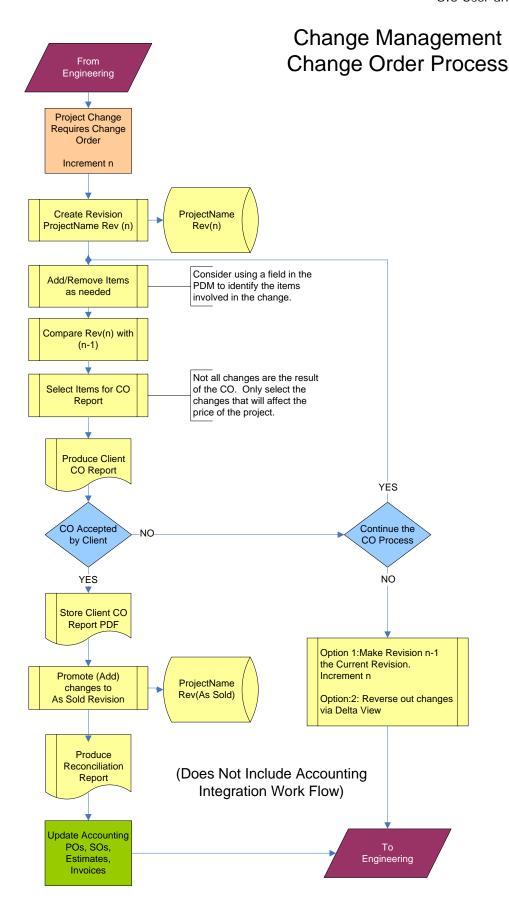
Always create a revision before starting the engineering process. This will allow you to rerun client reports from the As Sold revision after changes have been made to the Current or As Built revision.

Change Order Process

The only other time a revision is required is when managing Changes Orders. Create a new revision before initiating the Change Order process. The revision will become the new As Built revision. It is possible to work on more than one CO at a time, but it may not be practical in the current SI5.0 release. If you continue to make Internal or Engineering changes during the CO process that will not be reflected in the client billing, these changes will need to be excluded when running the Change Order client report. You only want to include CO related items in the CO. SI5 gives you the ability to pick the Products to include on the Change Order. The following chart provides a high level view of the Change Order process. If the client rejects the change order, you have two choices:

- 1) Select and reverse out the changes
- 2) Promote a previous revision to the Current Revision (Promote Revision). If you choose this method you will also throw away any Internal Changes that may have occurred during the CO process.

If the Change Order is accepted, you will promote (copy) all CO related changes to the "As Sold" revision. This will allow you and the client to always know exactly what is in the As Sold proposal. Internal or engineering changes will not be promoted to the As Sold revision. You may rerun the complete client proposal at any time which will accurately reflect the products and services that the client has agreed to purchase.



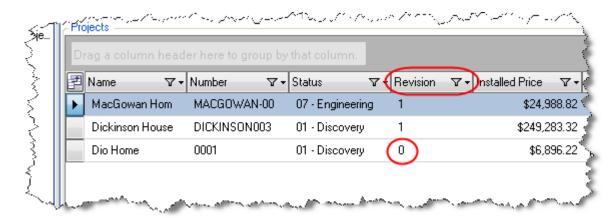
About Project Revisions

There are many times when creating a revision is appropriate. These could include:

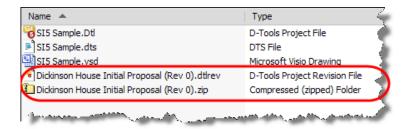
Prior to modifying a proposal that has already been presented to the client

- · After the client has signed off on the proposal
- Prior to quoting a change order

When a project is first created it is considered Rev 0. The Revision with the highest revision number is considered the "Current Revision".



The new Revision number is always one higher than the highest revision number prior to the creation of the new revision. The drawing files associated with the project are copied, zipped and stored in the Project Folder as shown below. ONLY drawing files are zipped. For example the user provided Revision History.doc document is not included in the zip folder. See examples later in the chapter.



Create a Project Revision

- 1) Select the desired project (Project row will turn blue)
- 2) Choose one of the following options:
- 3) Right-Click on the project and select "Create Revision"

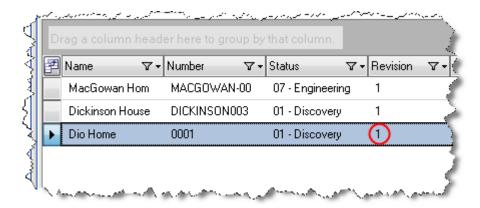
4) Select "Create a new revision of this project" from the Project functions list:



Enter an appropriate file name and click [OK]. Changing the file name is not recommended. Changing the Rev number in the file name is definitely not recommended.



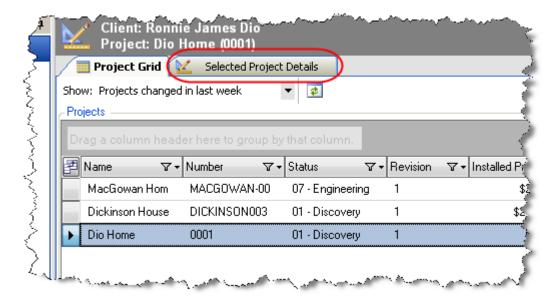
5) The Current Revision number is now "1".



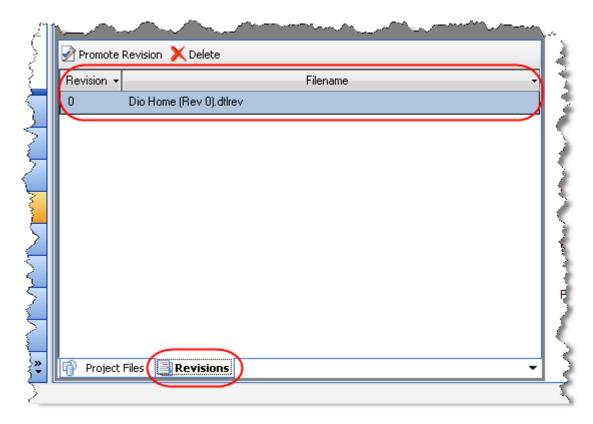
Viewing your Revisions

To view and work with your revisions:

- 1) Select the project in the **Project Grid**.
- 2) Click the Selected Project Details tab:

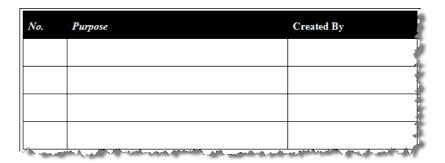


3) Click the **Revisions** tab at the bottom of the form:



Tracking Revisions

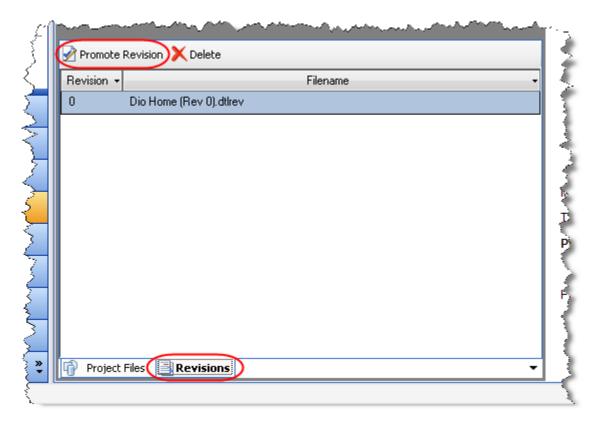
SI 5 does not include a built in method for tracking information about each revision. We suggest that you create a Word document similar to the one show below and attach it to each new project. The following is just an example. Feel free to include any information that will help you better track and manage project revisions.



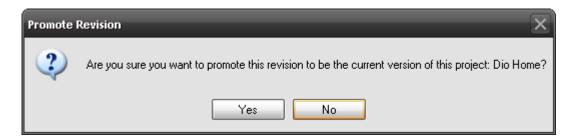
Promote Revision

Use Promote Revision to make a previous Revision the Current Revision. This may be useful if after presenting five or six proposals the client selects proposal number two as the one they would like to purchase.

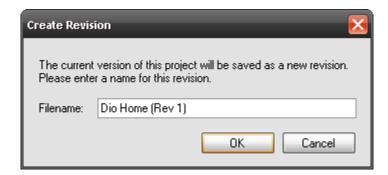
1) Select the Revision you wish to promote:



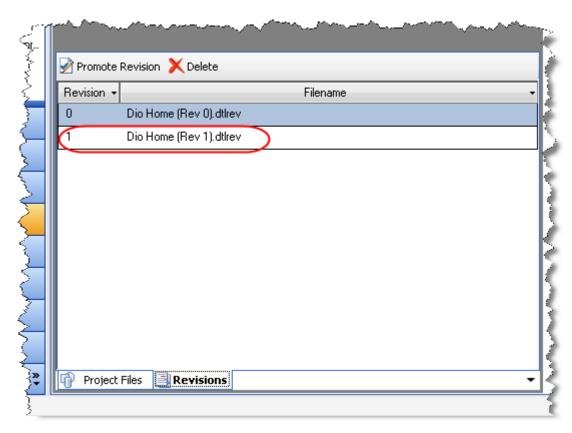
2) Click the **[Promote Revision]** button. You will be prompted to verify this action:

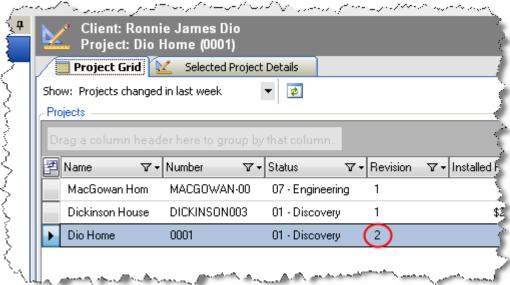


When you click **[Yes]**, the Create Revision form will open. Changing the file name is not recommended. Changing the Rev number in the file name is definitely not recommended. Click **[OK]**:



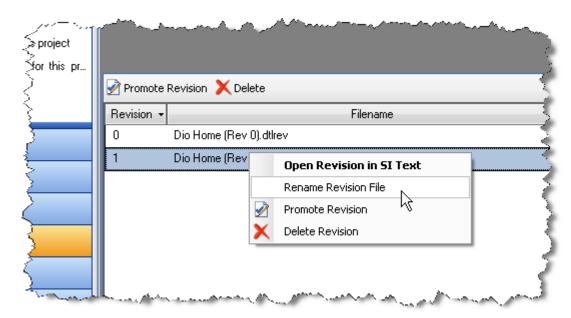
3) You will notice that Rev 1 now displays in your list of revisions and if you go back to the **Product Grid** tab you will see that the project's revision number has been incremented:





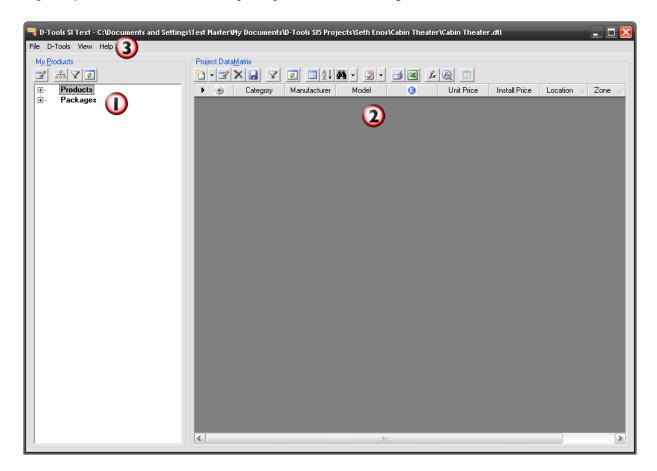
Rename Revision File

Once a Revision has been created you may change the file name if you desire. Changing the file name is not recommended. Changing the Rev number in the file name is definitely not recommended. If you must, select the revision and right-click and select "Rename Revision File"



Text Interface

When you open the .dtl file for a Project, you will be working in the SI 5 Text interface:



This interface resembles a cross between the **Product Explorer** and **Product Grid** screens within the **Manage My Product Data** (**MMPD**) interface. There are three major sections of this interface. The left hand side of the screen is called the **Product Explorer** and the right hand side of the screen is called the **Project Data Matrix** (**PDM**). There are also **Menu Options** on the menu bar along the top of the screen.

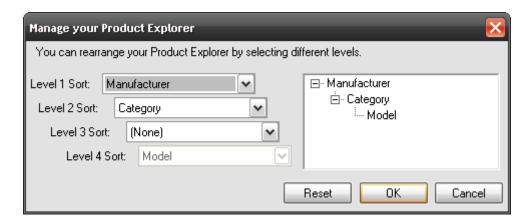


Product Explorer

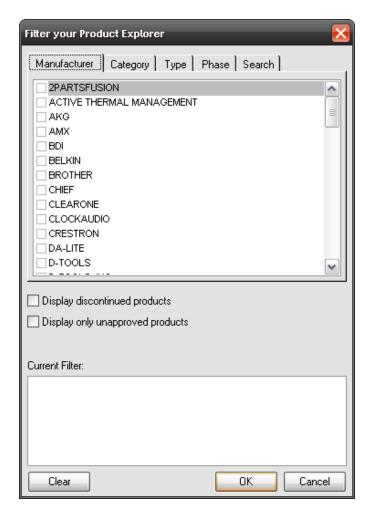


The **Product Explorer** displays all of the Products and Packages from your **Master Table** database. Use the [+] symbols to expand your selections.

You can customize the view of the Products listed in the **Product Explorer** section by modifying the hierarchy and/or by filtering the Products in your database. The button allows you to choose a display structure for your data up to four levels deep:



The button allows you to pick and choose the Products that display based on Manufacturer, Category, Type, and Phase:



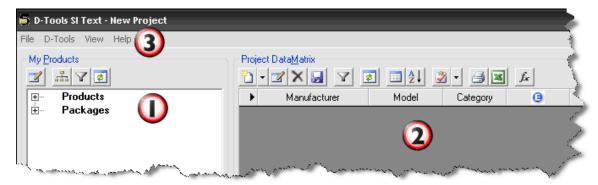
Click to edit a selected Product or Package. The **Master Table Product Properties** form will open:



If you add any Products or Packages in the **Manage My Product Data (MMPD)** interface while you have a **Text** project open, click to refresh the Products and Packages listed in **Product Explorer** section.



Project Data Matrix (PDM)



This section is where all of the Products that have been added to a Project are displayed. There are various buttons along the top of this section:



-Add Product/Package if you click the button, the Add Product form opens. Use the dropdown arrow to add a Package.
- Edit Selected Product/Package once you have selected a Product or Package in the PDM, clicking this button will open the Product Properties or Package Properties form. Double-clicking the Product or Package in the PDM results in the same action.
-Delete All Selected Products/Packages you can select multiple Products or Packages in the PDM by using the [Shift] or [Ctrl] keys on your keyboard.
- **I**......**Save** Saves your progress in the **Project**. Use frequently.
- Filter allows you to filter your **PDM** by Manufacturer, Category, Type, Phase, Location, or Zone. You also have the ability to Search for Product based on the Model, SKU, and Product Description fields.

- Refresh Changes made to Products and Groups may not immediately show in the PDM view. Use this button to refresh the PDM view.
- Add and Remove Columns/Groups allows you to customize the view of the PDM, very similar to how you customize the view on the Product Grid screen in the Manage My Product Data (MMPD) interface. You can choose what columns display in the PDM as well as choose how you want the Products and Packages to be grouped.
- Sort allows you to sort the Products and Packages in your PDM by various fields up to three levels deep.
- Line I tem Summary allows you to modify the display of the PDM as well launch different views of the data in separate windows. Details below.

Project Summary – displays a summary of the project in a separate window



Line Item Summary – displays an aggregated view of the PDM based on Category Manufacturer, and Model

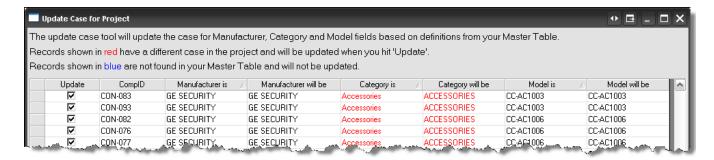


Flat Grid – displays the products in the PDM without grouping on Packages or Accessories

Show/Hide All Accessories – will expand or collapse accessories in the PDM. Products that have accessories have a "+" next to them in the PDM when you choose to group on Packages and Accessories

Expand/Collapse All Rows – expands or collapses all rows in the PDM

- Assign This button allows you to assign Locations, Zones, and Head Ends to Products in the PDM. The default is to assign Locations and Zones, use the drop-down menu to make other selections.
- Print prints the PDM
- Export to Excel export the contents of the PDM to an Excel spreadsheet. This file can be used for making additional calculations on the Products. This spreadsheet is not importable back into the software through the MMPD interface.
-**Update Price** This allows you update the price of multiple Products in the **PDM** based on Discount, Margin, and Markup.
- Update Case Use this to update the case settings within a project if you have made changes to your default case settings in the MMPD interface. A window will open showing what will be changed. You can uncheck any products you do not wish to change:

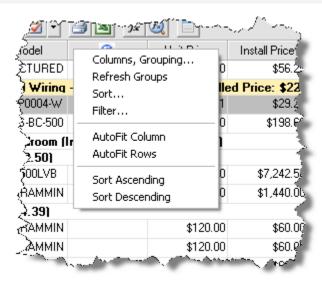


Den in I/O Studio – opens the I/O Studio for the product that is selected in the PDM.

See the MMPD section of this guide for specs on the I/O Studio.



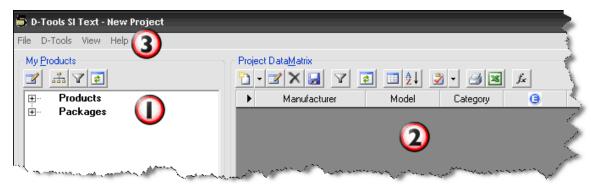
Another way to customize the view of the **PDM** other than clicking is to right-click any Column heading in the PDM. The right-click menu that displays gives you multiple options for customizing the view of the PDM:



Command	Description
AutoFit Column	Resizes the selected column to the width of the longest string
AutoFit Rows	Resizes all rows to the same height
Sort Ascending	Sorts the selected column by value: lowest to highest (alternative = left mouse click once in a column heading)
Sort Descending	Sorts the selected column by value: highest to lowest (alternative = left mouse click once in a column heading)
Expand All	This expands all [+] symbols displayed in the PDM (groupings)
Collapse All	This collapse all [+] symbols displayed in the PDM (groupings)



Menu Options



These menu options are fairly consistent across all three of the Project interfaces: Text, Visio, and AutoCAD. The Visio and AutoCAD interfaces have some unique options that will be detailed in their corresponding sections of this guide.

File->New

This will create a new SI 5 Project .dtl file. When you choose to save the new Project, you will be prompted to add a Client Name and Project Name if you have not already done so. The default path for the Project file will be **Client Name\Project Name** within your default local Projects folder. You can, of course, change this path if you wish.

File->Open

This allows you to browse to another SI 5 .dtl file and open it. If you currently have a Project open in this instance of the SI 5 Text interface, you will be prompted to close that Project as only one Project can be open at a time per instance of the SI 5 Text interface. If you wish to have more than one instance of SI 5 Text open at the same time, do not open Projects this way. Instead open additional .dtl files through the Navigator interface.

File->Save

Saves the Project.

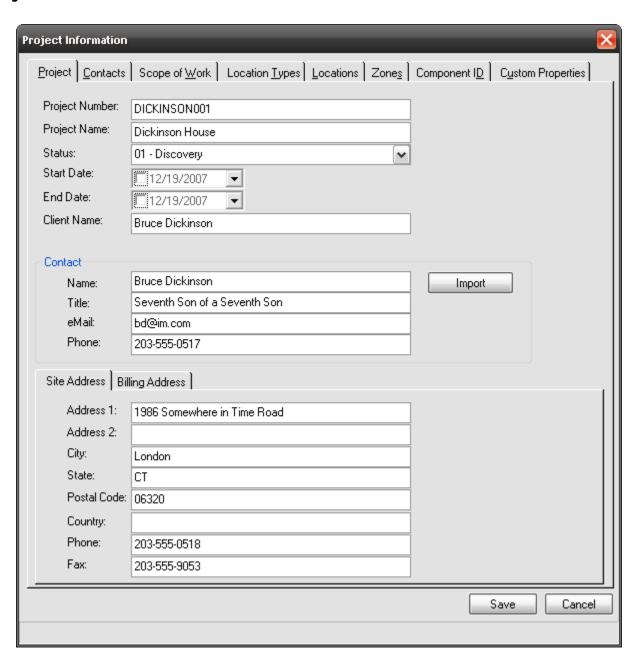
File->Exit

Closes the SI 5 Text interface.

D-Tools->Project Information

All of the information entered in steps 1-10 of the New SI 5 Project wizard is displayed here across the various tabs. You may add or edit information as needed. In addition to the information entered in steps 1-5 of the New Project Wizard, some of your global default settings are displayed on this form, e.g. **Component ID**. These can be edited here and will ONLY apply to this Project, i.e. your global default settings will not be changed.

Project



Many of the following fields are used in one or more standard SI 5 reports. However, ALL of the following fields are available for use in custom or user modified standard reports. See "Report Designer" on page 500 for more details on report customization.

Project Number – Optional. Alpha-numeric, 255 character limit.

Project Name – Required. This will also be the Project file name

Status – Optional. Use this field to mark "milestones" in a Project's lifecycle. The dropdown menu here can be modified under Navigator Setup tab.

Start Date - Optional. Use the dropdown calendar to select the start date for a Project

End Date – Optional. Use the dropdown calendar to select the start date for a Project

Client Name - Required. This field is used as the primary folder for storing project files.

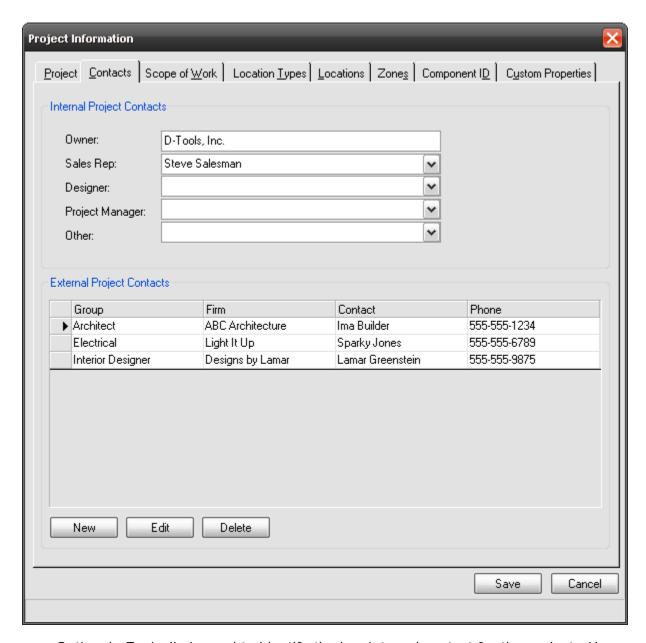
Contact section – Optional. The Contact is the name that will print on the standard Client reports. The **[Import]** button will open a window that allows you to pick from your Outlook Contacts list.



If you have a large number of Outlook Contacts the search time associated with the Import may be extensive. Create a New Contacts folder in Outlook to use as your Project Contact Folder. Before creating a new project in SI 5, copy the contact from your Outlook Contacts to the Project Contact folder in Outlook. Use the [Folder] button on the Import Contact form to select the Project Contact Folder.

Site/Billing Address section – Optional. These fields are used on reports.

Contacts



Owner – Optional. Typically is used to identify the key internal contact for the project. However this field may be used in any way you like.



The following field names are editable and may appear differently in your User Interface (UI).

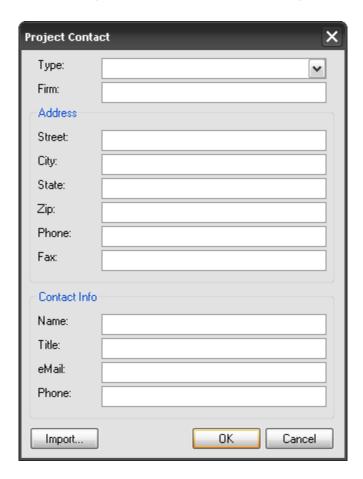
Sales Rep – Optional. This dropdown list may be edited via the Navigator>Setup>Application Settings tab.

Designer – Optional. This dropdown list may be edited via the Navigator>Setup>Application Settings tab.

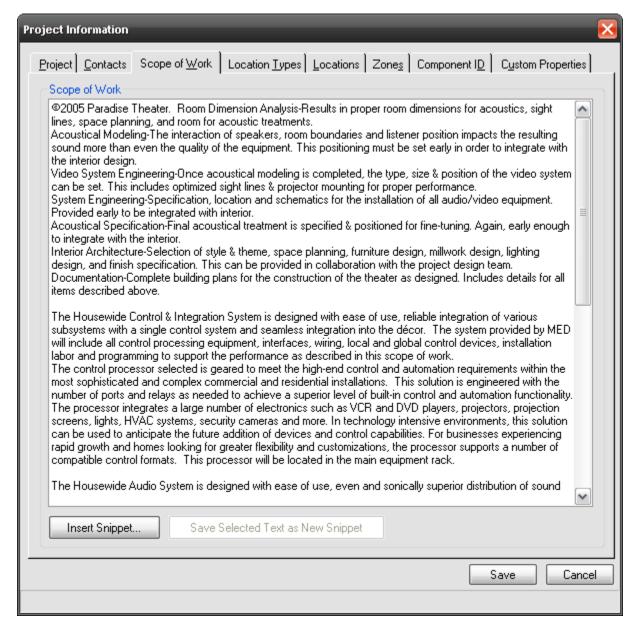
Project Manager – Optional. This dropdown list may be edited via the Navigator>Setup>Application Settings tab.

Other – Optional. This dropdown list may be edited via the Navigator>Setup>Application Settings tab.

External Project Contacts section – Optional. Use the **[New]**, **[Edit]**, and **[Delete]** buttons to manage external project contacts. These contacts could be architects, general contractors, etc. Clicking **[New]** opens a form where you can import contacts from your Outlook Contacts list.



Scope of Work

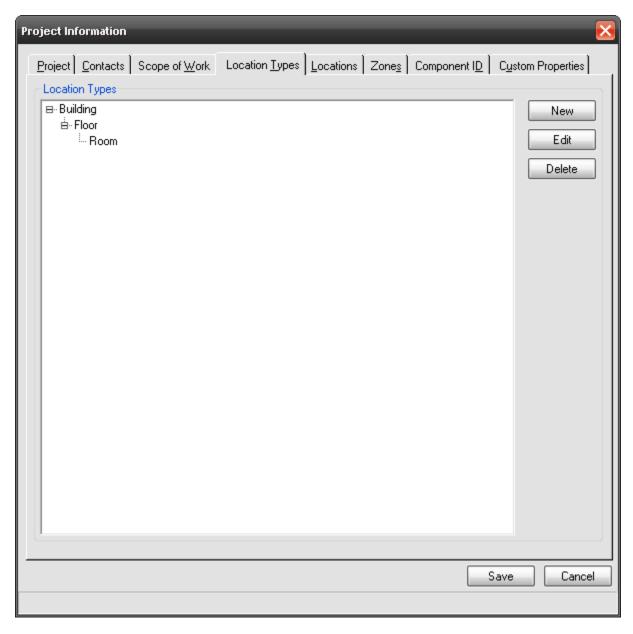


This lists the text for a Scope of Work report. These fields ONLY accept plain text. No text formatting is available including tabs. You may type directly in this field; copy and paste directly in this field, or you can use the [Insert Snippet...] button. The Add Snippet form will open allowing you to add any previously saved Snippets. You may select text in this field and use the [Save Selected Text as New Snippet] button if you type something particularly clever that you want to use on future Projects.



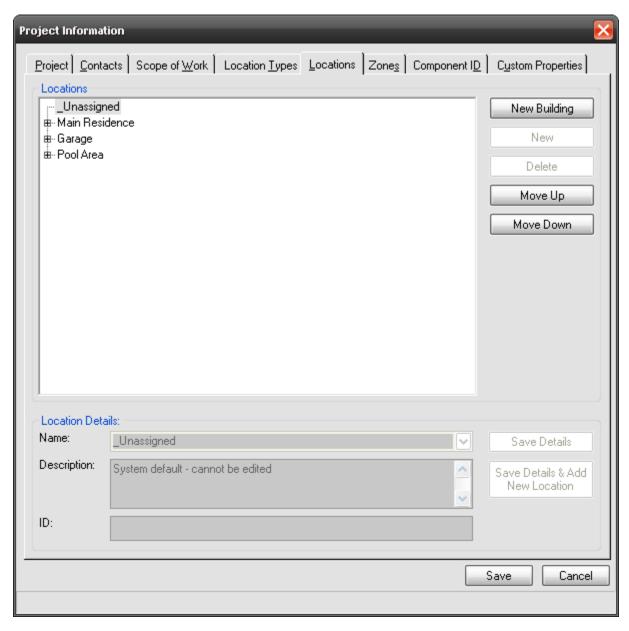
Use your favorite word processor to create and spell check the Scope of Work, then copy and paste to the above form or Snippet.

Location Types



Here you can change the hierarchy for the Location Types for a Project. You can have up to five levels or as few as one. When deleting, start from the bottom and work your way up.

Locations



Here you can assign the specific Locations for Project. The **[New...]** buttons will change depending on what you have selected in the Locations field. Use the **[Move Up]** and **[Move Down]** buttons to position Location names up or down for each Location Type. The client "By Location" reports will present the locations in the order they are listed above.

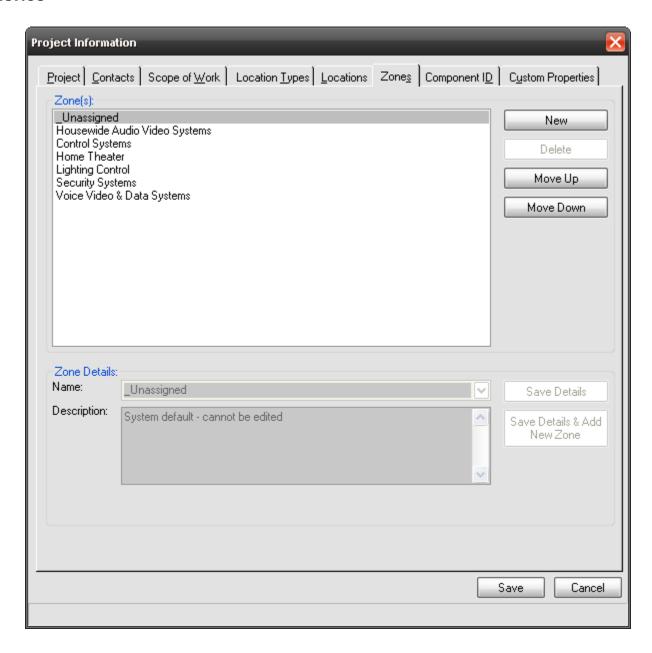
The Details section at the bottom allows you to add a description and ID for each Location. For more information on "Location Types and Locations:" see page 47.



These location descriptions may be shown on client reports. Keep in mind that each Location at every level (Building, Floor, and Room for example) may have a description. On the reports these descriptions are concatenated together in the

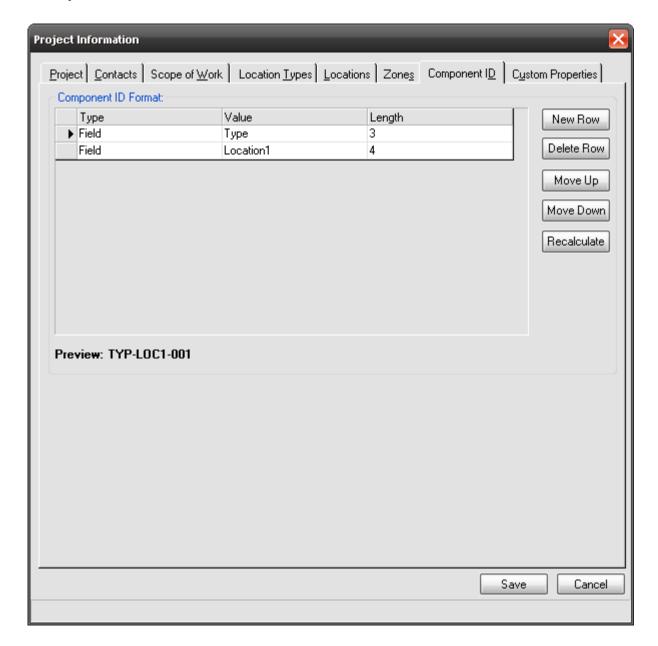
order presented in the hierarchy. So the description that shows up on a report for a particular room will be Building Description + Floor Description + Room Description. See pg 471 for more details.

Zones



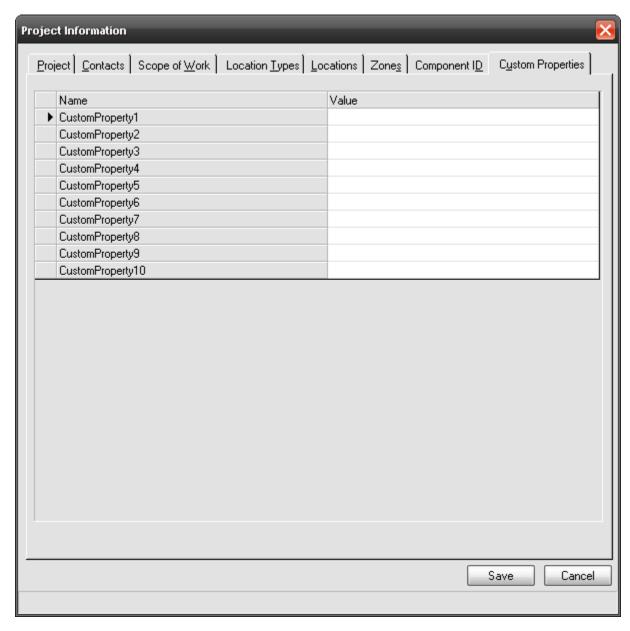
This is where you manage your Zones within a Project. The **[Move Up]** and **[Move Down]** buttons allow you to position the Zones in a preferred order for reporting. See "**Zones**:" on page **48** for details.

Component ID



See "Component ID Format:" on page 55 for details on the Component ID. The added functionality here within a project is the [Recalculate] button. This will recalculate the Component IDs for all products already in the project. You would use this option if you changed your Component ID Format part way through the creation of a project and want the change to reflect on the existing products in the project.

Custom Properties

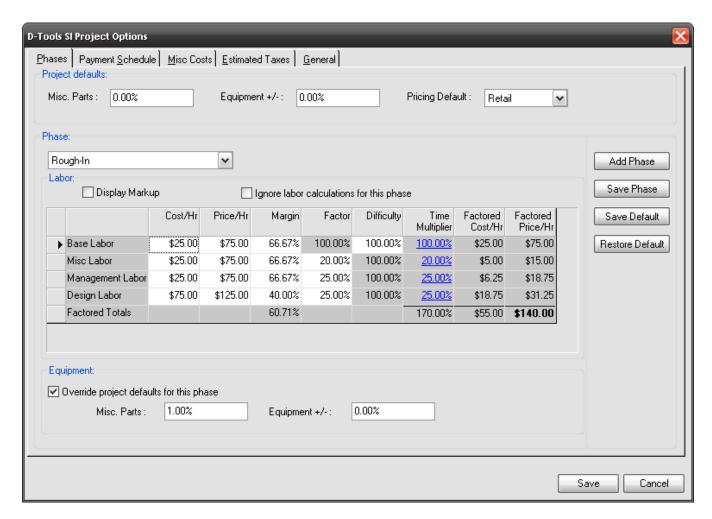


These are ten text fields for adding additional information to a Project. The labels for these fields are defined under the setup tab in navigator, see "**Project Custom Property Name Settings:**" page 46.

D-Tools->Options

This opens the **D-Tools SI Project Option**s form and allows you to modify your Phases, Payment Schedule, Misc Costs, Estimated Taxes, and General settings.

Phases



Phases are discussed in detail in the Navigator->Setup section of this guide, see **Application Project Settings** on pg. **47**. Project specific functions are discussed below.

The "**Project defaults**" section lists your default or "global" preferences for Misc Parts, Equipment +/-, and Pricing Default. The "**Equipment**" section allows you to override the Project defaults for any Phase. For info on Misc Parts and Equip +/- see "**Price**:" on page 44.

Pricing Default: Sets your default selling price. The default names for these levels are "A", "B" and "C". These names may be changed to suit your business requirements. See "**Price**:" on page 44 for how to change the name of a pricing level.

When you select a Phase from the dropdown list, you will see the default values that you have set for that Phase, **Application Project Settings** on pg. **47** for more information. The "**Labor**" section has an editable grid. The white cells are editable while the gray ones are not. Clicking **[Save Phase]** will save your changes and your Default settings will not be affected. If you want to replace your Default settings with the changes made on this form, click **[Save Default]**.

[Restore Default] does the opposite, i.e. it replaces the values in the Project with your Default settings. If you have added or renamed Phases in your Default setting after a Project has been created, use the [Add Phase] button to add or rename the Phases for the Project.



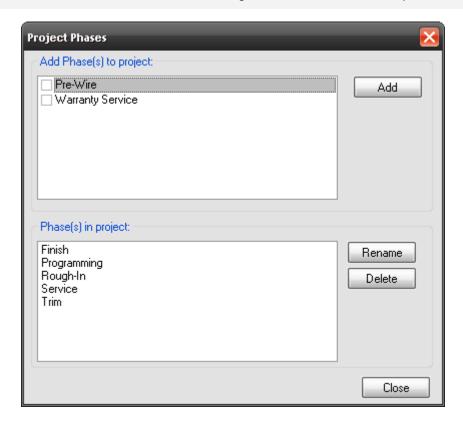
Example: You are working on a proposal for a client. During this time, you make changes to your Default labor settings for various Phases. You add a Phase to your default settings and rename the Phase "Rough-In" to "Pre-Wire".

The changes that you made to your Default settings will not affect your existing projects. In order to change these settings for an existing Project you would open the Project and manually make all changes or you may click the [Restore Defaults] button.



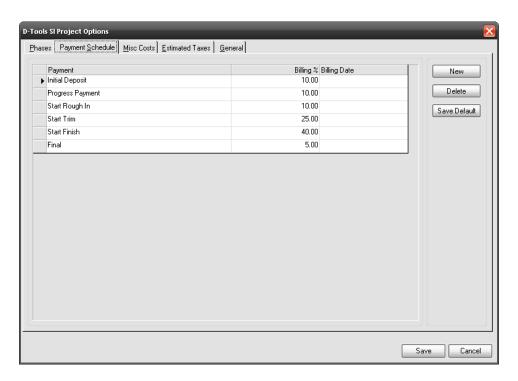
In this example, you want to add the Phase "Warranty Service" to an existing Project and rename the "Rough-In" phase to match your global settings.

- 1) Open the Project and then select **D-Tools->Options**
- 2) Select the **Phase** tab (should be selected by default)
- 3) Click the [Add Phase] button. The Project Phases form will open:



- 4) Select "Warranty Service" in the "Add Phase(s) to project" section and then click [Add]. The "Service" Phase will be added to the "Phase(s) in project" section.
- 5) Although "Pre-Wire" is showing in the "Add Phase(s) to project" section, you would only add it to the Project if you want to keep your existing Products listed as "Rough-In" and any newly added Products as "Pre-Wire". More than likely, you simply want to rename the existing "Rough-In" Phase to "Pre-Wire". To do this, highlight the Phase in the "Phase(s) in project" section and click [Rename].
- 6) Click [Close] when done.

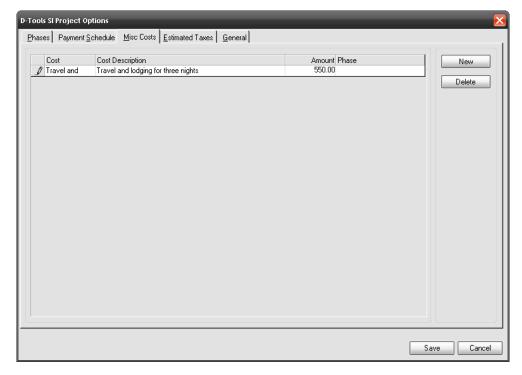
Payment Schedule



Here you can modify the Payment Schedule for a Project by using the **[New]** and **[Delete]** buttons. If you want to replace your Default settings with the changes made on this form, click **[Save Default]**. Clicking in a Billing Date cell will display a drop-down calendar. These values will show up on the Client Contract Report.

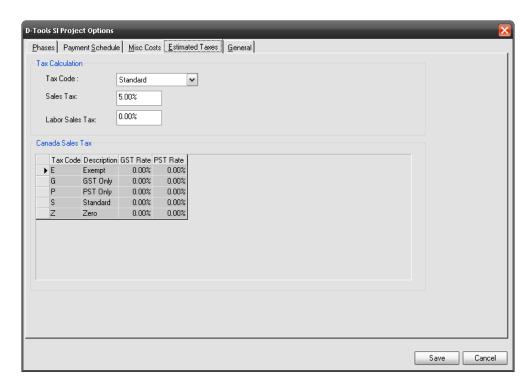


Misc Costs



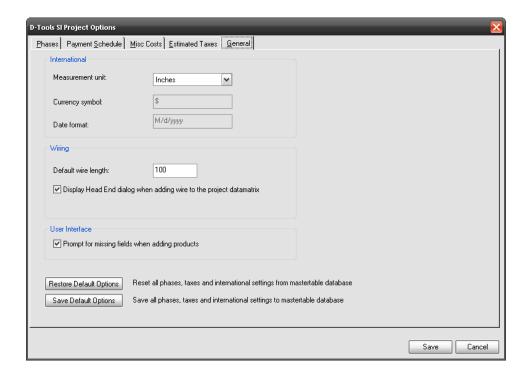
This tab allows you to recover additional Project costs that are not accounted for in the **PDM**. Phase is completely optional on this form and has no bearing on the stock reports in **SI 5**. These costs are NOT taxed. Typical items may include reimbursed travel expenses or lift rentals. These items will show up just before the project summary on client proposal reports.

Estimated Taxes



Here you can modify your Tax Code, Sales Tax, and Labor Sales Tax for the Project. For detailed information on taxes, see page 471.

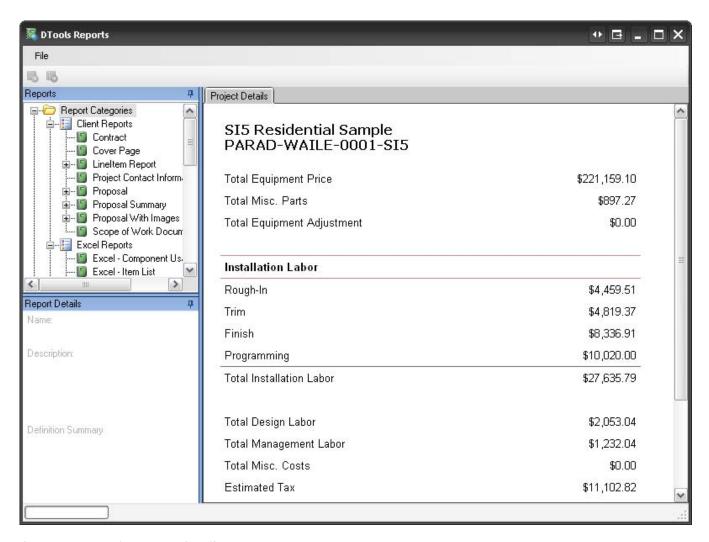
General



Here you can change Wiring options for a Project. The "International" section settings are determined by your Window's Regional and Language Options. The "Wiring" section allows you to set the default wire length for the project. You can also choose to turn off the "Head End" prompt for the project if you wish. You can also choose to reset or save to the Default settings.

D-Tools->Reports

This will launch the Reporting interface for SI 5.



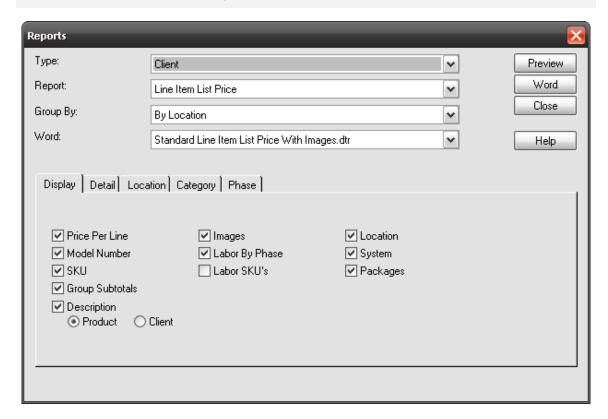
See page 471 for more detail.



If you upgraded from a previous version of SI, you will be able to access your legacy reports by selecting File->Legacy Reporting System:

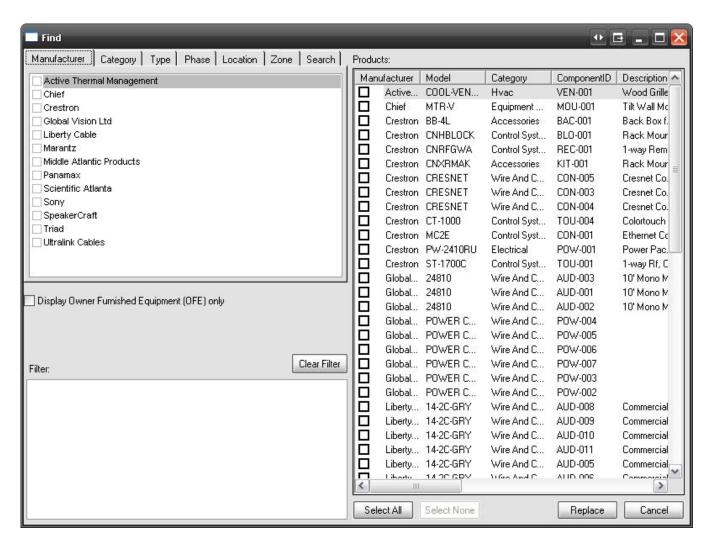


This will open a familiar looking form:

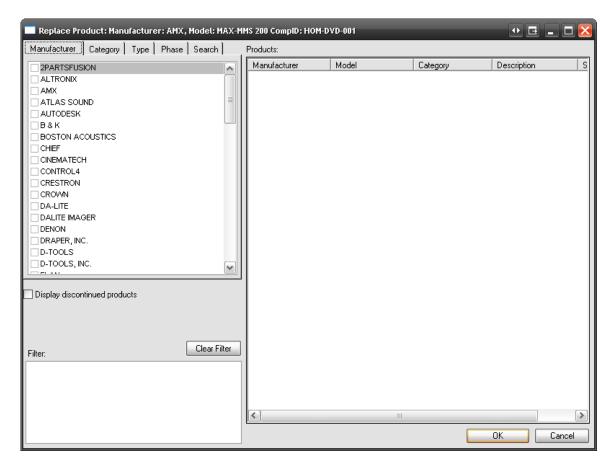


D-Tools->Find and Replace

This allows you to find any Products in your **PDM** and replace them with other Products from your **Master Table** database.



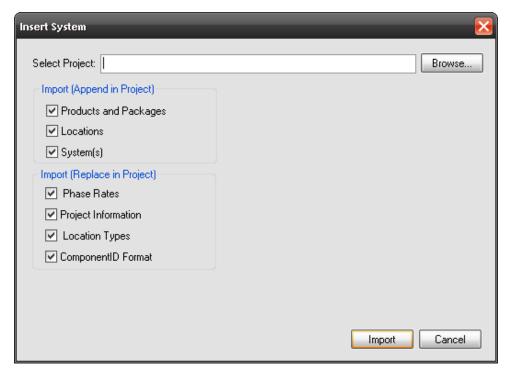
Use the tabs to filter to the Products(s) that you wish to replace. Check the boxes next to the Product(s) and then click **[Replace]**. A similar form will open:



Use the tabs to find the "replacement" Product(s) and then click [OK].

D-Tools->Insert System

This form allows you to choose another Project that you have already created and insert it into the current Project. Generally you would not insert an entire Project's data into another Project unless you are doing production or "cookie cutter" projects. However, you can create individual Projects for specific systems that you sell frequently, e.g. a multi-zone distributed audio system. Instead of adding all of the Products or Packages individually to the "new" project, you can simply insert the system.



To use, browse to the Project you want to import into the current Project, select your options, and click [Import].



Save your Project before using Insert System. If you are not happy with the options you chose for your Insert, simply close the Project without saving, re-open the Project, then use Insert System with a different set of options checked.

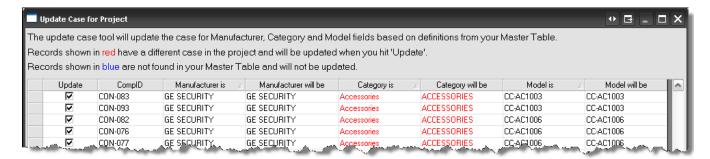
Pay attention to the sections on the form: Import (Append in Project) and Import (Replace in Project). Be careful with the replacement option if you are importing into an established Project. For example, your Phase Rates may have changed since you created the Project you are inserting as a system and you wouldn't want the old rates to apply to the new Project.



This function is also available within the Visio and AutoCAD interfaces. The difference is that you can also import drawing pages into the new Project. This is a very big time saver! More detail is in the Visio and AutoCAD sections of this manual.

D-Tools->Update Case

Use this to update the case settings within a project if you have made changes to your default case settings in the MMPD interface. A window will open showing what will be changed. You can uncheck any products you do not wish to change:



D-Tools->OrderTools

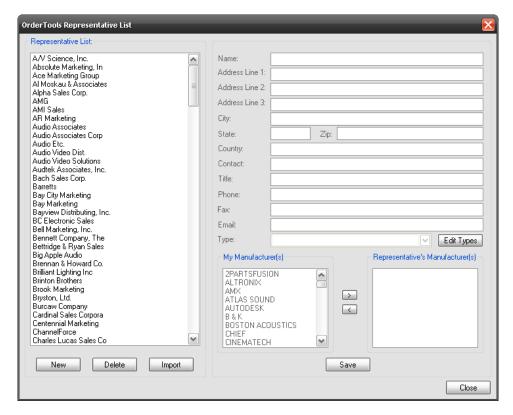
OrderTools is a built in purchase order tool in **SI 5**. You first setup your list of Representatives. Representatives are the vendor's from which you purchase products. They may or be rep firms, distributors or manufacturers. Once your Representatives are setup, you can then produce a purchase order from any Project.



OrderTools does NOT link to your accounting software. This tool is for user's who do not use accounting software to issue purchase orders.

D-Tools->OrderTools->Representative Management

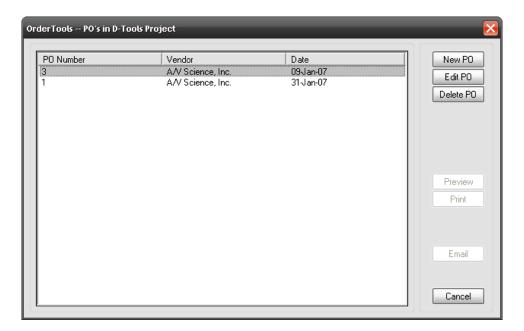
This form is where you will add/edit your Representatives. A Representative is essentially a vendor from which you buy Products.



You can use the **[New]** button to add a Representative manually or use the **[Import]** button to pull from your Contact List in Outlook 2003. Click **[Edit Types]** to add additional Types if desired (this is not a required field). Use the **[>]** to add Manufacturer's from the "My Manufacturer(s)" section to the "Representative's Manufacturer(s)" section and use the **[>]** to reverse the process. The purpose of this is that you are creating a filter for when you create a purchase order. A single Representative may sell products for many Manufacturers. The Products in the Project are referenced by Manufacturer. This interface maps the Manufacturer to a particular Representative. If you buy direct, the Manufacturer and the Representative would be the same company.

D-Tools->OrderTools->Purchase Orders

This form displays the history of purchase orders for the Project.



If you have purchase orders in the list, use the **[Edit PO]**, **[Delete PO]**, **[Preview]**, **[Print]**, or **[Email]** buttons as needed.

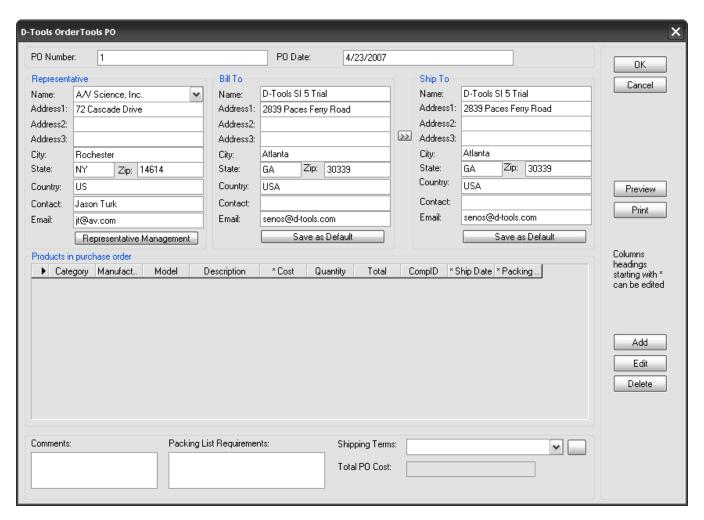


The email function only works with Outlook 2003. A .pdf formatted purchase order will automatically be attached to the email

To create a new purchase order, click **[New PO]**. You must accept the terms of the OrderTools File Transfer agreement in order to create a purchase order.



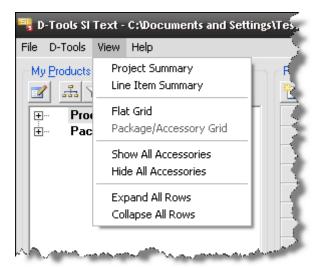
The D-Tools OrderTools PO form opens:



Once you select a Representative, the available Products to add to the PO are filtered to only the Manufacturers you have assigned to the Representative through **Representative Management**. Use the **[Add]**, **[Edit]**, and **[Delete]** buttons to create the Purchase Order. You can **[Preview]** and **[Print]** from this form as well. Once a Product is added to a purchase order, the Product is "flagged" within the Project to prevent you from ordering the same Product multiple times

View-> Various Functions

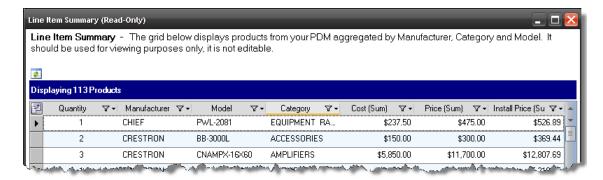
This menu has all of the functions of the Line Item Summary button ():



Project Summary – displays a summary of the project in a separate window



Line Item Summary – displays an aggregated view of the PDM based on Category Manufacturer, and Model



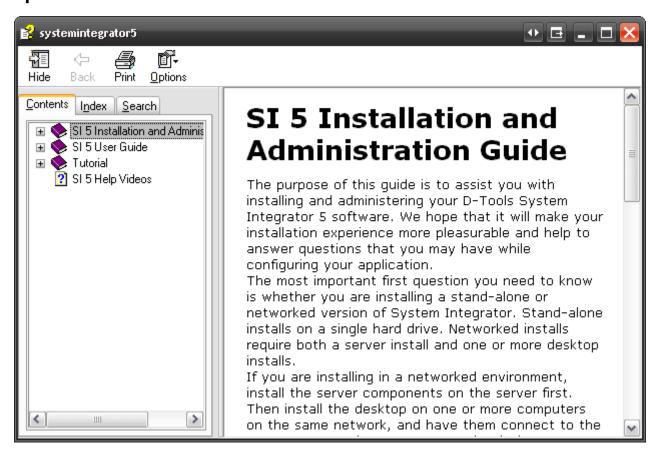
Flat Grid – displays the products in the PDM without grouping on Packages or Accessories

Package/Accessory Grid - displays the products in the PDM without grouping by Packages or Accessories

Show/Hide All Accessories – will expand or collapse accessories in the PDM. Products that have accessories have a "+" next to them in the PDM when you choose to group on Packages and Accessories

Expand/Collapse All Rows – expands or collapses all rows in the PDM

Help->Contents\Index\Search



Here you can access the Installation and Administration guide, the User Guide, and the Tutorial.

Help->About

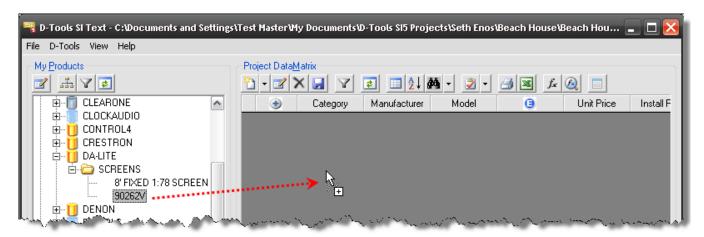
This opens a form showing information about SI 5. You should have this screen and the data provided when you click [System Info...] open when calling technical support.



Adding Products and Packages to a Project

There are multiple ways to add Products and Packages to the **PDM** within a Project.

The first method is to left-click with your mouse and then drag and drop Products or Packages from the **Product Explorer** section to the **PDM**.

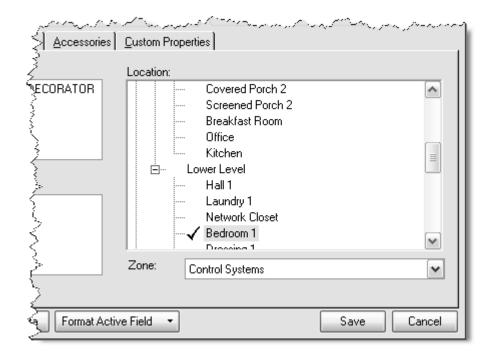


When you release the left mouse button, the Product or Package is added to the PDM.

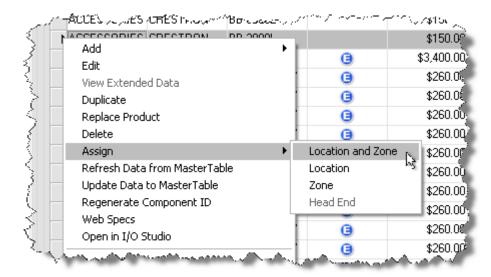
Assigning Locations and Zones

Now is a good time to discuss all of the ways that you can assign a Location and/or Zone to a Product. Once a Product has been added to the **PDM** you have three ways that you can assign Locations/Zones:

1) Double-click the Product in the PDM and assign the Location and Zone on the Product Properties form.

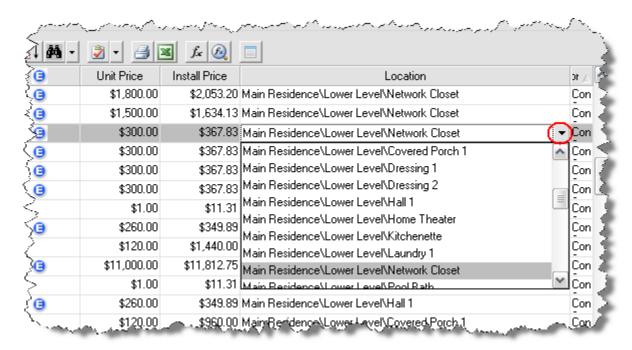


2) Select the Product then right-click->Assign->Location and Zone/Location/Zone:



Depending on your choice, a form will open allowing you to select a Location and/or Zone.

3) Use the dropdowns to assign Location and Zones directly in the PDM. To do this, make sure that the proper columns are displaying. Click in the cell and use the dropdown arrow to make your selection.



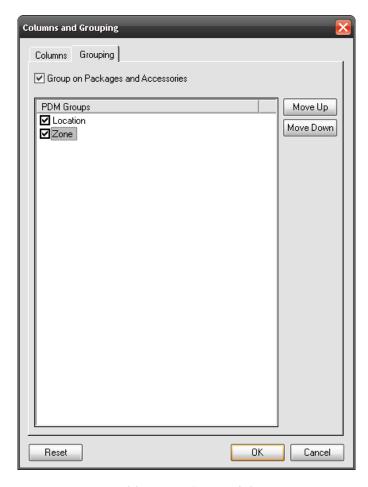


You can save yourself a few steps assigning Locations and Zones by choosing to group the Products in the **PDM** by Location and Zone. You can then drag and drop other Products directly into that Location and Zone group heading in the **PDM**. You must have at least one Product for each Location/Zone already in the **PDM** before this will work.

Assigning Locations and Zones by Drag Drop

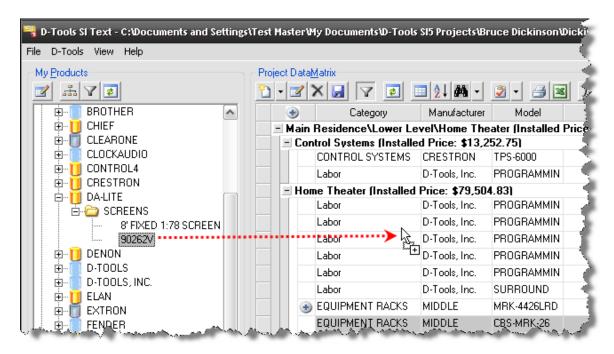
The following example groups by both "Location" and "Zone", however you may choose to group by only one Product property.

- 1) Click . The **Columns and Grouping** form will open.
- 2) Click the Groups tab and then check "Location" and "Zone" in the list then click [OK]:



The Products in the PDM are now grouped by Location and System.

3) Left click a Product or Package in the **Product Explorer** section and drag and drop the Product or Package to the Location and System grouping in the **PDM**.

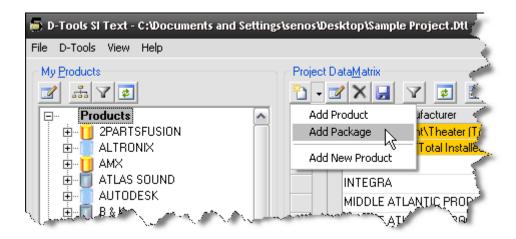


4) The Product will automatically be assigned to that Location and Zone.

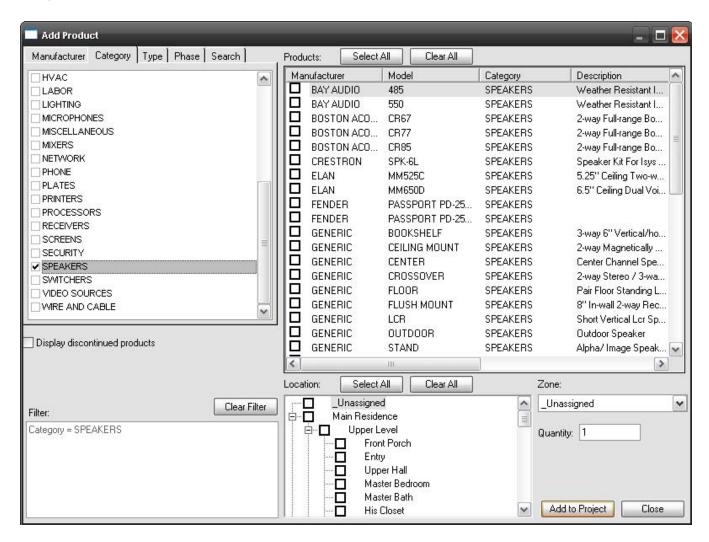
A second way to add Products or Packages to a Project is to use the Latent button.



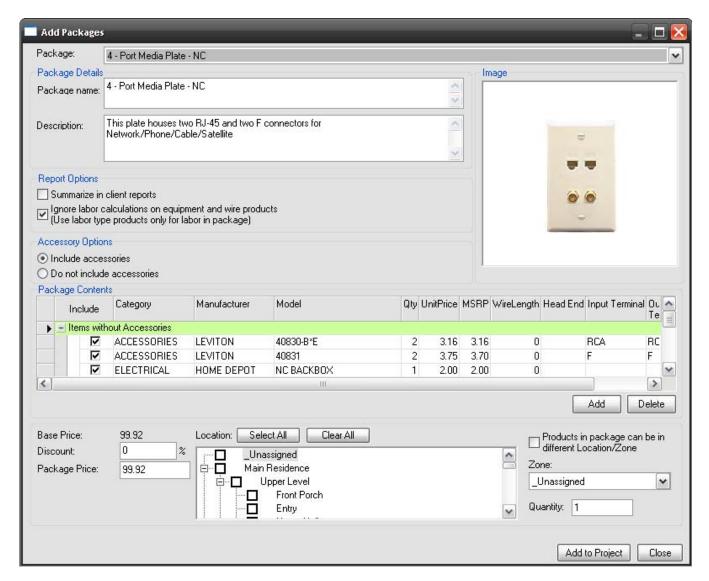
Clicking the page icon will open the **Add Product** form. If you want to add a Package, use the dropdown arrow section of the button and select "Add Package" from the menu:



The Add Product form allows you to filter using the tabs to locate the Product(s) to add to the Project. You can select multiple Products to be added at one time to your Project. You can also assign the Location and Zone as well.

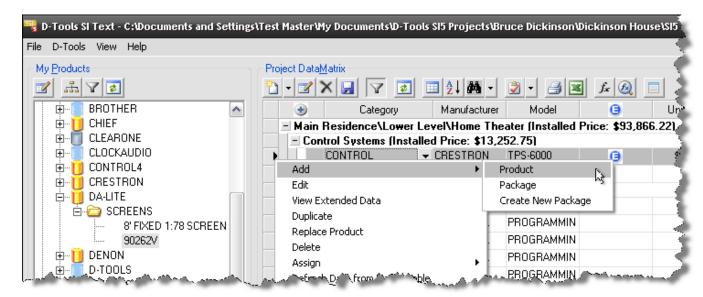


If you chose to add a Package with the dropdown arrow, the **Add Package** form will open. This form allows you to choose a Package to add to the Project as well as a place for you to select your Location and/or Zone for the Package.



The "Products in package can be in different Location/Zones" option disables the Location and Zone selections on this form. You would then assign the Locations and Zones in the PDM as described in the "Assigning Locations and Zones" section of this chapter.

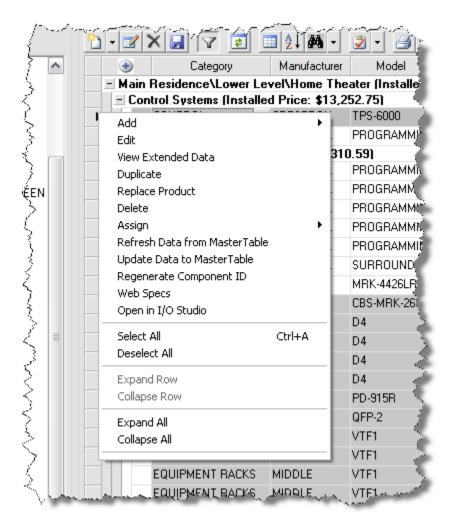
A third way to add a Product or Package to a Project is to right-click any Product in the **PDM** and select **Add->Product** (or Package):



Either the Add Product or Add Package form will open.

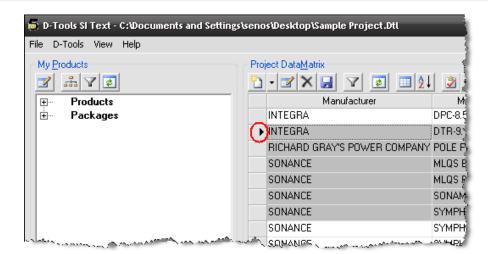
Additional Right-Click Options

Right-Click Options can apply to individual products, multiple selected products and Product Groups. The screenshot below shows the other available options when you right-click a Product or **Group Heading** that is selected in the **PDM**.





Some of these options will apply across multiple Products, some only for the primary selected Product or Group. Selected Products are indicated by a gray row color, and

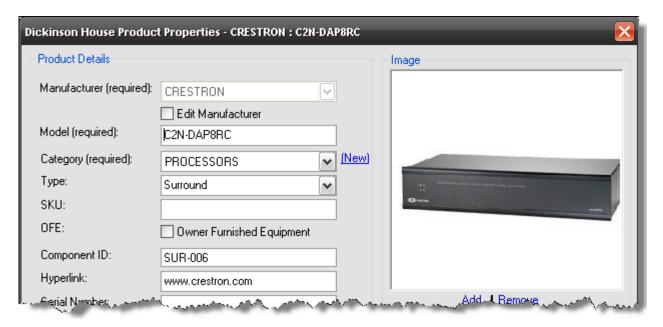


the primary selected Product is indicated with an arrow in the PDM.

To select multiple items in the PDM, use your [Ctrl] or [Shift] keys.

Right-Click->Edit

This works for the primary selected Product or Package in the **PDM**. This will open a **Product or Package Properties** form:



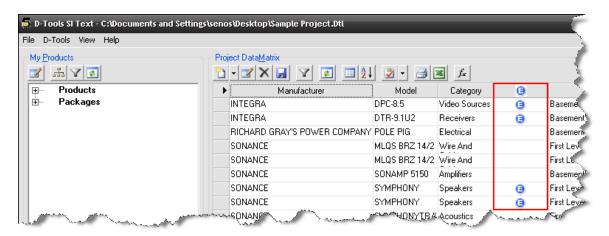


The **Edit** right-click option is the same as double-clicking a Product or Package in the PDM. You can also select the Product or Package and then click the button at the top of the **PDM**. Hitting Esc will close this window.

Right-Click->View Extended Data*

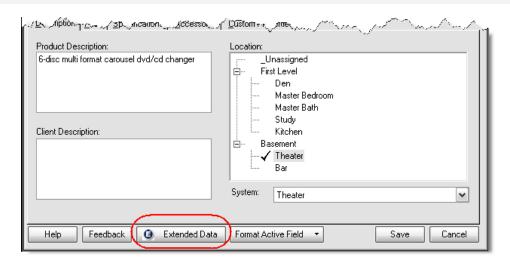
*(Data Subscription is required)

This works for the primary selected Product in the **PDM**. This will launch a web browser directed to a D-Tools server where Product manuals, brochures, and images can be downloaded, saving you the trouble of having to search manufacturer's websites for this information. Extended data is part of our Data Subscription program. A product that has extended data displays a in the Extended Data column within the PDM. You MUST maintain the D-Tools provided Manufacturer, Model and Category settings/spelling to access the Extended data.





Another way to access Extended Data if available for a given product is through the Product Properties form. At the bottom of the form, there is an **[Extended Data]** button:



Right-click->Duplicate

This works for Packages and multiple Product selections in the **PDM**. You will first be prompted with a message similar to this:



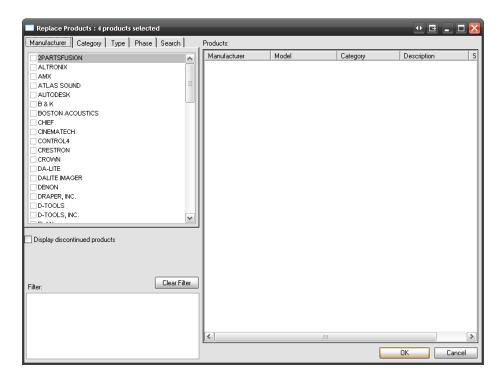
Clicking [Yes] will then open this prompt:



Enter the quantity you wish to add and then click **[OK]**.

Right-click->Replace Product

This works for the primary selected Product in the **PDM**. This allows you to change the selected Product to any other Product in your database.



Right-click->Delete

This works for Packages and multiple Product selections in the **PDM**. This will remove the selected Products or Packages from the Project.



You can also delete Products or Packages by selecting them and clicking the

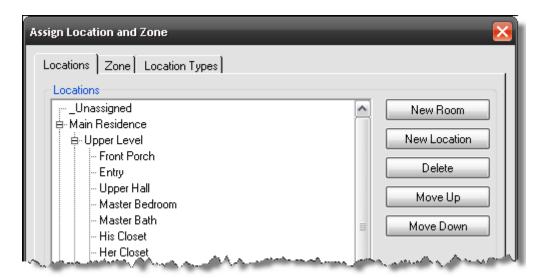
[Delete] key on your keyboard or by clicking the button at the top of the PDM.

Right-click->Assign->Location and Zone/Location/Zone/Head End

This works for Packages and multiple Product selections in the **PDM**. You have four assignment options here: "Location and Zone", "Location", "Zone", and "Head End".

Locations and Zone:

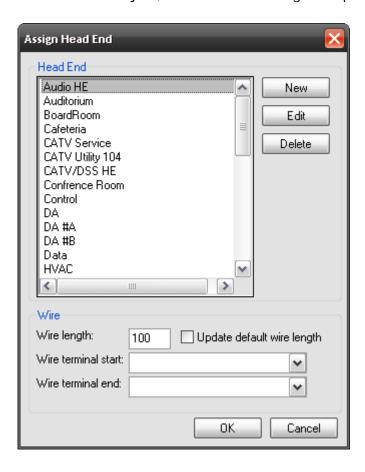
Use this command to change the Location and Zone for the selected Products and/or Packages. Generally you would use this option instead of selecting "Location" or "Zone" individually. The **Assign Location and Zone** form opens:



Use the tabs to make your selections.

Head End:

The Head End assignment only applies to Wire and Cable, and only to Wire and Cable assigned to a Phase that has the associated Head End action. Confused? Head End is the "end point" of the wire. By default, the "Rough-In" phase is the only SI 5 phase that ships with the Head End action. When a "Rough-In" Wire is added to a Project, the Head End dialog box opens as shown below:



If you ever want to reassign a Head End once the Product is added to the **PDM**, use this right-click option.

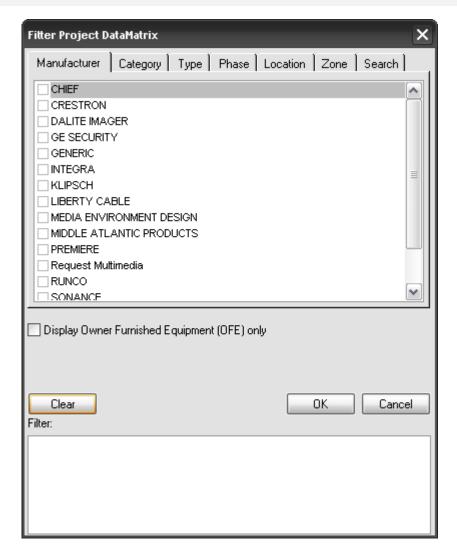
Right-click->Refresh Data from Master Table

This works for multiple Product selections in the **PDM**. This will refresh the selected Products with data from the **Master Table** database.



Example: You update the pricing Products for a manufacturer in your **Master Table** database. However, some of these Products have already been added to Projects that are in process. To update the pricing for all of the Products for that manufacturer, select them in the **PDM**, right-click->Refresh From Master Table.

Use the button to filter the **PDM** to easily find the Products you want to refresh.



Right-click->Update Data to Master Table

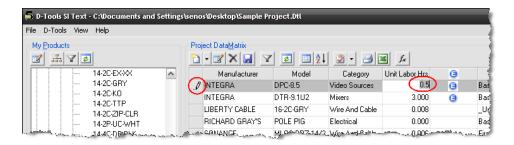
This works for Packages and multiple Product selections in the **PDM**. This does the exact opposite of the **Refresh Data from Master Table** command. This takes the selected **Product and/or Package** data from within the Project and updates the **Master Table** database. This function is used less often than **Refresh Data from Master Table** since the following form is presented each time you edit Product data using the **Product Properties** form:



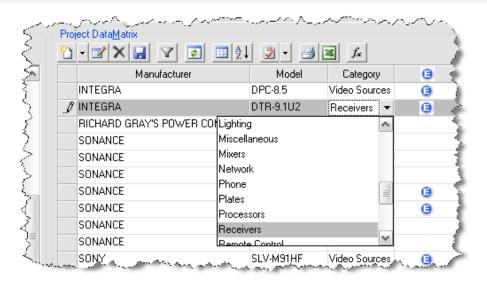
However, if you edit Product data directly in the **PDM** grid, you will not be asked to update the **Master Table**. If you wish to update the **Master Table**, use the **Update Data to Master Table** function.



To edit data directly in the PDM grid, left-click once on the field you wish to edit. The pencil icon on the left indicates that you are editing the product, and the field you selected will have focus allowing you to edit. If you intend to replace the data in the field, press F2 to select and highlight the contents. Your first keystroke will delete the field's contents and insert the typed character.

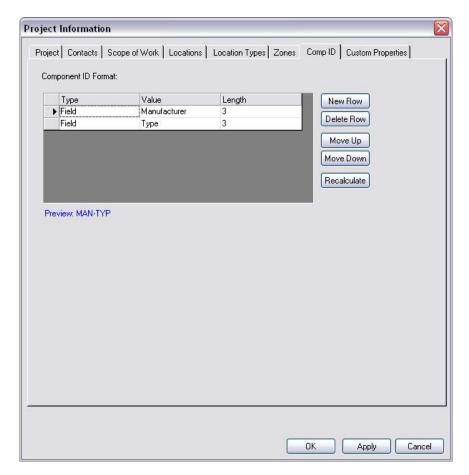


Some fields have dropdown menus:



Right-click->Regenerate Component ID

This works for multiple Product selections in the **PDM**. It will recalculate the **Component ID** for ONLY the selected Products in the **PDM** based on the **Component ID** format for the Project. To modify the **Component ID** format within a Project, select **D-Tools->Project Information** and then click the **Component ID** tab.



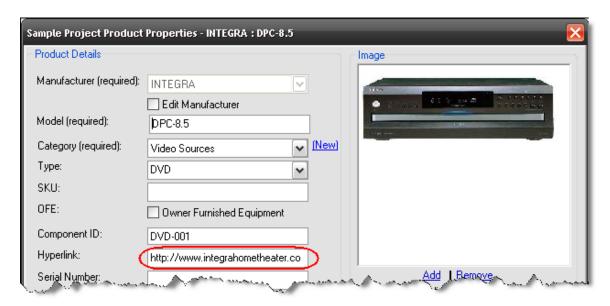
The [Recalculate] button will recalculate the Component ID for ALL Products in the PDM. If you only want to recalculate specific Products, use the right-click option instead of using the [Recalculate] button on this form.



If wire labels have already been installed that reference the Component ID, care should be taken before deciding to recalculate the IDs.

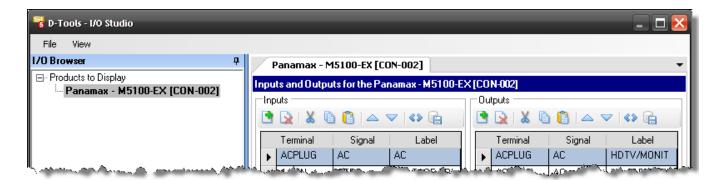
Right-click->Web Specs

This works for the primary selected Product in the **PDM**. This will launch a web browser directed to the URL in the "Hyperlink" field for the Product:



Right-click->Open in I/O Studio

This opens the I/O Studio for the product that is selected in the PDM. See the MMPD section of this guide for specs on the I/O Studio.



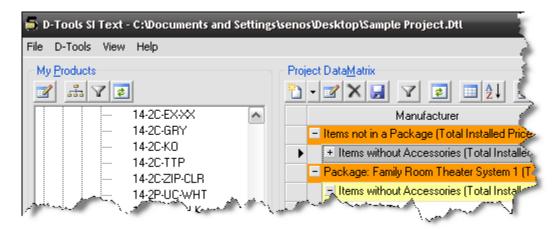
Right-click->Select All/Deselect All

These options will either select all of the Packages and/or Products in the PDM, or deselect them all.

Right-Click->Expand Row/Collapse Row

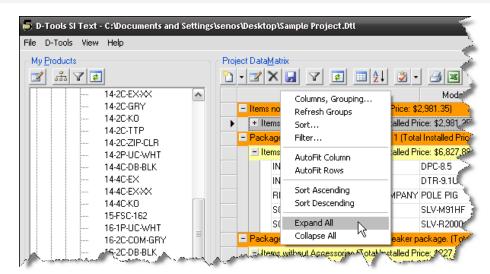
This will work for Group headers or multiple row selections in the **PDM**. This option works in conjunction with grouping. When you group Products in the **PDM**, [+] and [-] options display in

the PDM for each Grouping ([+] = Expand row, [-] = Collapse row). You can use this right-click command to Expand or Collapse the selected rows in the **PDM**.



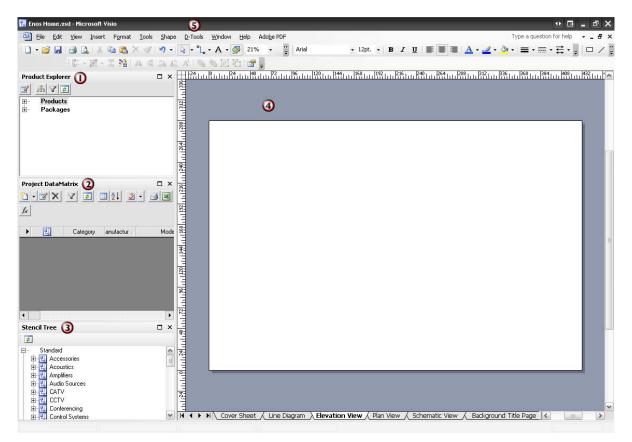


To Expand or Collapse all of the rows in the **PDM**, right-click any column heading in the **PDM** and select **Expand All/Collapse All** from the right-click menu.



Visio Interface

The Visio Project Interface is a tool for creating graphical representations of Projects. The interface is composed of five major parts: the Product Explorer, the Project DataMatrix (PDM), the Stencil Tree, the Drawing Area, and the Menu Options.





Your Visio interface may look different than the screenshot below. To change what windows display, use the D-Tools->View menu.

Product Explorer

For a complete description of the **Product Explorer** see page 264 of this manual.

Project Data Matrix (PDM)

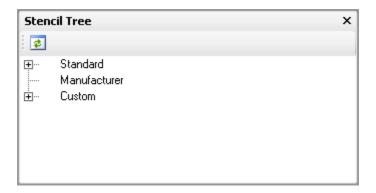
For a complete description of **Project Data Matrix** (PDM) functionality see page 266 of this manual.

3 Stencil Tree

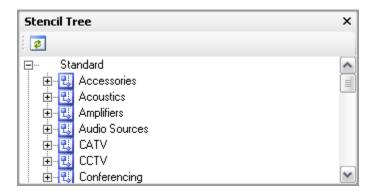
This section displays all of the stock SI 5 Stencils and downloaded Stencils available.

Terminology: Stencils are "containers" for Shapes. Shapes are what is actually displayed on the Drawing Pages within Visio.

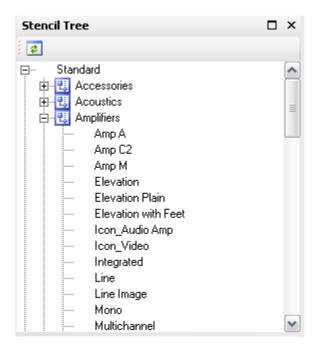
There are three "sections" in the Stencil tree: Standard, Manufacturer, and Custom.



The Standard category lists the stock D-Tools Stencils based on Category. These stencils contain Generic Shapes. Generic Shapes have a one-to-many relationship with Products in the **SI 5** database.



There are a few ways to view the Shapes within a stencil. To view the Shapes by name, click the [+] next to the stencil name:

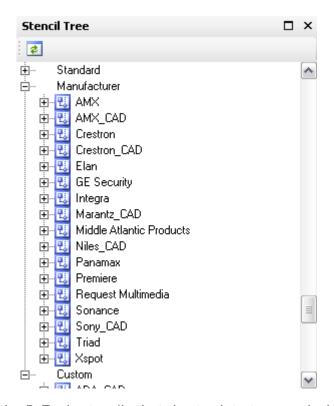


If you want to see icon representations of the Shapes, right-click the Stencil name and select "Display Docked Stencil" from the right-click menu. This will open the Shapes window and display the Shapes.

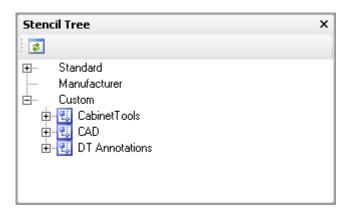


322 Visio Interface

The Manufacturer section lists any D-Tools Manufacturer Stencils that you have downloaded. These stencils contain specific Shapes created for the particular manufacturer. Most of the Shapes in these stencils have a one-to-one relationship with Products in your **SI 5** database.



The Custom section lists the D-Tools stencils that don't relate to a particular Category or Manufacturer. These stencils will be discussed later in the "Drawing Page Types" section of this chapter.





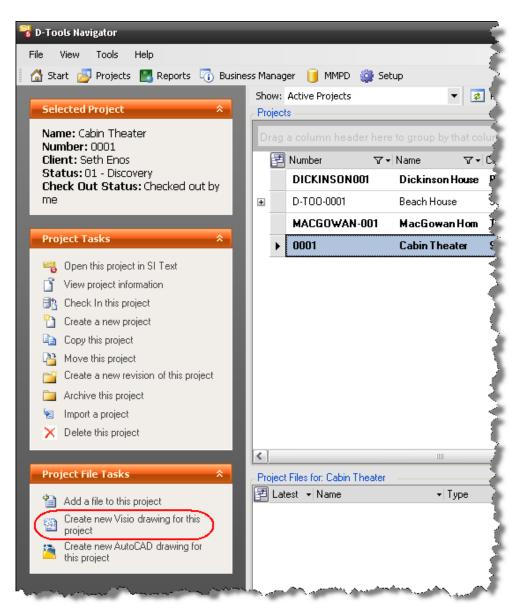
Drawing Area

This section of the interface is where you will create your drawing pages. The drawing pages for the Project are listed as tabs along the bottom. There are six page types in the stock SI 5 Visio file templates: Cover Sheet, Line Diagram, Elevation View, Plan View, Schematic View, and Background Title Page. These page types and their properties are discussed on page 325.

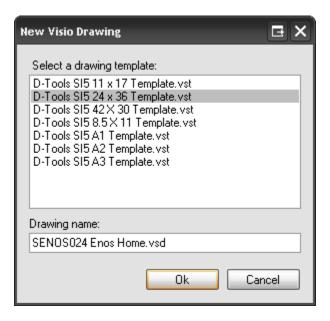


Creating a Visio file for an SI 5 Project

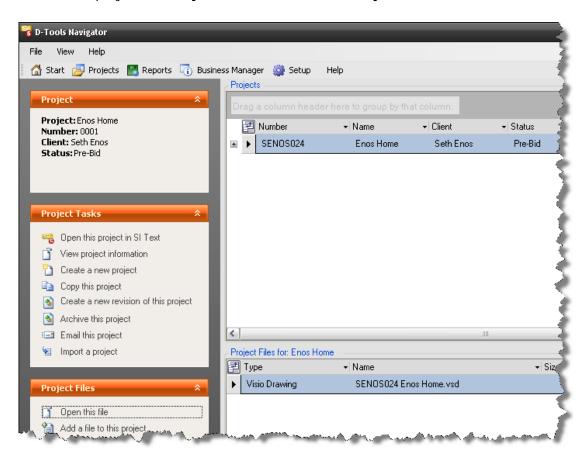
Creating a Visio file for an SI 5 Project takes place in the Projects tab of the SI 5 Navigator. Select a Project in the Projects section of the form and then click the "Create new Visio drawing for this project":



The Select Template form will open:



When you select a template, the default name for the file will be "Drawing1.vsd". We recommend that you change this to something a little more specific to the Project. When finished, click **[OK]**. The Visio file will display in the Project Files section of the Projects tab:



Each one of the stock **SI 5** Templates creates a Visio file with six default drawing pages set to the size indicated in the name of the Template. The six types of drawing pages are: Cover Sheet, Line Diagram, Elevation View, Plan View, Schematic View, and Background Title Page. Each page type has unique properties, all of which are detailed in the "Drawing Page Types" in the following section.

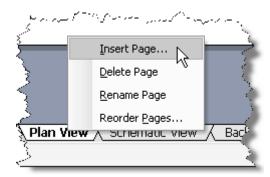
You can create your own Visio templates. See Creating SI 5 Visio Templates on pg. 400.

Drawing Page Types

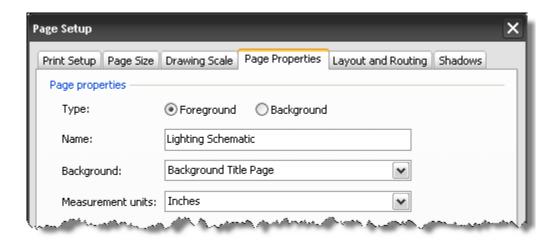
The six types of drawing pages are: Cover Sheet, Line Diagram, Elevation View, Plan View, Schematic View, and Background Title Page. You may add as many drawing pages as you want to a Visio Project.

Example: To add a drawing page to a Visio file -

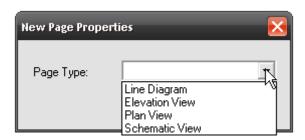
1) Right-click an existing drawing page tab and select Insert Page...



2) The Page Setup form will open:

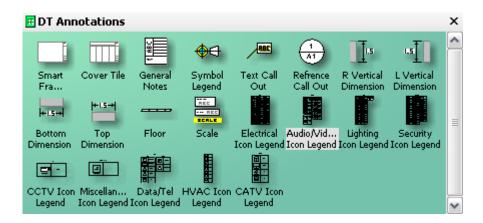


3) Name the page and make any modifications to Drawing Scale, Page Size, etc. then click [OK]. The defaults for Drawing Scale, Page Size, etc. will be the same as the page you right-clicked in step 1. You will be prompted to select a Page Type that will determine what shapes display by default on the page.



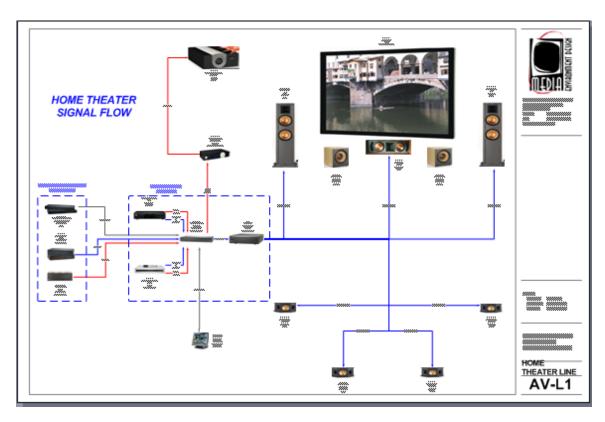
Cover Sheet

The Cover Sheet page is not intended for use with most **SI 5** Shapes. It is a page that you can use to add legends you may have created, add notes, etc. You may choose to use some of the legend shapes already created in the DT Annotations stencil:

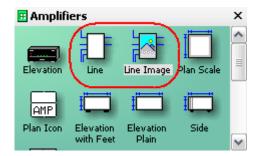


Line

The line page type is used to create a flow chart of systems within a Project. An example of a Line Diagram drawing page is below:

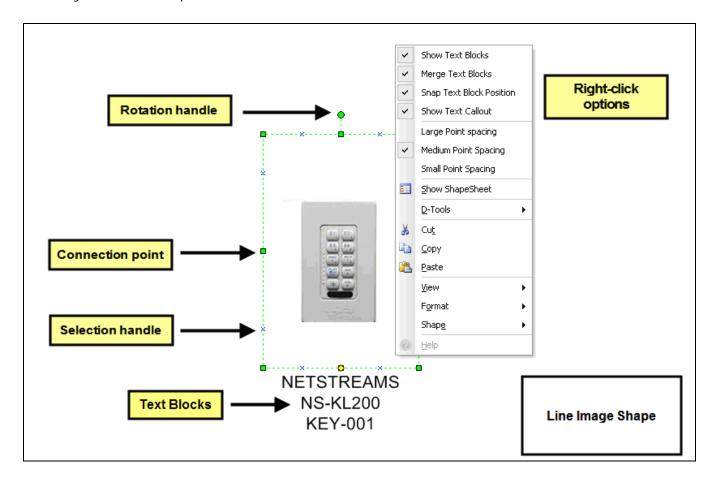


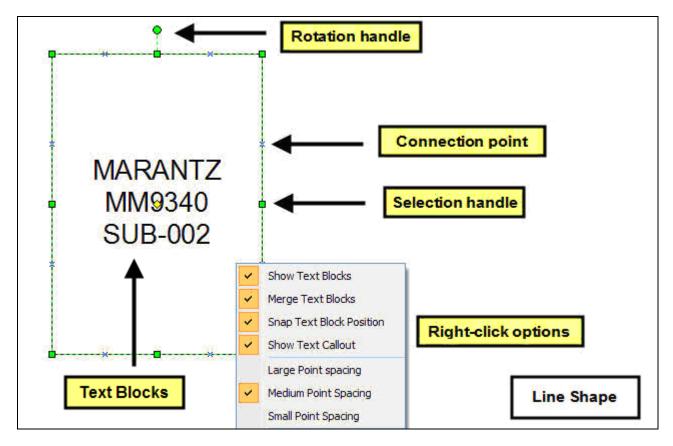
The shapes that are intended for use on this page are either the default Line Image shape that populates with the Image that you have assigned to the Product or the Line shape:



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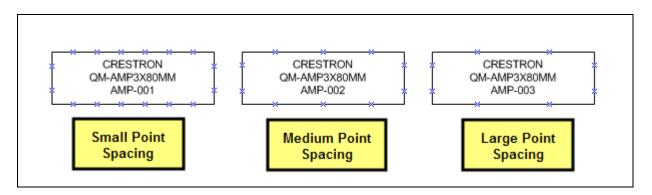
Line shapes are intended for use on a line diagram drawing page to provide a conceptual overview of the system. Line shapes are not to scale and can be resized.





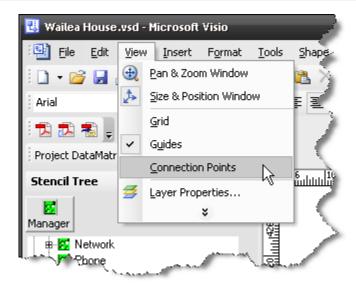
Right-click options specific to Line shapes

Large/Medium/Small Point Spacing: allows you to change how many connection points display on the shape.



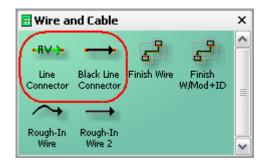


If you do not see any Connection points, you can turn them on by selecting View->Connection Points:

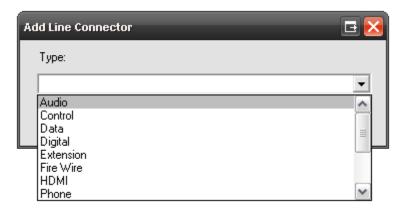


The shape can be resized using any of the Selection handles. The Connection points are there for attaching line connectors between Products to show the signal flow of a system. Although you could use Wire shapes on this page, it is not necessary.

There a few options for adding line connectors. One option is to use the D-Tools created Line Connector shapes in the Wire and Cable Stencil:



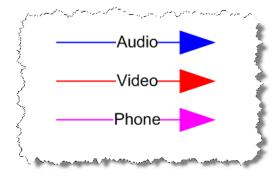
These line connector shapes are not linked to Products in the **SI 5** database like the Wire shapes are but they are linked to the Type table for wire Products. When you drag and drop the Line Connector shape onto a drawing page, you will be prompted to pick a Type for the wire you are representing with this shape:



The colors assign based on this legend:

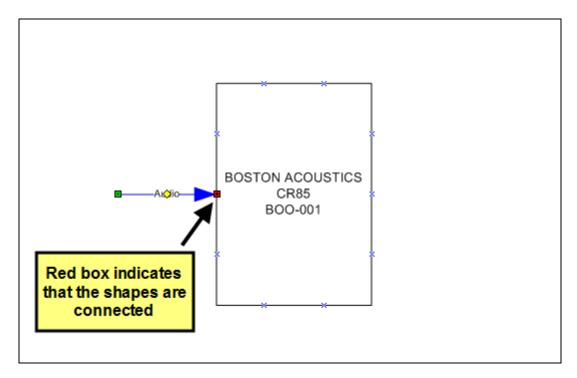


The color and the "Type" text will display on the shape:



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Each end of the line connector shape has a connection point that you can attach to a connection point on another shape:

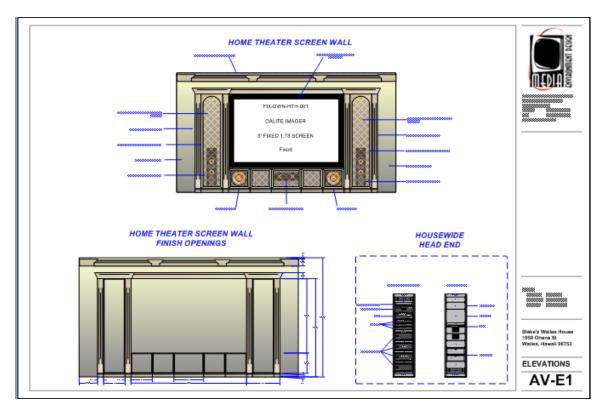


Another option for adding a line connector is to use the Visio Connector Tool function:



Elevation

The elevation page type is used to create a scaled representation of systems within a Project. The most common use for an elevation page is for building racks. An example of an Elevation drawing page is below:



The shapes that are intended for use on this page type are either the generic Elevation shapes from the Category stencils or a Product specific shape from a Manufacturer stencil.

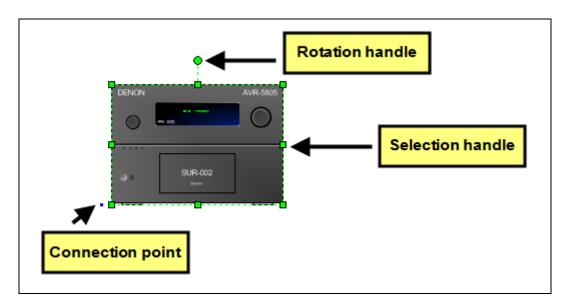




Even though the shape on the left is a generic representation of the Product, the

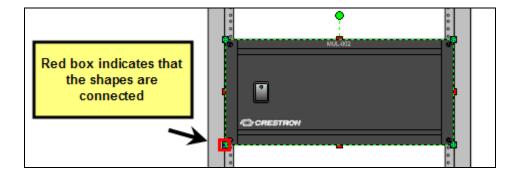
shape populates with the Manufacturer, Model, Component ID, and Type fields. The fields that display vary between shapes.

Elevation shapes are scaled shapes based on the height and width of the Product.



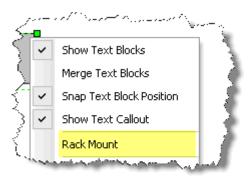
These shapes cannot be resized using any of the Selection handles. In order to resize them, you must make changes to the properties of the Product.

The Connection point is there for connecting to other shapes, i.e. a rack shape.

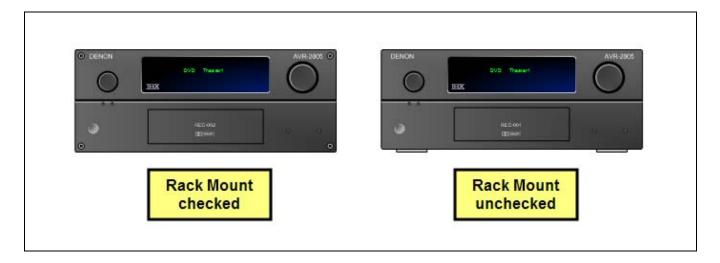


Depending on what Category the Product is assigned, there will be different right-click options.

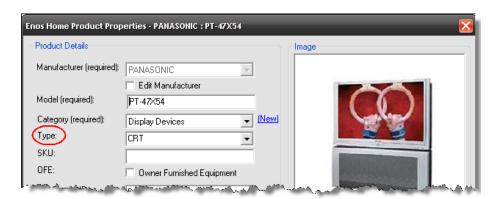
Anything that can be rack mounted like an amplifier, video source, receiver, etc. will have a Rack Mount option:



Rack Mount - when checked, the shape will display screw shapes, when unchecked the shape displays feet

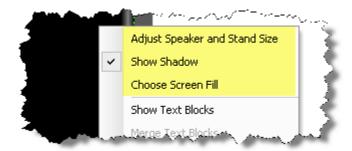


Display Devices have specific options depending on the Type assigned to the Product. Remember the Type field?

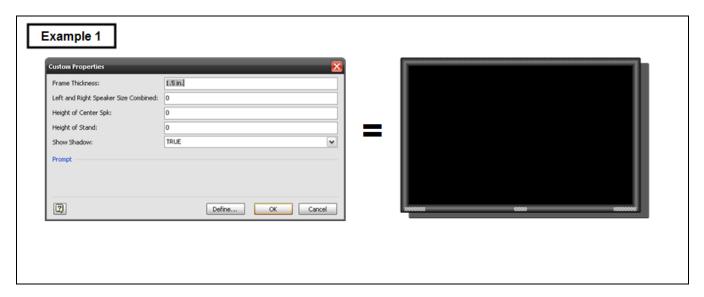


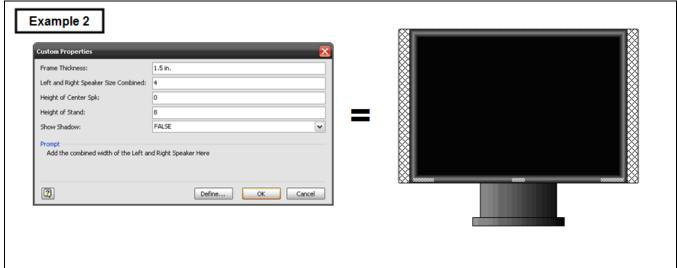
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For example, the Type "CRT" will display only the "Choose Screen Fill" option while Type "LCD" or "Plasma" will display "Adjust Speaker and Stand Size" and "Show Shadow" options:



Adjust Speaker and Stand Size – opens a Custom Properties form for edit.





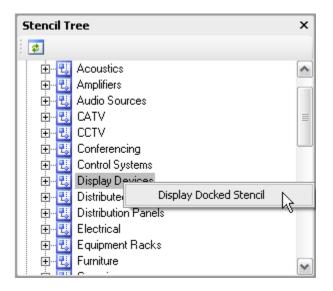
Show Shadow – displays a shadow for the shape (see Example 1 above)

Choose Screen Fill – allows you to choose a fill image for the screen

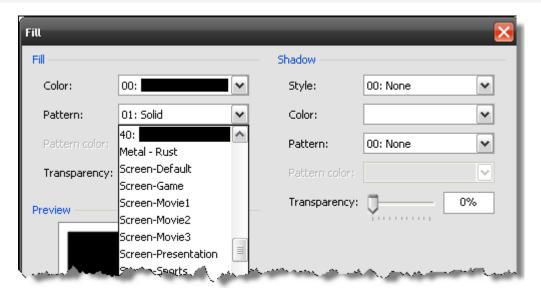




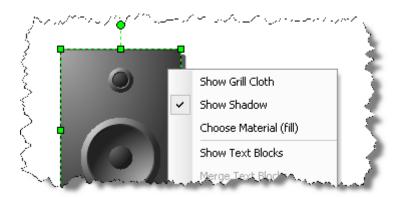
In order for the "Choose Screen Fill" option to function you must right-click the Display Devices stencil and select "Display Docked Stencil":



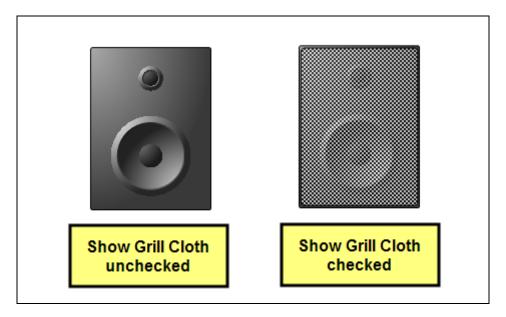
When you select "Choose Screen Fill", the Fill form opens and the fills will be available for selection from the "Pattern" dropdown:



Speakers have specific right-click options:



Show Grill Cloth – displays a grill pattern on the shape



Show Shadow - displays a shadow for the shape

Choose Material (Fill) - allows you to choose a fill pattern for the speaker

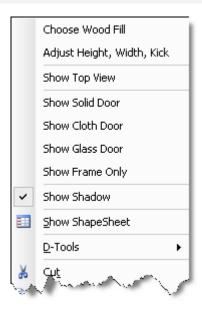
The Cabinet Tools stencil under the Custom section of the Stencil Tree is intended for use on this page.



These shapes are not linked to Products in the database so nothing is added to the PDM when you use these shapes.



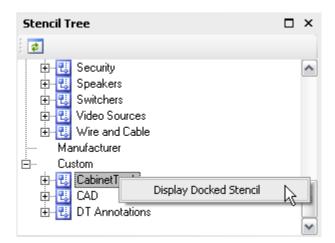
Right-clicking these shapes once they are on a drawing page lists some sizing and display options that are specific to these shapes in addition to the standard right-click options. The standard right-click options are discussed on page 370.



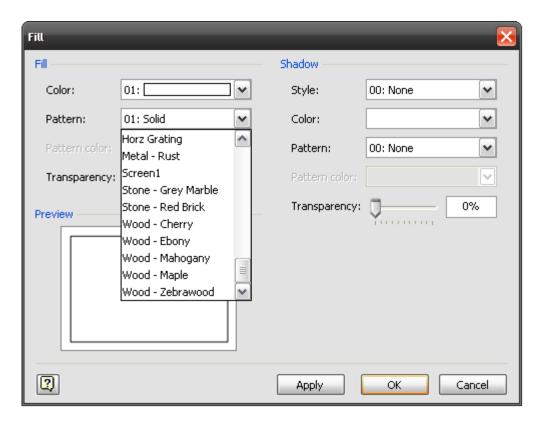
Choose Wood Fill - allows you to choose a wood fill pattern for the cabinetry



In order for the "Choose Wood Fill" option to function you must right-click the Cabinet Tools stencil and select "Display Docked Stencil":

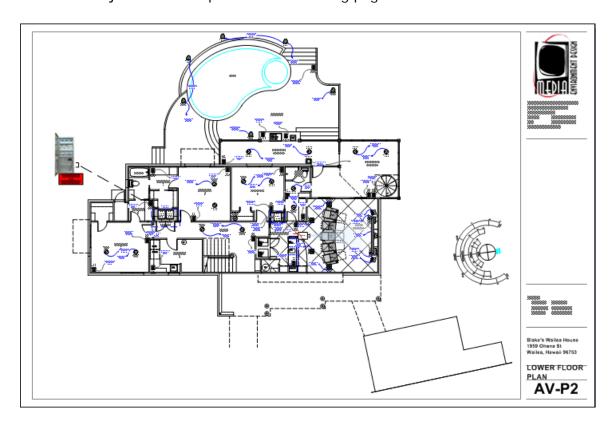


When you select "Choose Wood Fill", Fill form opens and the fills will be available for selection from the "Pattern" dropdown:



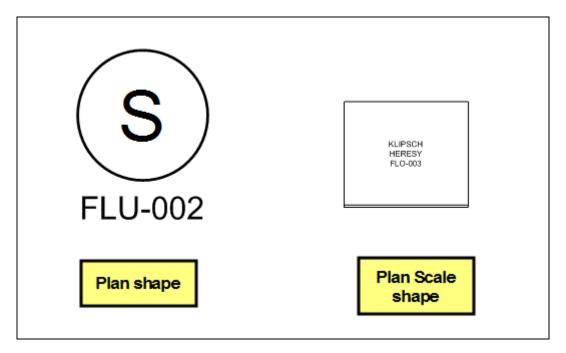
Plan

The plan page type is generally used with a floor plan to show an overhead view of where products are installed in a Project. An example of a Plan drawing page is below:

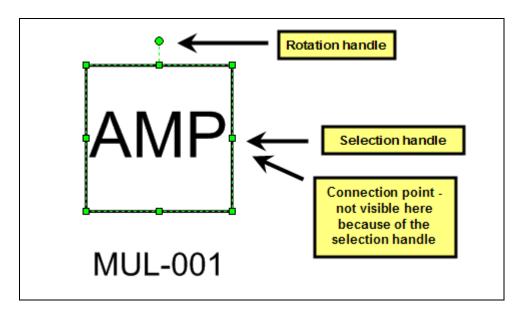


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The shapes that are intended for use on a plan drawing page type are very basic shapes. There are two different style shapes you can use on this page type: Plan shapes and Scale Plan shapes.

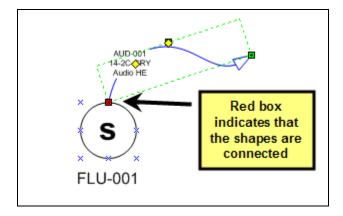


Plan shapes are not to scale and can be resized. Most stencils also have a Scale Plan shape that is to scale based on the Products width and depth. Scale Plan shapes cannot be resized using the selection handles. In order to resize them, you must make changes to the properties of the Product.

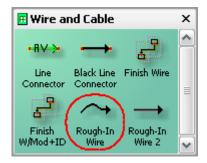


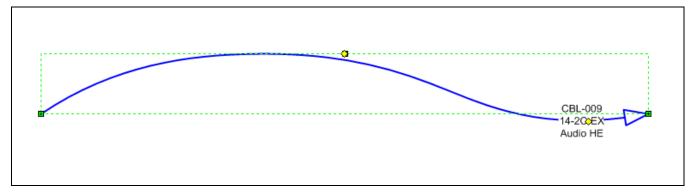
The connection points on these shapes are intended for use with Wire and Cable shapes. The connections made with Wire and Cable shapes are recorded for reporting. Example reports are the

Brother Wire Labels and the Wire Checklist reports. See "Brother Wire Labels" on page 526 for more detail.

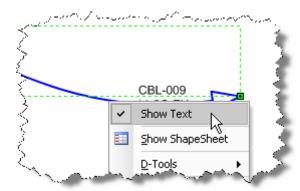


The wire and cables shape that drops by default on a plan page is the Rough-In Wire shape:

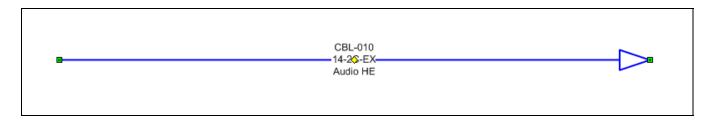




There is a connection point at each end of the wire and the text block displays the Component ID, Model, and Head End. Right-clicking allows you to hide the text block:



The Rough-In Wire 2 shape is straight, not squiggly:



To change a shape, see the Right-Click->D-Tools->Shape->Change option on page 379.

If a wire shape is connected to another shape on a Visio page, if you drag that product to another page the wire will automatically on the page as well.

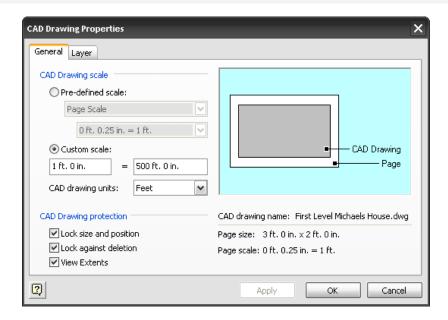
Inserting a file of the floor plan is ideal on this page because it saves you the trouble of drawing out rooms. Ideally you would insert an AutoCAD file onto the Visio page or you can insert an image of the floor plan if that is all you have.



Inserting a CAD drawing saves a ton of time and it is a function of Visio:



The form will default to Custom scale because Visio makes an attempt to fit the CAD drawing on the page.



You can leave it if you are not worried about scale or you can select Pre-defined scale, select Architectural, and then select 1/4" = 1' (if you know what scale the CAD drawing is, use that instead). Click [Apply] to see if this size works. If it does not, then you can change your Visio drawing page scale and try inserting the CAD drawing again.



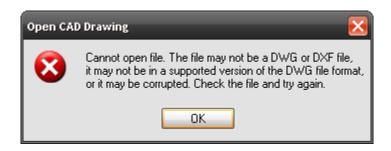
Once the AutoCAD drawing is on the page, you will want to lock it so you don't accidentally select the CAD image. To do this, right-click anywhere on the drawing page and select **View->Layer Properties...** Click the cell in the "Lock" column.





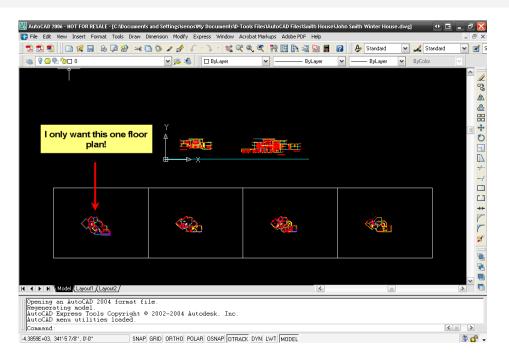
The AutoCAD file must be "cleaned" before it can be inserted into Visio. This cleaning must be done in AutoCAD. If you do not have a copy of AutoCAD, the architect or builder will do this for you.

The most common error you will see when importing an AutoCAD file into Visio is this:



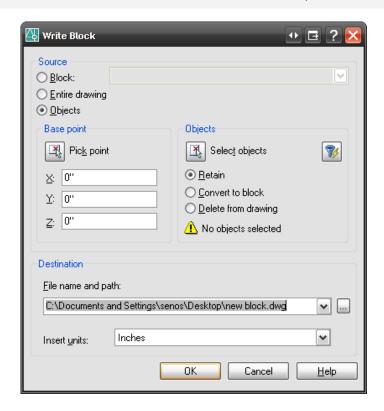
The most common reason for this error is that the AutoCAD file is not in AutoCAD 2000 (or earlier) format. The method described below will take care of this error as well as other issues that are encountered when inserting an AutoCAD file into Visio.

- 1) Verify that the Drawing (.DWG) is in Model Space (not Paper Space).
- 2) Run the Command: zoom extents
- 3) Verify that there is only one "image" in the Drawing. Many AutoCAD Drawings have multiple "images" as shown below:

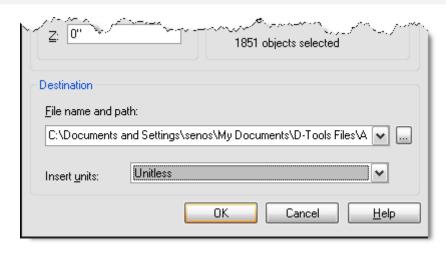


To create a new separate drawing file for each view that you want, follow these steps:

a) Run the command wblock. The Write Block form will open:



- b) Click the [Select objects] button
- c) Select the objects that you want and then click [Enter] on the keyboard. You will be returned to the Write Block form. Choose a file name and path, and change the Insert units to "Unitless".

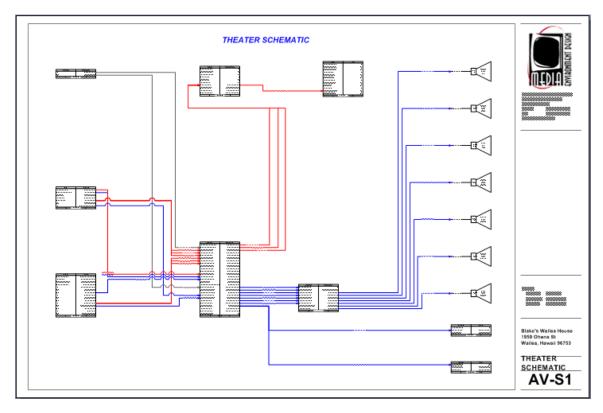


- d) Now you would open the new file you just created in AutoCAD and start over with the "Preparing an AutoCAD file for insertion into Visio" process.
- 4) Run the Command: **units** The Drawing Units dialog will open. Verify that the "Type" is set to Architectural and the "Units to scale inserted content" is set to Unitless.
- 5) Run the Command: **xref** The Xref Manager dialog will open. If there are xrefs, you can Bind them or if the Status of the xrefs is "Not Found" or "Unloaded", Detach them.
- 6) Run the Command: **purge** The Purge dialog will open. Check "Purge nested items" and uncheck "Confirm each item to be purged"
- 7) Run the Command: audit
- 8) Type "y" to fix any errors.
- 9) Save the drawing as an R14 DWG or an R12 DXF file if these are options in your version of AutoCAD. If you don't have one of these options you can save as an AutoCAD 2000 DWG.

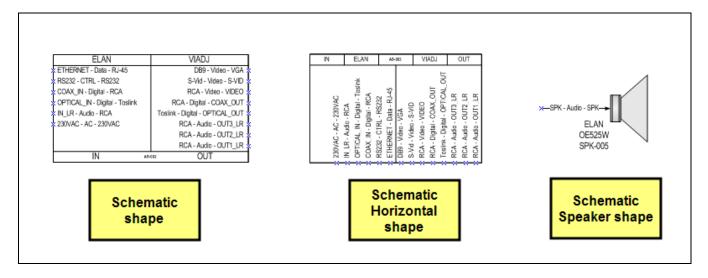
The procedure described above will work for most AutoCAD Drawings. For instructions on importing an AutoCAD Drawing into Visio, adding Visio Shapes, then exporting back to AutoCAD ("Round Tripping") see the "Round Tripping: AutoCAD to Visio...then back to AutoCAD" section in this chapter pg 403.

Schematic

The schematic page type is used to create the wiring diagrams for systems within a Project. An example of a Schematic drawing page is below:



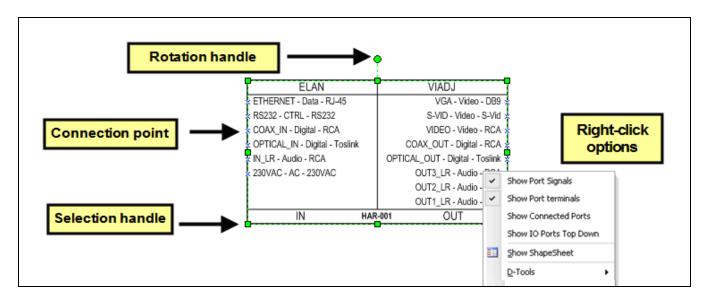
The shapes intended for use on this drawing page type list the inputs and outputs for the Product.



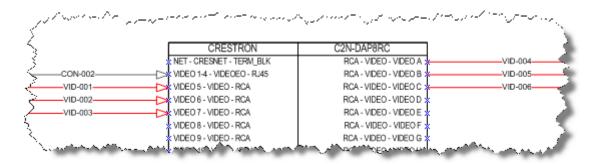
The Schematic shape will drop by default for all Categories except Speakers and Wire and Cable. If you want to change the default shape that drops, see the **Right-Click->D-Tools->Shape->Change Shape** option pg 379.

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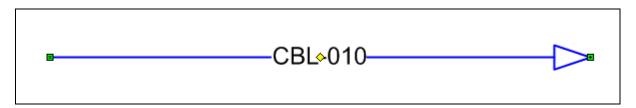
Schematic shapes size vertically automatically based on the number of inputs and outputs for a Product. The selection handles can be used to size the shapes horizontally. Each input and output listed has a connection point.



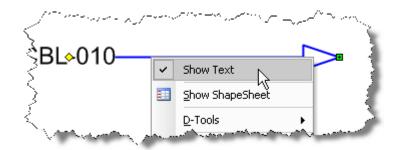
Wire and Cable shapes are used on this page to connect Products. The connections made with Wire and Cable shapes are recorded for reporting. Example reports are the Brother Wire Labels and the Wire Connection reports. See "Brother Wire Labels" on page 526 for more detail.



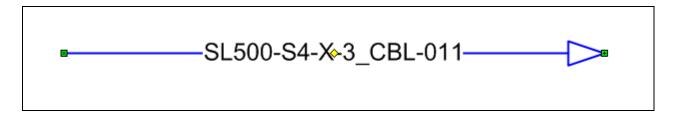
The wire and cables shape that drops by default on a schematic page is the Finish Wire shape:



There is a connection point at each end of the wire and the text block displays the Component ID. Right-clicking allows you to hide the text block:



The Finish W/Mod+ID shape displays the Model and Component ID fields separated by an underscore:

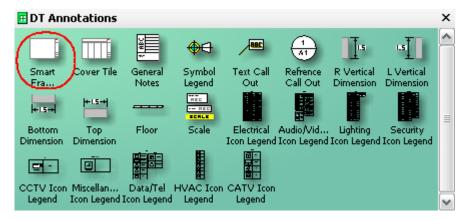


To change a shape, see the **Right-Click->D-Tools Shape->Change Shape** option on page 379.

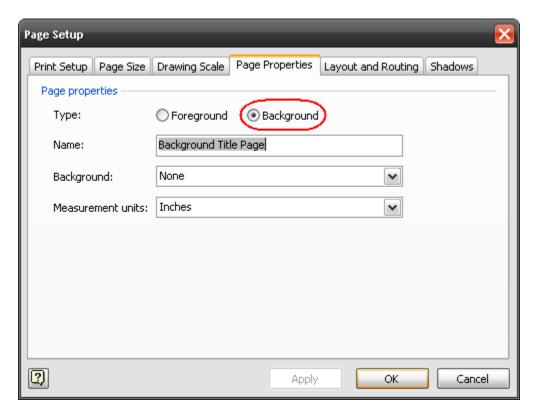
If a wire shape is connected to another shape on a Visio page, if you drag that product to another page the wire will automatically on the page as well.

Background Title Page

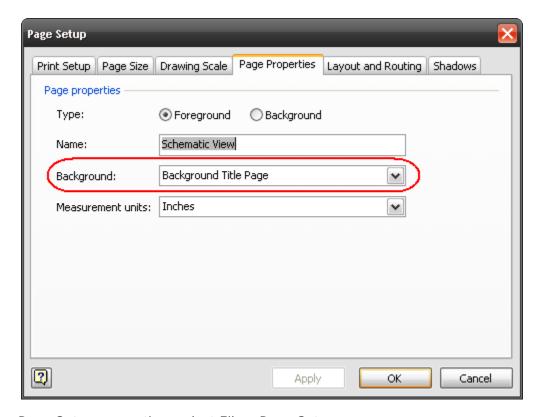
The Background Title Page is intended for use with the D-Tools created Smart Frame L-Scape shape in the DT Annotation stencil. However, you can use any way you like.



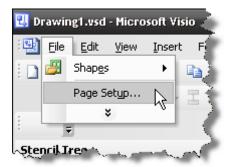
Any shape put on this page will automatically display on the other default pages (Cover Sheet, Line Diagram, Elevation View, Plan View, and Schematic View). The reason for this is due to the Page Setup properties for this page:



The Type selected is "Background". Every other page in the stock SI 5 templates is linked to this page in their Page Setup properties:



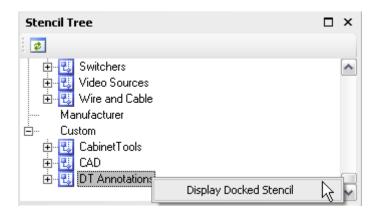
To view the Page Setup properties, select File->Page Setup:



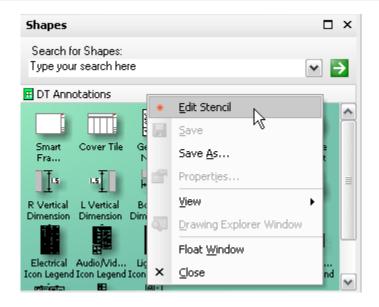
When you drag the Smart Frame L-Scape shape to this page, it will automatically display on every page linked to it.

To edit the Smart Frame L-Shape shape, follow these instructions:

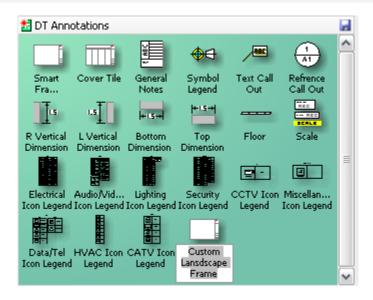
1) In the Stencil Tree, right-click the DT Annotations stencil and select "Display Docked Stencil"



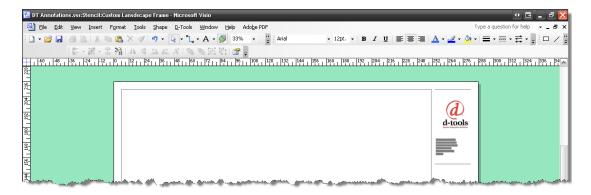
2) The stencil will display in the Shapes window. Right-click the stencil name and select "Edit stencil"



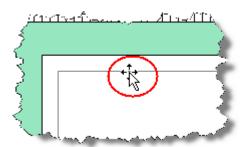
3) Make a copy of the Smart Frame L-Scape shape and paste into the docked stencil. Use any of the standard Windows commands to accomplish this copy and paste. The reason you are making a copy of the original is so you can simply delete the shape if you make a mistake. You can rename the shape anything you wish:



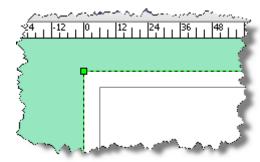
4) Double-click the new shape to open it. The green background indicates that this is a grouped shape:



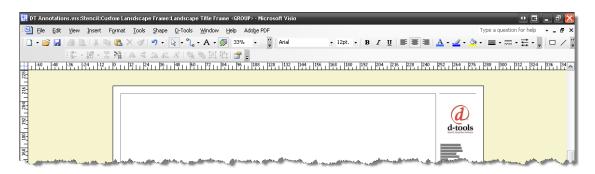
5) Select the shape by left clicking any of the individual shapes in the group. You will know you can select the shape when the cursor turns into a double arrow:



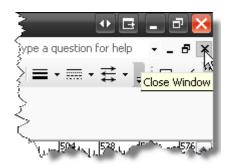
When the shape is selected, you will see a dashed green border around the shape:



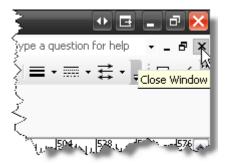
6) Select Edit->Open Landscape Title Frame from the menu options. The yellow background now indicates that the shape is not grouped and can be edited:



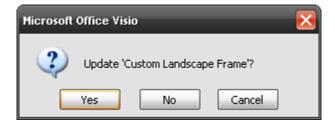
7) You can now modify the shape to your liking, e.g. remove the D-Tools logo and insert your own. When finished, close the edit window by clicking the X in the upper right-hand corner:



8) You will now be back on the grouped shapes screen (green background). Close the window by clicking the X in the upper right-hand corner:



9) When prompted to save changes to the shape, click [Yes]:



10) Right-click the stencil name in the Shapes window and select "Edit stencil" to take the stencil out of edit mode. Click Yes when prompted to save changes to the stencil:



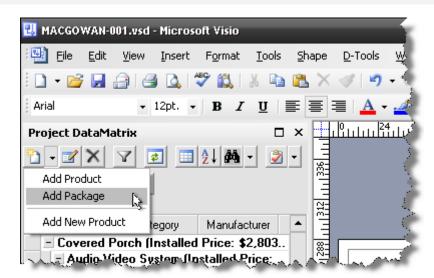
You can make any page a background page and link any other page to a background page. This is particularly handy when inserting AutoCAD floor plans. You may wish to use the floor plan on multiple Visio pages. Insert the AutoCAD file on one background page and then link the Plan pages the background page. This will keep the file size down in size since you only insert the AutoCAD file once instead of multiple times.

Adding Products and Packages

There are multiple ways to add Products to the PDM. One way to add Products and/or Packages to a Visio Project is to use the button in the **PDM** section of the screen.

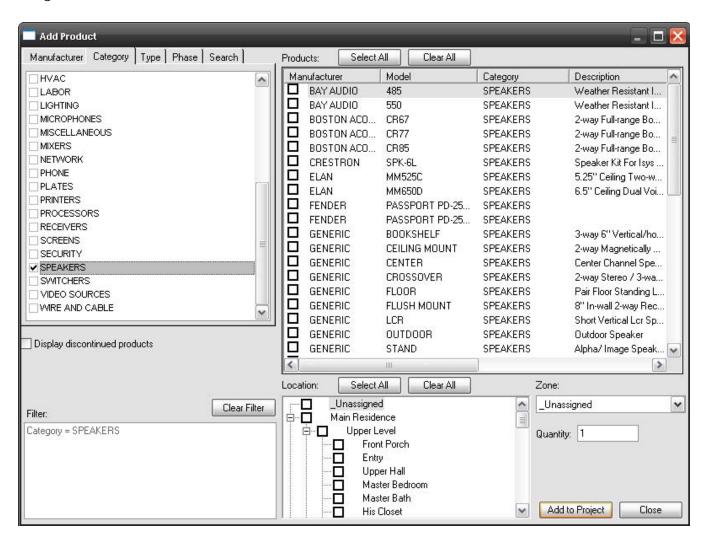


Clicking the page icon will open the Add Product form. If you want to add a Package, use the arrow section of the button and select "Add Package" from the dropdown menu:

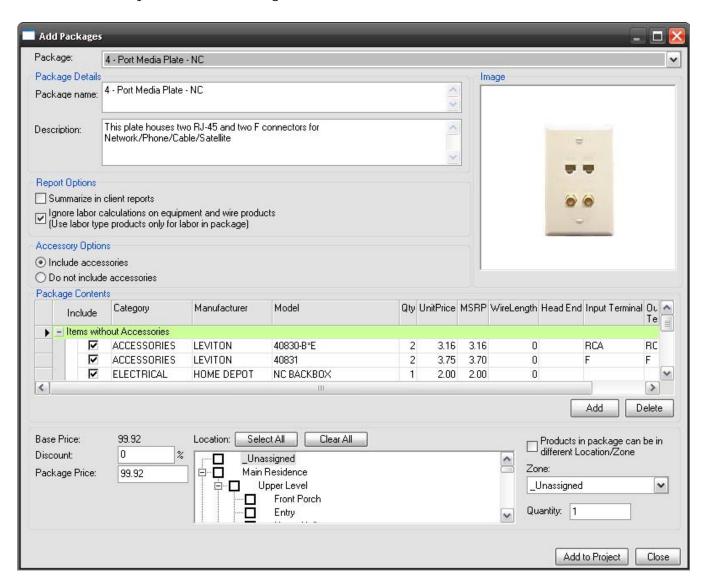


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The Add Product form allows you to filter using tabs to find the Product(s) you want to add to the Project. You can select multiple Products to be added at one time to your Project. You can also assign the Location and/or Zone as well.

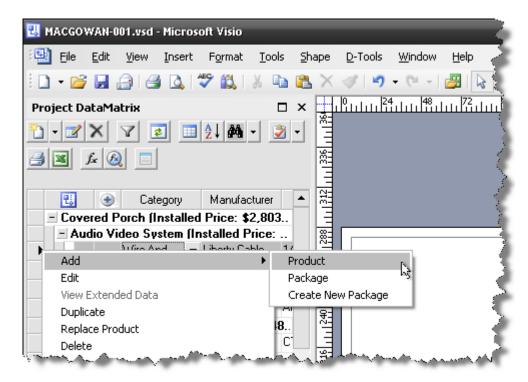


If you chose to add a Package with the dropdown arrow, the Add Package form will open. This form allows you to choose a Package to add to the Project as well as a place for you to select your Location and/or System for the Package.



360 Visio Interface

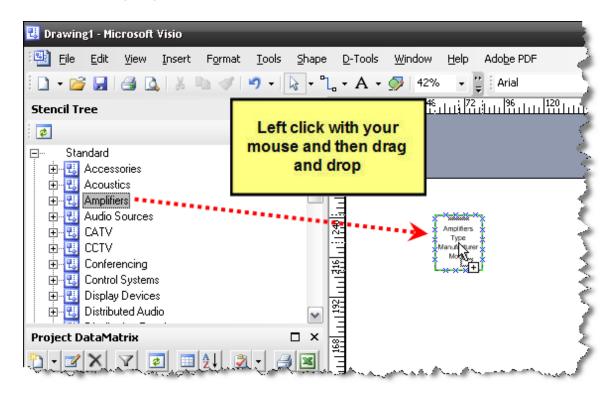
Another way to add Products or Packages to the PDM is to right-click a Product in the PDM and select Add->Product (or Package).



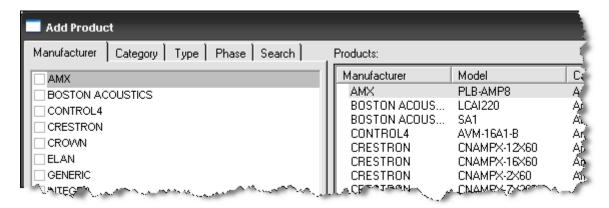


In the methods described above, adding a product to the PDM does not automatically add a Product shape to any of the drawing pages.

Another way to add Products to the PDM is to add a shape to the project on one of the Drawing Pages. You can do this a few different ways. The first way is to drag a stencil from the Stencil Tree over to a Drawing Page:



You will then be prompted to select a Product from your database:

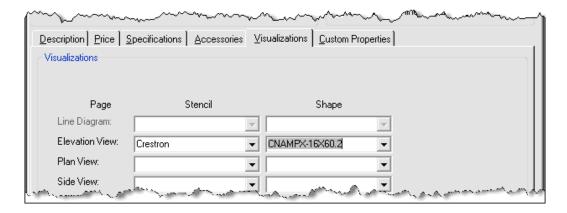


The default shape for that page type will drop on the page and the Product will be added to the PDM.

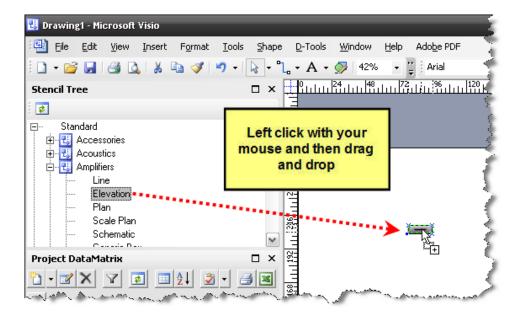


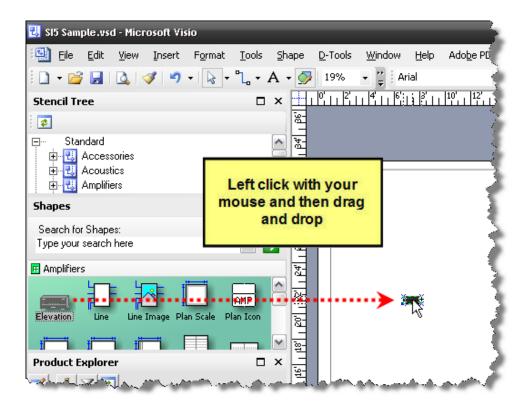
The default shape will drop for a particular page type unless you have specifically assigned a particular shape to drop for that Product. You can assign a specific shape

to drop for a particular page type on the **Visualizations** tab in the Product Properties for a Product.

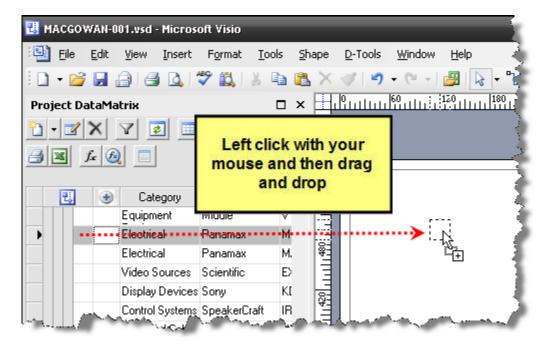


You can also drag over a particular shape to the drawing page instead of dragging the stencil if you prefer. You can do this from the names displayed the stencil, or if you have the stencil docked, you can drag the image of the shape to the page:



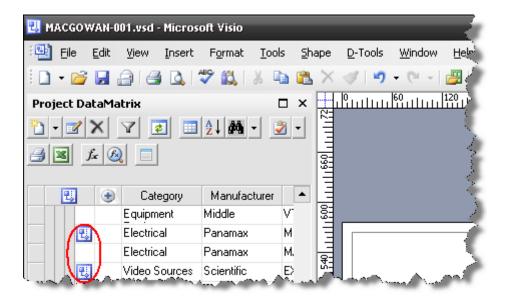


To get shapes on the drawing page for Products already in your PDM, you simply have to drag the Product from the PDM to a drawing page (use the grey block next to each Product):





Notice that the Visio icon will display in the far left column in the PDM to indicate that the Product is on the selected drawing page.



Assigning Locations and Zones

For a complete description of how to assign **Locations** and **Zones**, see "Assigning Locations and **Zones**" page 299 of this manual.



Menu Options

For a complete description of "Menu Options" see page 270 of this manual.

D-Tools->Project Information

For a complete description of the information contained under the "D-Tools->Project Information" tab see page 271 of this manual.

D-Tools->Options

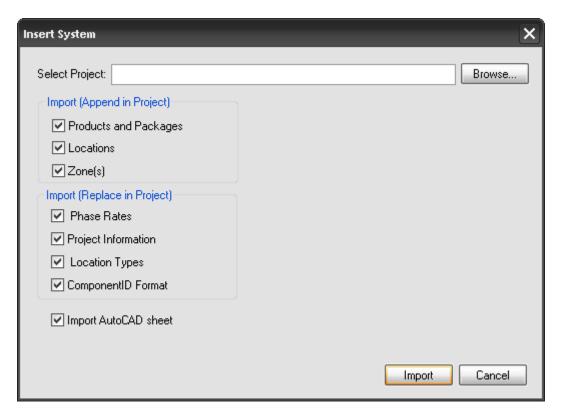
For a complete description of "D-Tools->Options" see page 280 of this manual.

D-Tools->Reports

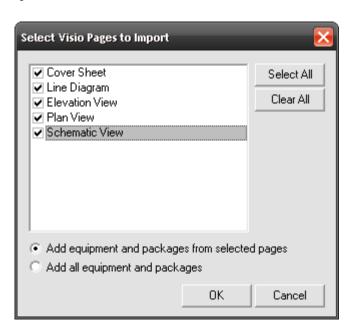
For a complete description of **Reports** see page 471.

D-Tools->Insert System

See page 290 for an introduction to Insert System functionality.



The "Import Visio Pages" option adds enhanced functionality to import only the Products and Packages that are on particular drawing page(s), rather than all Products and Packages from the Project that you are inserting. Once you [Browse...] to the Project that you want to insert and click [Import], you will be prompted to select what drawing pages you want to insert and what Products and/or Packages you want to insert.



D-Tools->Export To->Microsoft PowerPoint

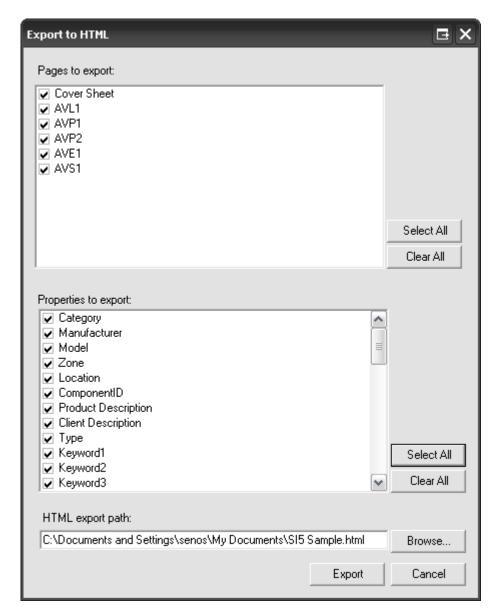
This option is only available with the Professional version of **SI 5** and with Microsoft Office 2007 installed. This will create a PowerPoint presentation based off of the Project. All drawing pages will be exported to their own slide and a project summary follows on additional slides.

D-Tools->Export To->Microsoft Project

This option is only available with the Professional version of **SI 5** and with Microsoft Project 2007. This will export the **SI 5** Project information to Microsoft Project.

D-Tools->Export To->HTML

This function will create an html document and an images folder that you can use to post your Projects on your website.



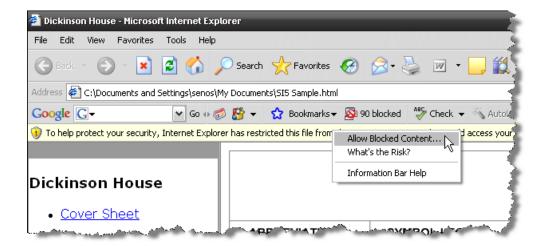
Select the drawing pages and Properties that you want to export. Then select the path where you want the files to be created and click **[Export]**.

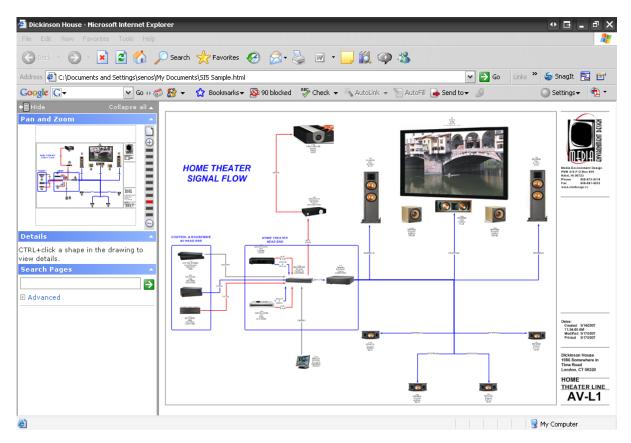


The Properties that you selected will be viewable on the html doc by holding down [Ctrl] and then clicking on a Product shape.

Since the output file is html, it can be opened in a browser to view.

You may need to right-click and select "Allow Blocked Content..." if IE displays the message below:





D-Tools->Find and Replace

For a complete description of **Find and Replace** see "**D-Tools->Find and Replace**" page 288 of this manual.

D-Tools->Update Case

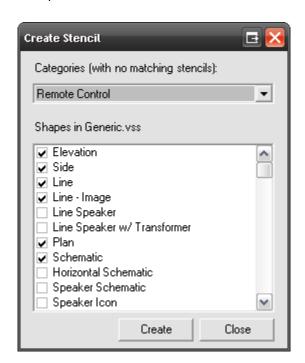
For a complete description of **Update Case** see D-Tools->Update **Case**" on page 291 of this manual.

D-Tools->View

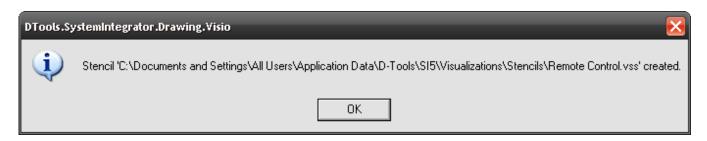
There are five options: Display Project DataMatrix, Display Product Explorer, Display Stencil Tree, Display Project Summary, and Display Line Item Summary. Use these commands if you chose to close or open any of those windows at some point while working in Visio.

D-Tools->Utilities->Create Stencils

If you have created your own Categories in **SI 5**, you may want to create a stencil with some shapes for those Categories. This option will allow you to select the Category to create a stencil for, and then list the available shapes from the Generic.vss stencil.

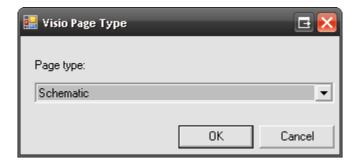


When you click [Create], the stencil will be created and placed in the proper folder:



D-Tools->Utilities->Change Page Type

There are four page types in an SI 5 Visio Project: Plan, Elevation, Line, and Schematic. Each of these page types have specific shapes that are designed to work with them. More details on these page types are available in the "Drawing Page Types" section of this chapter. Use this function if you want to change the page type for any page.



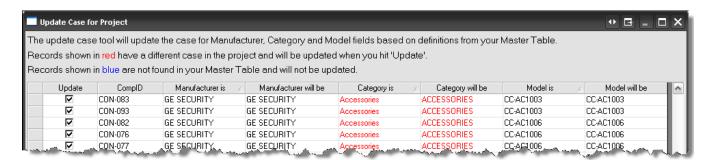
D-Tools->Utilities->Populate 'Location' and 'Zone' in Shapes

This will populate the Location and Zone on custom shapes to which the Location and Zone field have been added.

D-Tools->OrderTools

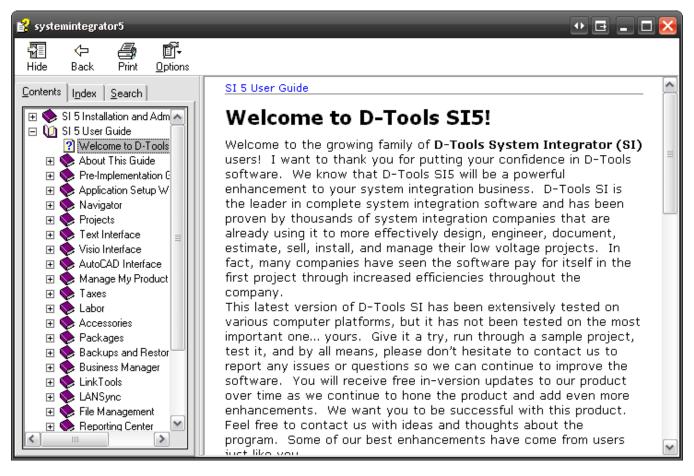
For a complete description of OrderTools see "D-Tools->Update Case

Use this to update the case settings within a project if you have made changes to your default case settings in the MMPD interface. A window will open showing what will be changed. You can uncheck any products you do not wish to change:



D-Tools->OrderTools" on page 291 of this manual.

Help->Contents\Index\Search



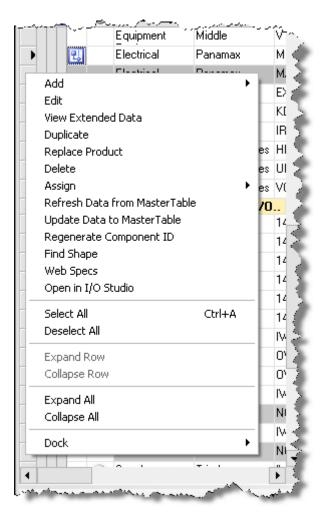
This opens an electronic version of the SI 5 User's Guide.

Right-Click Options

In addition to the Add Product/Package option described above in this section of the guide, there are additional right-click options available to you. Your right-click menus will vary depending on whether you right-click a Product in the PDM or if you right-click a shape in the Drawing Area.

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When you right click selected Product(s) or Package(s) in the PDM, the right click menu displays as shown below:



Most of these options were discussed in the Text Project Interface section of this guide. For a complete description of **Right-Click Options**, see "**Additional Right-Click Options**" page 306 of this manual. The Visio Project Interface specific options are discussed below.



Some of these options will apply across multiple Products, some only for the primary selected Product. A selected Product is indicated by a grey row color, and the

<u>4</u>:

🖶 Drawing1 - Microsoft Visio Tools Project DataMatrix Manufacturer Model ▲ Category Electrical RICHARD GRAY'S P., POLE PIG Equipm.. | MIDDLE ATLANTIC .. | RSH-5A-C Amplifiers CRESTRON CNAMPXI-16 Speakers SONANCE ELLIPSE 2.0 Acousti., SONANCE SONAFILL II **ELLIPSE FLI** Speakers SONANCE Stencil Tree □ ×

primary selected Product is indicated with an arrow in the PDM:

Right-Click->Find Shape

This works for the primary selected Product in the PDM. This option will find the shape for that product on the drawing page. The drawing page will zoom out to full screen and the Product shape will be selected on the page.

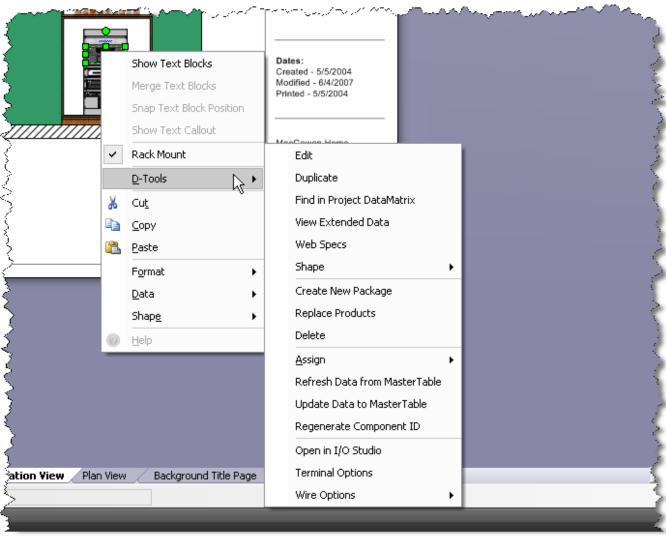
Right-Click->Dock->Left/Right/Top/Bottom/Float

#

This option applies to the PDM and will dock or float the window based on your choice.

374 Visio Interface

When you right click selected Product shapes on a drawing page, the right click menu displays as shown below:



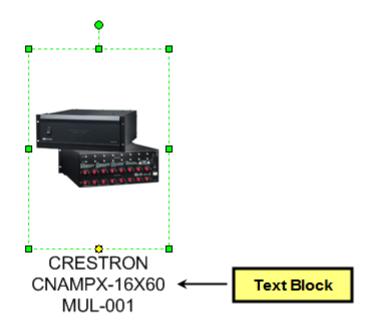
Note!

The right-click options will vary depending on what kind of shape you select.

For the following four options, a Line-Image shape is used for the screenshots: Show Text Blocks, Merge Text Blocks, Snap Text Block Position, and Show Text Callout.

Right-Click->Show Text Blocks

Displays the Manufacturer, Model, and Component ID for the Product:



Right-Click->Merge Text Blocks

There are two text blocks, one that displays Manufacturer and Model and one that displays the Component ID. Check this option to keep both of them together or uncheck this option to keep them separated. In the example below, the text blocks are not merged:

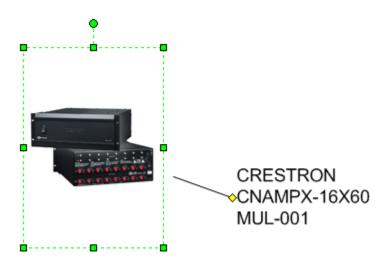


Right-Click->Snap Text Block Position

When this option is checked, the yellow handle for the text block will snap to the handles of the shape. When unchecked, they don't snap. In both of the screenshots above the text blocks are "snapped" to the shape handles.

Right-Click->Show Text Callout

This displays a line from the shape to the text block when checked:



Right-Click->D-Tools->Find in Project DataMatrix

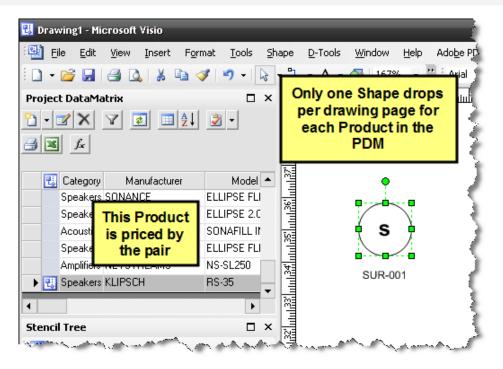
This option works for only one selected Shape at a time. This will find and select the Product in the **PDM**.

Right-Click->D-Tools->Shape->Insert Alternate View

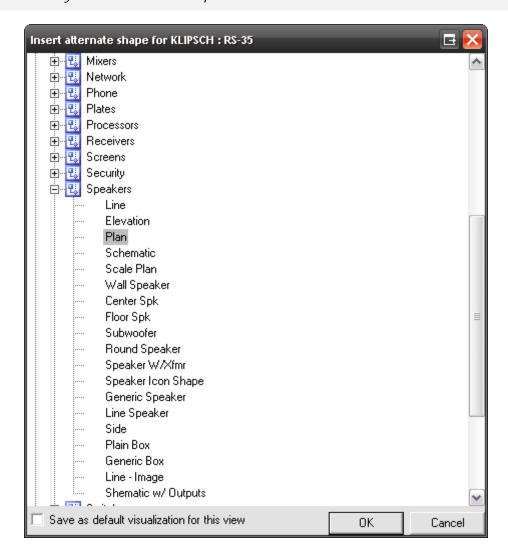
This option allows you to add a second shape to represent the selected Product to the drawing page. The shapes will have the same Component ID as each other. You can choose any shape from any stencil for this second shape.



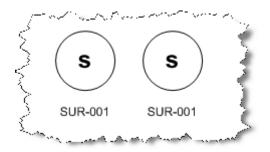
Example: You price your speakers by the pair in your database. When you add the Product to the PDM and then drag the Product to a drawing page, you only get one shape to represent the pair of speakers:



Select the shape and then Right-click->D-Tool->Shape->Insert Alternate View. Select your Stencil and Shape from the form:

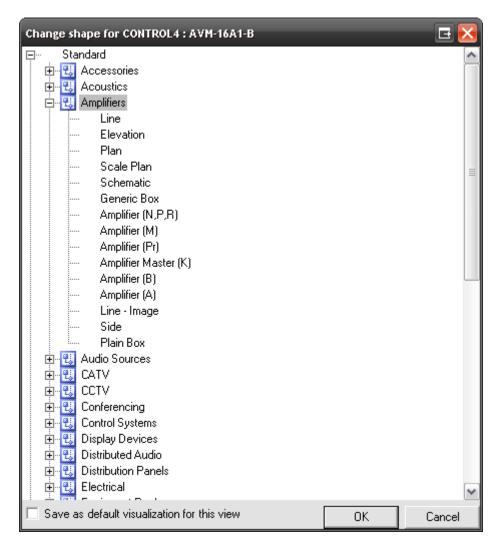


A second shape will display on the drawing page:

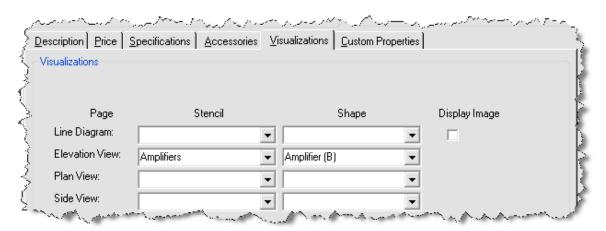


Right-Click->D-Tools->Shape->Change Shape

If the default shape that displays on a drawing page is not the shape you want, you can change the shape to any shape from any stencil.

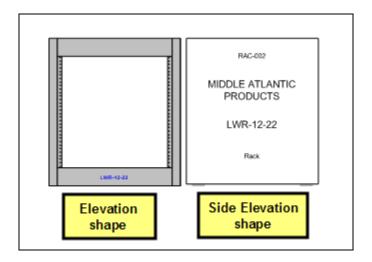


The "Save as default..." checkbox will save this setting for future use. The setting is displayed on the Visualization tab of the Product Properties form:



Right-Click->D-Tools->Shape->Generate Side View

This option will only work on an elevation page type. This will add a very basic side view of the selected Product. The side view shape is to scale based on the Height and Depth of the Product.



Right-Click->D-Tools->Shape->Link To D-Tools

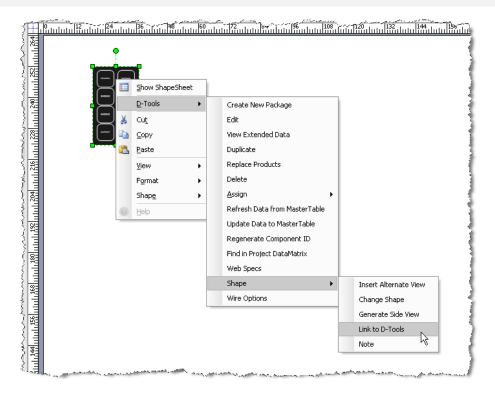
This option allows you to link a shape that you have created to a Product in the **SI 5** database. Once you create a shape and link it to a Product in **SI 5**, you may want to add the shape you created to a stencil so that you can use it in future Projects.



Example: In this example, I created a very simple 8-button plate shape using standard Visio drawing tools that I want to link to a Product in my **SI 5** database.

1) Select the shape you want to link then Right-Click->D-Tools-> Shape->Link To

D-Tools:

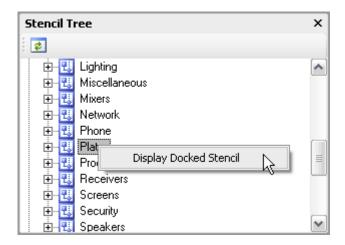


2) Select the Product that you want to link this shape to on the Add Product form:

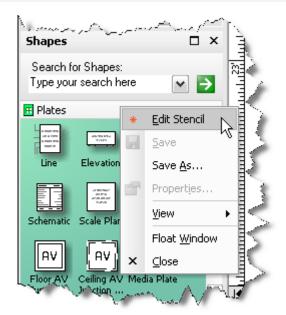


- 3) The shape is now linked to the Product that you selected and the Product has been added to the PDM.
- 4) To add this shape to a stencil for use on future Projects:

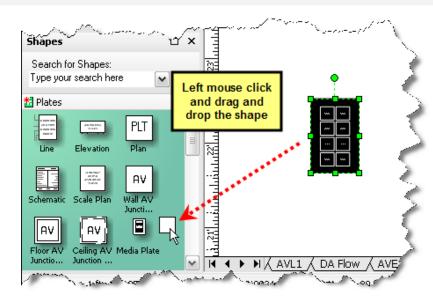
5) Right-click the stencil and select "Display Docked Stencil". In this example, I chose the Plates stencil:



6) Once the stencil is docked, right-click where the stencil name is displayed in the Shapes window and select Edit Stencil:



7) Now drag the shape from the drawing page into the docked stencil:



8) The shape will now display inside of the stencil. Rename the shape to an appropriate name.



9) Right-click the stencil name and select "Edit Stencil" to take the stencil out of edit mode. Save changes to the stencil.



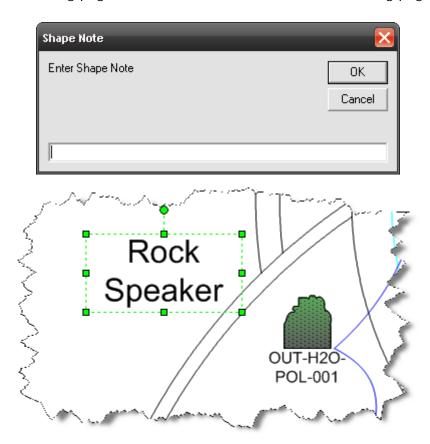
10) Now anytime that you drag this shape over to a drawing page, you will be prompted to select the Product you assigned to this shape.



This function is a one-to-one relationship with a Product in the **SI** 5 database as opposed to a one-to-many relationship like the standard **SI** 5 shapes.

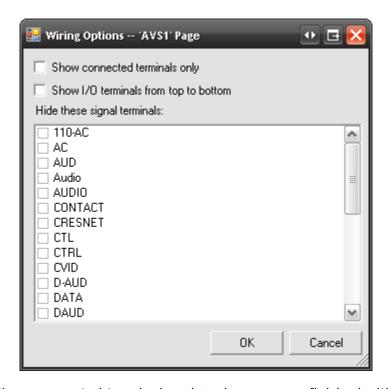
Right-Click->D-Tools->Shape->Note

This option lets you add a note about a particular shape on a drawing page. The note will appear as a text box on the drawing page and can be moved/edited on the drawing page.



Right-Click->D-Tools->Terminal Options

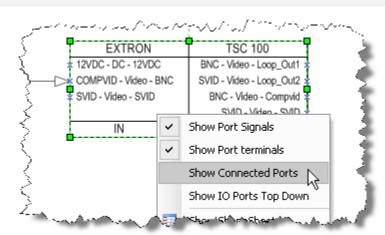
This option is only available for use on a schematic page type. This form allows you to pick and choose what signal points display on the shapes on the drawing page.



You can choose to "Show connected terminals only" when you are finished with a drawing page. This will "collapse" the schematic shapes on the page by hiding unused inputs and outputs. The "Show I/O terminals from top to bottom" will invert the I/Os on the shape.

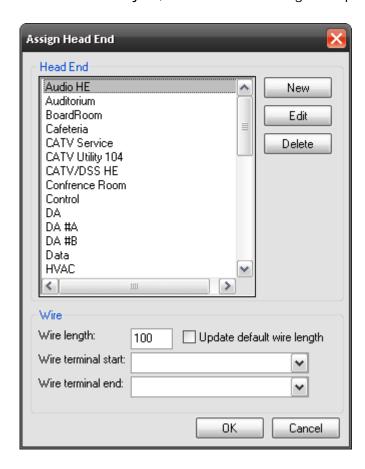


Instead of using the "Display connected ports only" and "Show I/O ports from top to bottom" options globally for the schematic page, you can right-click specific schematic shapes on the drawing page and select "Display Connected Ports" and/or "Show IO Ports Top Down":



Right-Click->D-Tools->Wire Options->Assign Head End

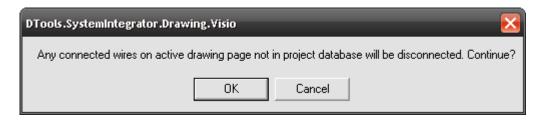
The Head End assignment only applies to Wire and Cable, and only to Wire and Cable assigned to a Phase that has the associated Head End action. Confused? Head End is the "end point" of the wire. By default, the "Rough-In" phase is the only SI 5 phase that ships with the Head End action. When a "Rough-In" Wire is added to a Project, the Head End dialog box opens as shown below:



If you ever want to reassign a Head End once the Product is added to the **PDM**, use this right-click option.

Right-Click->D-Tools->Wire Options->Check Connections

This function is a part of the wire auditing in SI 5. If you have turned off the "Prompt on Conflict" setting on your Wire Connection Options (see below) you would use this function to verify that you have no conflicting wire connections.



Right-Click->D-Tools->Wire Options->Wire Connection Options

This function gives you flexibility on how wire connections behave and whether or not they are recorded for reporting purposes. These settings let you choose how the wire auditing in SI 5 functions.



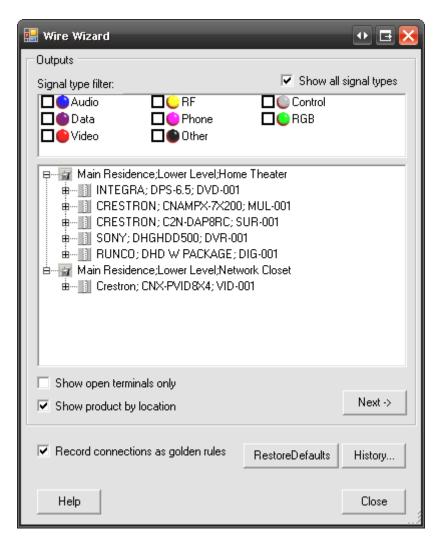
Prompt on Conflict –When this option is checked you will see a similar prompt to the one below letting you know that there is a conflict. The **[Change Setting...]** button will open the Wire Connection Setting shown above. Even if you do not have this box checked, your settings in the "Connection" section of the form still apply.



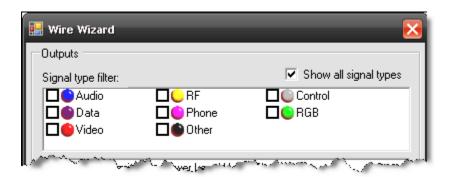
Connection Settings – there are two main options here: Store New Connection or Store Old Connection. Only one connection can be "stored" for each end of a wire. This "stored" connection is what gets passed to our reporting engine. The two sub-options for each of the main options deals with how you want the old or new connection to display on the drawing. You can either leave it connected by using the "Keep old/new connection on drawing" option or you can have the shapes separate by using the "Remove old/new connection from drawing" option. This is aesthetic only since only one connection can be "stored" as stated above.

Right-Click->D-Tools->Wire Options->WireWizard

This option is only available for use on a schematic page type. This wizard will allow you to make wire connections between schematic shapes without having to zoom in on the drawing page. There are three steps to the WireWizard: choose an output, choose and input, and choose a wire.

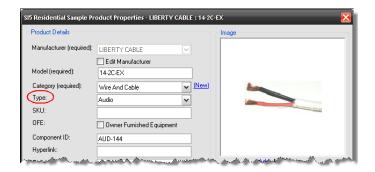


The first screen of the WireWizard form lists all of the Products on the schematic page that have outputs. You may filter by signal type if you wish by checking the boxes in the "Signal type filter" section:





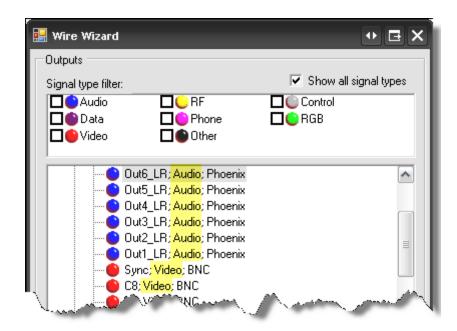
The colored icons next to the signal types reflects the color the wire shape will drop when a wire of that type is dropped on a schematic page. Remember the "Type" field?



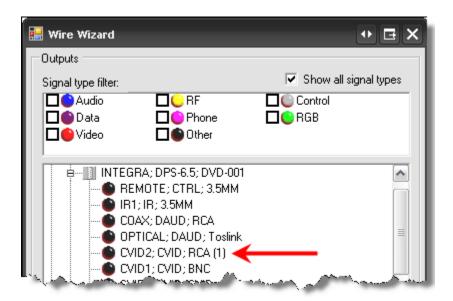
Once the wire shape is on the page, you can use the Visio function "Line Color" to change the color of the shape:



The icons that display next to outputs are colored based on the Signal assigned to the output. These colors are matched to the Signal type based on a text comparison:



Products display in the format: Manufacuter; Model; Component ID. Click the [+] next to the Products to display the output list. An output that has a wire connected to it on a schematic page will display with a (1) next to it:



There are two additional filters on this form:

Show product by location - groups Products based on their location assignment

Show open terminals only – filters the output list so that outputs that are already connected on the drawing page with a wire shape do not display in the list



With the exception of the "Show product by location" filter, we do not recommend using the filtering options unless you have verified all Product data as being consistent in naming conventions, e.g. all Audio wire is listed as Type "Audio" and

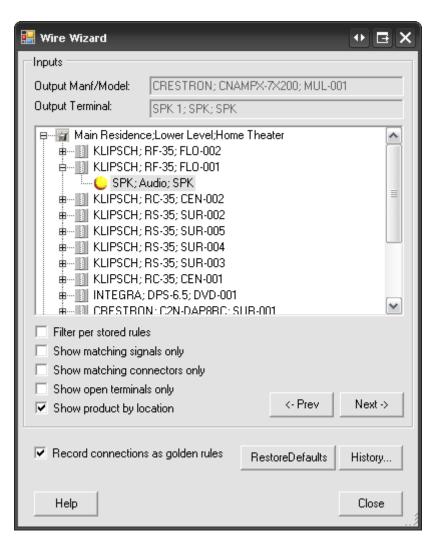
not a mix of "Audio" and "Aud". This is because our filtering is text based and matches on exact terminology only.

The [RestoreDefaults] button clears any filters that you have selected.

The "Record connections as golden rules" option applies to the AutoWire function that is discussed on page 396. The **[History...]** button also applies to the AutoWire function. It allows you to manage the rules you've created. This is discussed in more detail on page 396.

The colored icons that you see next to the outputs for the product are based on the "Type" assigned to the product. The legend is at the top of the form in the "Signal filter type" section.

Click an output to select then click [Next].



The Product and output terminal that you selected is displayed at the top of the form. The output is displayed in the following format: Label – Signal – Terminal

Click the [+] next to a Product to display the inputs. The icons that display next to inputs are colored based on a text comparison between the output Terminal and Signal, and the input Terminal and signal:

green = both the output and input Terminal and Signal match

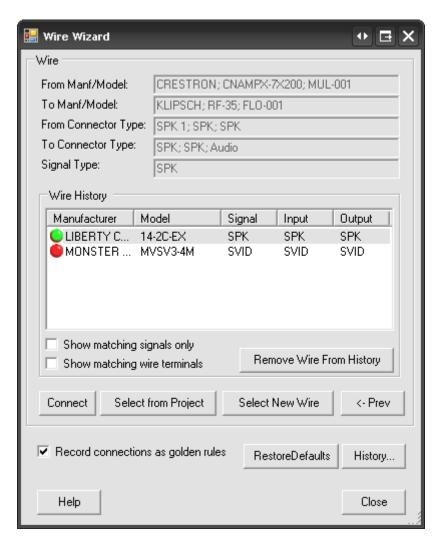
yellow = either the output or input Terminal or Signal match

red = neither the output or input Terminal or Signal match

Again, there are many filters here that we do not recommend you use unless you have verified all of your Product data for consistency. Most are self explanatory but just for kicks, here is what each filter does:

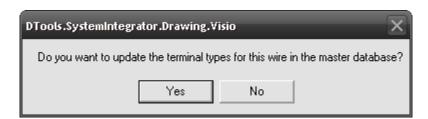
Filter	Description
Filter per stored rule	Filters the input list to only those inputs that are associated with a Standard Rule or Golden Rule, i.e. – filters to the inputs that have been connected in the past using Wire Wizard
Show matching signals only	Filters the input list to only those inputs where the signal matches the chosen output's signal
Show matching connectors only	Filters the input list to only those inputs where the signal matches the chosen output's signal
Show open terminals only	Filters the input list so that inputs that are already connected on the drawing page with a wire shape do not display in the list
Show product by location	Groups Products based on their location assignment

Select an input and then click [Next].

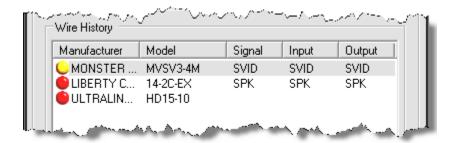


Now the top of the form displays information for both the output and input Products that you have selected. It also lists the signal from the output you chose in the "Signal Type" field.

The Wire History section displays a list of every wire that has been used in the WireWizard. The Manufacturer, Model, Signal, Input, and Output list for each wire. When you make a wire connection using the WireWizard, you are prompted with:



Choosing **[Yes]** will populate the Signal, Input, and Output fields for the wire in the Wire History. Choosing **[No]** will not populate the fields:



The colored icons next to the wires indicate whether or not the Signal matches the signals from the inputs and outputs you chose:

green = both the output and input signal match the signal assigned to the wire
yellow = either the output or input signal match the signal assigned to the wire
red = neither the output or input signal match the signal assigned to the wire
Use the [Remove Wire From History] button to clean up the list as needed.

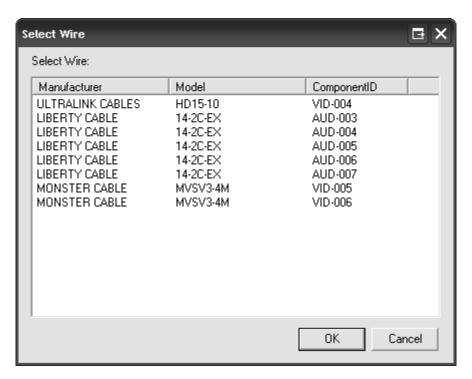
The filter choices at this point are:

Filter	Description
Show matching signals only	This will filter the Wire History so that only wires assigned a signal that matches either the output or input signal display, i.e. – only wires with a green or yellow icon will display
Show matching wire terminals	This will filter the Wire History so that only wires assigned a terminal that matches both the output or input terminals display, i.e. – only wires with a green icon will display

You have three options for selecting a wire at this point: [Connect], [Select from Project], and [Select New Wire].

[Connect] – In order to use this button, you must first select a wire listed in the Wire History section of this form. This will add the selected wire to the PDM and automatically drop and connect the wire shape on the page.

[Select from Project] – This option allows you to use a wire shape that you have already added to the drawing page from your PDM. Using this option will not add a wire to your PDM since you have already used an existing wire from the PDM. A dialog will display showing you all available wire shapes on the drawing page:



[Select New Wire] – This option allows you to select a wire Product from your MasterTable database. You will be prompted to pick a wire from your database. This will add the selected wire to the PDM and automatically drop and connect the wire shape on the page.

When you have made your wire selection, the wire shape will connect on the drawing page and the WireWizard will reset to the first page of the form so you can make your next connection.

Right-Click->D-Tools->Wire Options->AutoWire

This option is only available for use on a schematic page type. The functionality of AutoWire is based of rules that you have "taught" **SI 5** through using the WireWizard. Every connection you make using the WireWizard is recorded as a Standard Rule.



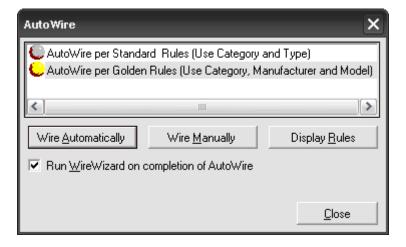
The connection is also recorded as a Golden Rule if you have the "Record connections as golden rules" option checked on the WireWizard form.



Standard Rules – These rules are based off of the Category and Type fields. This means that if you make a connection between a Product of Category "Video Sources" and Type "DVR" to a Product of type "Display Devices" and Type "Plasma" with a Monster Cable MVSV3-4M cable, the AutoWire function will assume that this same wire is used to connect all Products of Category "Video Sources" and Type "DVR" to Products of type "Display Devices" and Type "Plasma" on the drawing page.

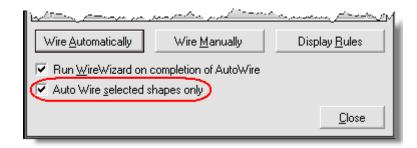
Golden Rules – These rules are based of the Category, Manufacturer, and Model fields. This means that these rules are more specific than Standard Rules and may be your best option for using AutoWire.

The AutoWire main form looks like this:

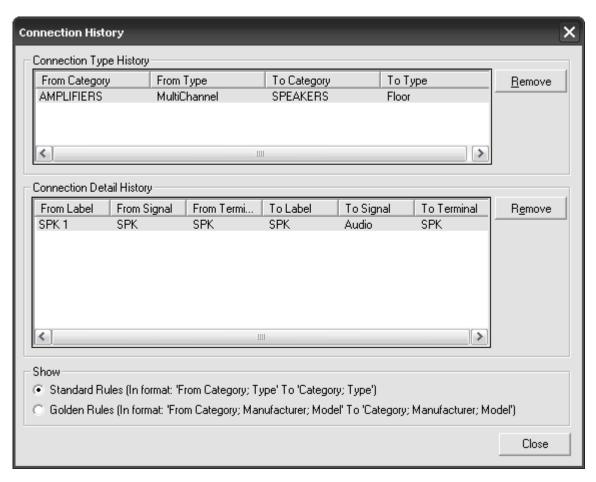




If any shapes are selected on the page prior to running AutoWire, you will see and additional option to just run AutoWire for the selected shapes:



Here you can choose what rules you want use, Standard or Golden, and whether or not you want to [Wire Automatically] or [Wire Manually]. You can also use [Display Rules] to display and manage the rules that have been created:



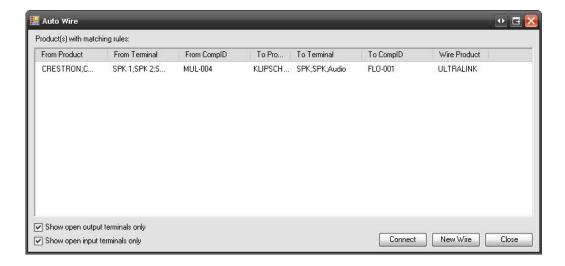


The [Display Rules] button is the same as the [History...] button on the WireWizard form:



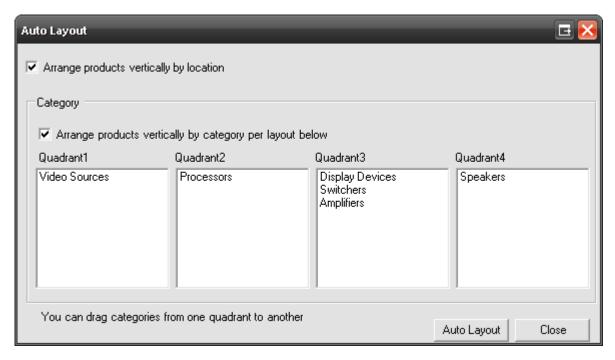
[Wire Automatically] – This will wire the page based on what type of rules you selected. Always double check the connections after they are made using this feature. Since they are based off of rules that you have created, human error still plays a part here.

[Wire Manually] – This allows you to choose what connections to make based off of the rules that you have created. This gives you a bit more control over the Wire Automatically function. A form opens allowing you to select rules the rules you wish to apply. Click [Connect] to make the connection or click [New Wire] to select a wire from your database.



Right-Click->D-Tools->Wire Options->AutoLayout

This option is only available for use on a schematic page type. This function will move shapes of a particular Category to the quadrant of the drawing page based on your selections.



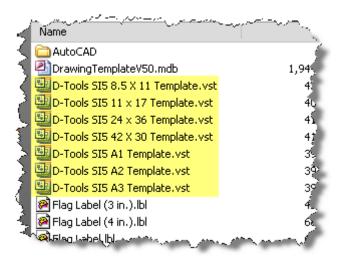
To use, drag a Category to the desired quadrant column and then click **[Auto Layout]**. All of the shapes on the drawing page will move over and group in the selected quadrant. Only the Categories in the project will display.

Arrange products vertically by location – arranges the Products based on their location assignment and the location hierarchy you have established for the Project

Arrange products vertically by category per layout below – arranges the Products vertically based on their position from top to bottom in each quadrant

Creating SI 5 Visio Templates

1) Navigate to the C:\Documents and Settings\All Users\Application Data\D-Tools\SI5\Templates folder and select an existing template. Choose an existing template with the same page sizes you intend to use on your template to save yourself time setting up pages and scales. "Work smarter, not harder", "Don't re-create the wheel", etc.

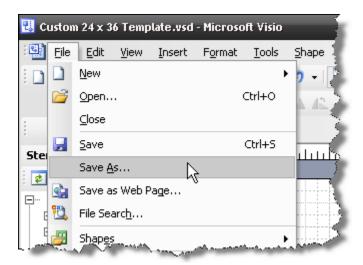


The path for Vista users is C:\ProgramData\D-Tools\SI5\Templates.

- 2) Double-click the file to open in Visio.
- 3) Click [Cancel] when prompted to create a New SI Project:

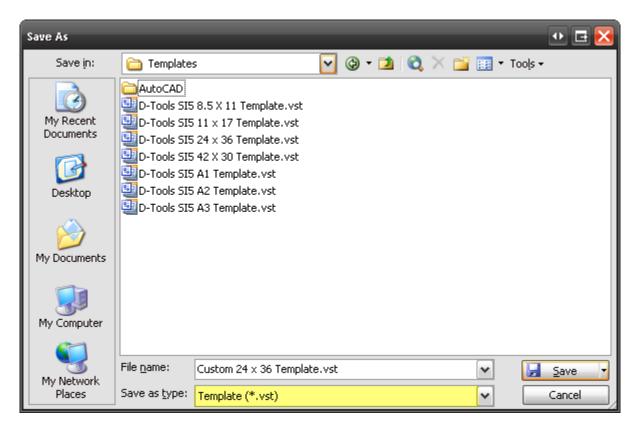


- 4) Make any adjustments that you desire, e.g. add pages, change drawing scale, etc.
- 5) When finished, select File->Save As...



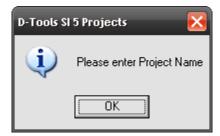
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The Save As form will open. In the "Save in:" section, navigate to the same folder as in step 1. In the "Save as type:" field, select Template (*.vst):

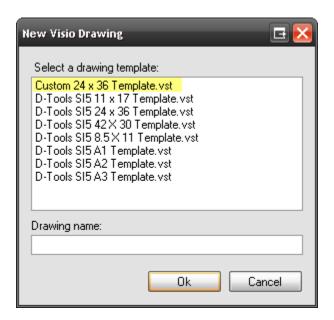


When finished, click [Save].

6) Click **[OK]** when prompted to enter a Project Name:



- 7) Click [Cancel] on the Project Information form.
- 8) The next time you create a Visio file for a Project, the template you created will display in the list:



Round Tripping: AutoCAD to Visio...then back to AutoCAD

Often the most difficult part of working with an AutoCAD Drawing is getting the AutoCAD file from the architect. The situation may arise when an architect or builder asks that you provide installation drawings integrated with an existing AutoCAD based architectural drawing package. You could print out a 24" x 36" plot, but ideally you would like to provide an electronic file.

This method was designed by Adam Stone, President of D-Tools, Inc. to assist you with this task.



Some of the procedures in this section are repeated elsewhere in this chapter because there are additional specific criteria needed for "round tripping" that are not necessary when not "round tripping".

Basic Facts About Visio and AutoCAD

Before we jump into the process I should go over some AutoCAD terms and how they relate to Visio. The first thing we need to know about AutoCAD is that there are two ways to view a drawing: Paper Space and Model Space. Basically all drawings are done in Model Space and all printing/plotting is done in Paper space. Drawings in Model space are created in the real world scale: 1: 1. Drawings in Paper Space are represented as a scaled version of Model Space so they can fit on paper, typically $\frac{1}{4}$ " = 1'...

The important thing to remember is that Visio imports and exports AutoCAD files in Model Space but uses Paper Space (scale) to work with shapes and objects. Visio does not have a Model Space equivalent; everything is done in Paper Space. When importing AutoCAD files into Visio, it is

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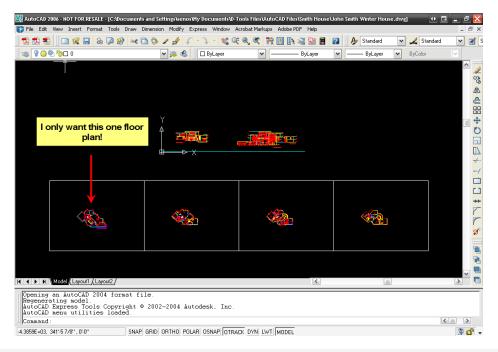
important to always match the Visio and AutoCAD page scale. If the drawing is saved properly, it will export in Model Space at a 1:1 scale.

Prepare the AutoCAD File for Insertion (requires AutoCAD)

You will need a current version of AutoCAD and some basic knowledge of AutoCAD or AutoCAD Lt to complete this process. If you don't have AutoCAD, see if you can get the person who gave you the floor plan to follow these instructions. This process assumes the user is working on an Architectural file.

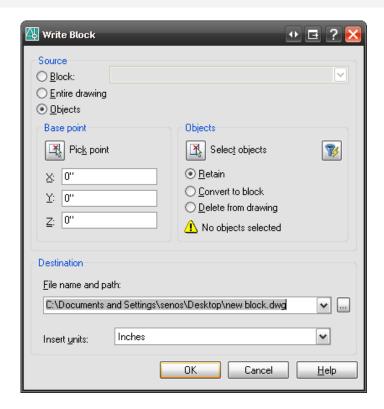
Open original file in AutoCAD in Model Space. The following commands will clean up the drawing and set the reference point.

- 1) Run the Command: zoom extents
- 2) Verify that there is only one "view" in the Drawing. Many AutoCAD Drawings have multiple "views" as shown below:

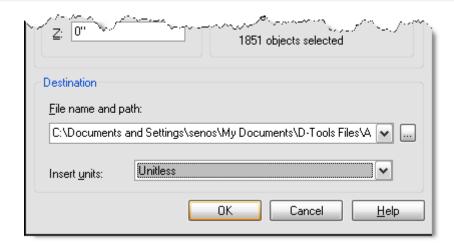


Follow these steps to create a new separate drawing file for each view:

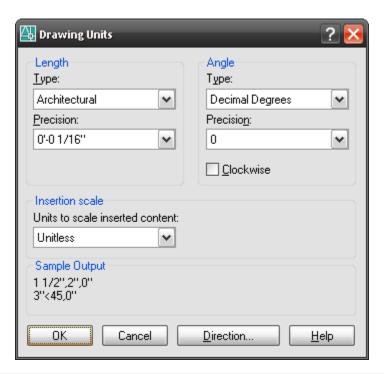
a) Run the command wblock. The Write Block form will open:



- b) Click the **[Select objects]** button
- c) Select the objects and then click [Enter] on the keyboard. You will be returned to the Write Block form. Choose a file name and path, and change the Insert units to "Unitless".



d) Now open the new file you just created in AutoCAD and start over with the Preparing an AutoCAD file for insertion into Visio" process. 3) Run the Command: units. Verify that the "Type" is set to Architectural and the "Units to scale inserted content" is set to Unitless.





You may see the following prompt, click [OK].

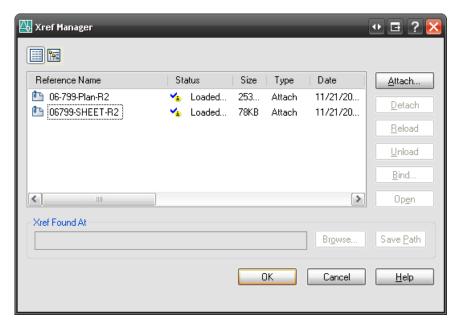


- 4) Run the Command: **zoom** Type e for "extents". Zoom extents will fill the page with the entire drawing.
- 5) Run the Command: **xref.** The **Xref Manager** dialog will open.



An xref is an external reference to other CAD files. It is up to the Architect or the person putting together the file to determine which files are needed to be added or deleted from the drawing.

6) If there are xrefs, select all files then click the [Bind] button. The Bind Xrefs dialog will open.

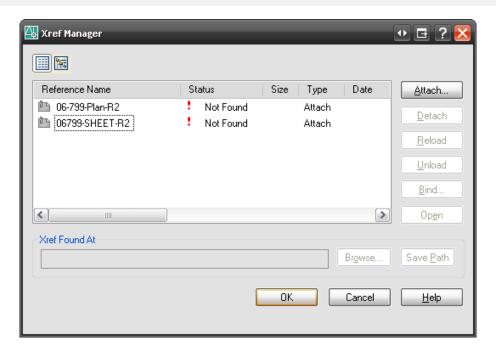


7) Select the **Insert** option and then click **[OK]**. Click **[OK]** to close the **Xref Manager**. This will bind any externally referenced files to this file.





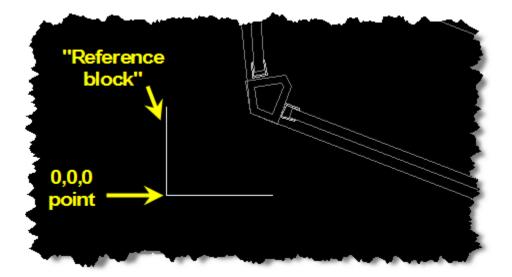
If the xref Status is "Not Found" or "Unloaded", then select all files, click the [Detach] button and then click [OK].



8) Run the Command: **purge** The **Purge** form will open:



- 9) Purge removes unused entities from the drawings. Check "Purge nested items" and uncheck "Confirm each item to be purged".
- 10) Click [Purge AII] until all items are purged (you may have to do this more than once) and then click [Close] to exit the form.
- 11) Run the Command: audit Type y to fix any errors
- 12) Run the Command: **Base** Then type **0,0,0**. This sets the insertion base point to 0,0,0.
- 13) Run the Command: **line 0,0,0.** This will find the origin point of the CAD drawing. The pivot point of the line is the "origin" or "zero point" of the drawing. This is very important if you want the Visio shapes to match the floor plan on export.
- 14) Draw the line along the x axis to the right of the 'zero point' and then hit the **[Esc]**.
- 15) 10. Run the Command: line 0,0,0
- 16) Draw another line at the pivot point along the y-axis to form a 90 degree angle. The two lines will form an "L". The corner of the angle is the "0,0,0 point" of the AutoCAD drawing. This "L" will be called the "reference block" When done, hit the **Esc** key.





You want the base point to be close to the drawing. Sometimes the base point will be set off of the page. This is usually an architect's mistake or the drawing was based off of a civil drawing. To set a new arbitrary point to use as a reference follow these commands:

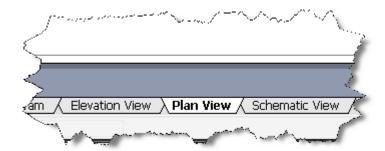
a) Run the Command: ucs Type n for new

- b) Pick the arbitrary point somewhere in the lower left beyond the boundary of the drawing
- c) Run the Command: base Set point to 0,0,0
- 17) Run the Command: zoom extents
- 18) Select File->Save as... and save the drawing in AutoCAD 2000/LT2000 Drawing format.

At this stage the file is ready to be exported at its cleanest and most Visio compatible state.

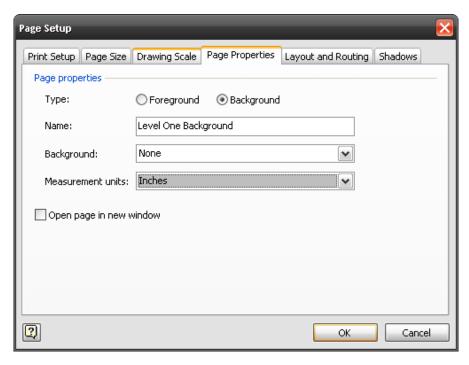
Insert AutoCAD File into Visio as a Background

1) Create a new SI 5 Visio project or open an existing SI 5 Visio project. Make sure you are on a Plan Page Type in the Visio Project:

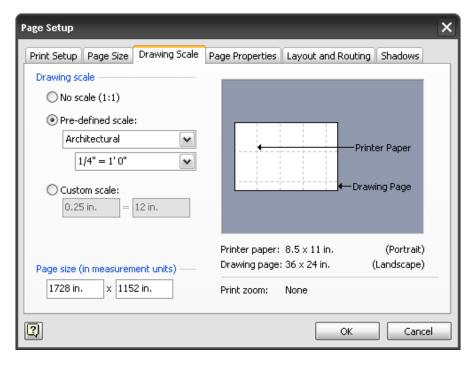


- Create a background page in Visio. Right-click on the Plan View tab and select Insert Page.
 The Page Setup form will open.
- 3) From the menu bar select **File->Page Setup...** The **Page Setup** form will open.

4) Click the **Page Properties** tab and verify that **Measurement Units** is set to "Inches", not "Feet and Inches". Name the page something appropriate and select the **Background** radio button for "**Type**".



5) Click the **Drawing Scale** tab and verify that the **Pre-defined scale**: is set to **Architectural** $\frac{1}{4}$ " = $\frac{1}{0}$ ". This is a good scale to start with. Click **[OK]**.

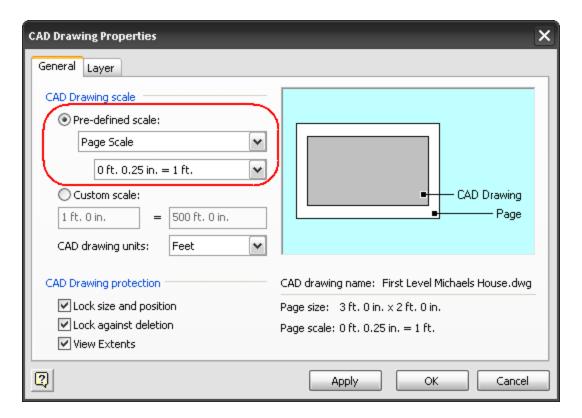


6) You just created a background page in Visio. Insert the AutoCAD file on this page, then "link" the actual pages you will be dropping Visio shapes on to this background page. This method of

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creating a background page is convenient when you are using the same AutoCAD floor plan on multiple drawing pages, i.e. you want to do a separate page for lighting and a separate page for audio.

- 7) While the background page is selected, select **Insert->CAD Drawing** from the menu bar in Visio
- 8) Browse to the AutoCAD file and click **[Open]**. The **Insert AutoCAD Drawing** dialog box will open.
- 9) The **Custom Scale:** radio button is selected by default. You must change this to **Pre-defined** scale: Page Scale. Click [OK]. The CAD drawing will be inserted into the Visio page.





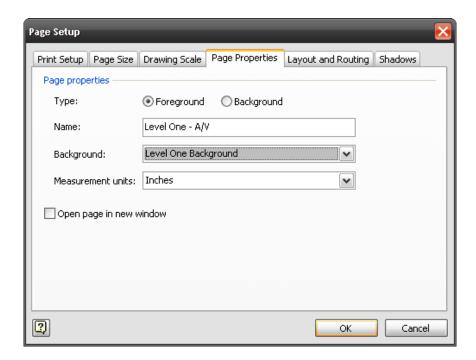
If the AutoCAD drawing is too large for the page size then start the insert over but with a smaller scale from the **File->Page Setup->Drawing Scale** form (step 4 in this section).

If the AutoCAD drawing is too small for the page size then start over with a larger scale from the File->Page Setup->Drawing Scale form (step 4 in this section).

To remove the AutoCAD drawing from the Visio page, double-click the AutoCAD drawing in Visio. The **AutoCAD Drawing Properties** dialog box will open. Un-

check the **Lock against deletion** box and then click **[OK]**. Hit the delete key on your keyboard to remove the AutoCAD drawing from Visio.

- 10) Test the scale by checking a door in the drawing. Most doors are standard sizes and are usually marked 2-4 or 2-6 to represent a 2'4" or 2' 6" door. If they measure the same in Visio, you have successfully imported the AutoCAD file to scale in Visio.
- 11) After you insert the AutoCAD Drawing into the background page, you can then link the background page to other pages in Visio. Select the page on which you would like to use the AutoCAD drawing as a background. In this example, the page named **Level One A/V** page is selected.
- 12) From the menu bar select **File->Page Setup** and then click the **Page Properties** tab. Select your background page from the **Background**: dropdown menu (in this example, the page was named **Level One Background**). Verify that the **Measurement Units** is set to "Inches". Click **[OK]**. You will now see the AutoCAD drawing displayed on the Visio page.

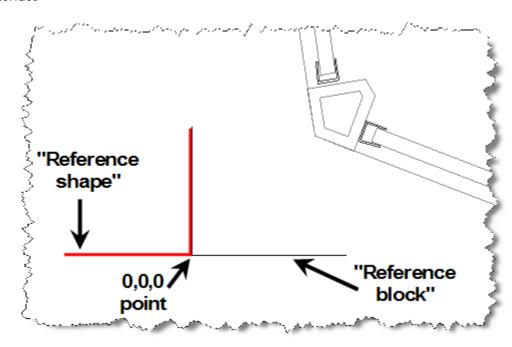


Creating an AutoCAD Drawing From a Visio Drawing

The first thing to do is create a "reference shape" in Visio to match the "reference block" created earlier in AutoCAD.

- Use the standard Visio Line Tool function from the Drawing toolbar to create a backwards "L".
 This will be called the "reference shape".
- 2) Line up the "reference shape" with the "reference block" so that their corners meet.

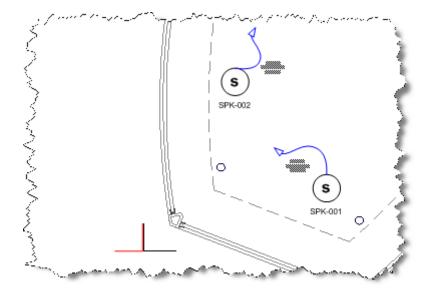
414 Visio Interface



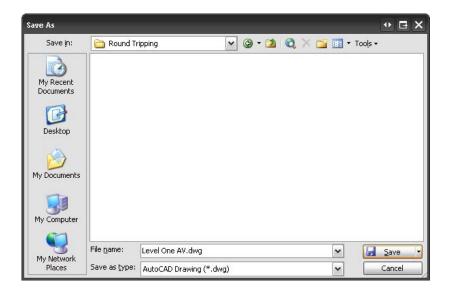


The reason for this step is when you save the Visio drawing as an AutoCAD drawing (upcoming steps), only the Visio shapes will export, not the floor plan. The architect will use this "reference shape" to line up this drawing over the original AutoCAD file inside of AutoCAD.

3) Add Visio shapes to the drawing page. In this case I added some speakers and wire.



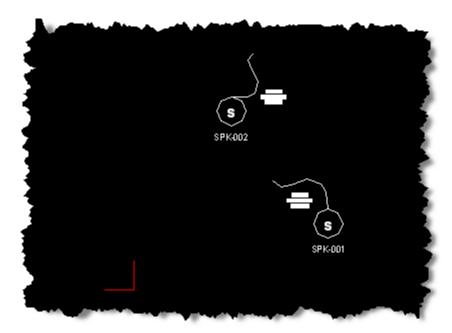
4) Save as a DWG by selecting **File->Save as...** and selecting **AutoCAD Drawing** from the **Save** as **type:** dropdown.





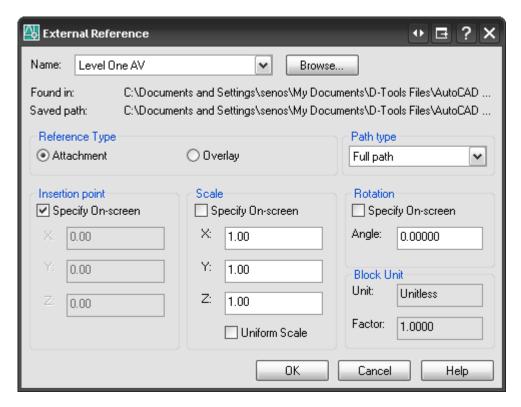
If you are using a title frame shape in Visio, you may want to remove it from the Visio page before saving the file as an AutoCAD drawing.

This is the file that you would send back to the architect. The Drawing only contains the Visio shapes that you added, not the original floor plan:

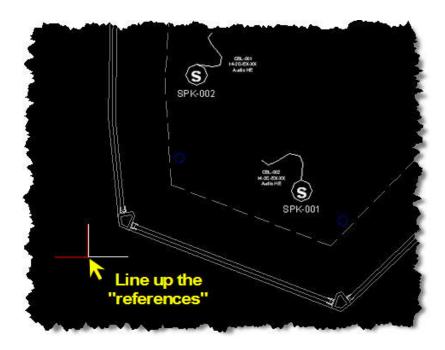


Externally Reference (Xref) the Visio Created DWG to the Original DWG

- 1) Open the original AutoCAD file in AutoCAD
- 2) From the menu bar select **Insert->External Reference**...and Browse to the file you just saved from Visio. Click **[Open]**. The **External Reference** dialog will open.



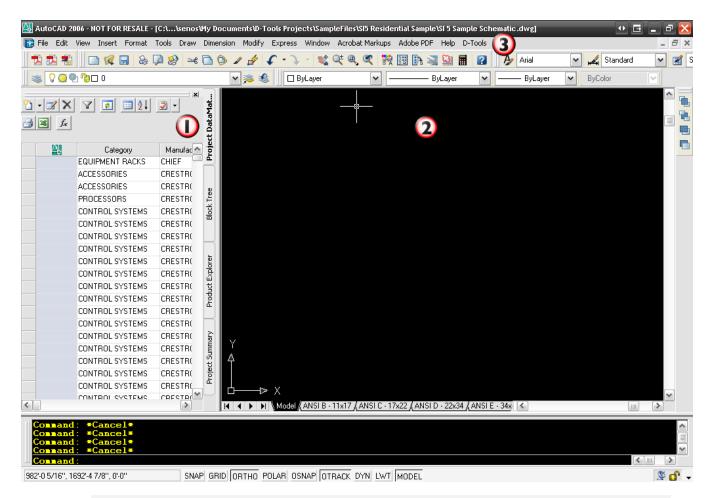
- 3) Check the Specify On-screen dialog then click **[OK]**. You will need to point the cursor to the matching CAD reference point.
- 4) Verify that the reference points line up. You may have to move the inserted xref layer to line up the reference points.



The reason that will have to move line up the "references" is because Visio's "0,0,0 point" (technically just a 0,0 point in Visio) is always at the lower left corner of the drawing page while the AutoCAD "0,0,0 point" can be set.

AutoCAD Interface

The **AutoCAD Project Interface** is a tool for creating graphical representations of Projects. The interface is composed of three main parts: the Project DataMatrix (PDM)/Block Tree/Product Explorer/Project Summary window, the Drawing Area, and the Menu Options.



If you have additional plug-ins associated with AutoCAD, i.e. Adobe Acrobat, the D-Tools menu may not load. If this happens, run the command: **dtshowmenu**



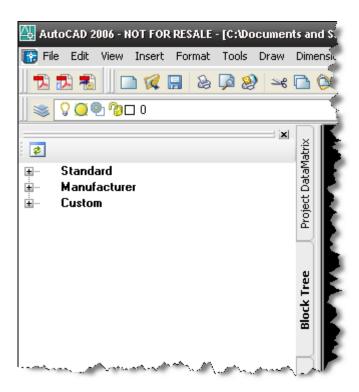
Project DataMatrix (PDM)/Block Tree/Product Explorer/Project Summary Window

This window has four tabs for you to select from. The **Project DataMatrix** (**PDM**) view is where all of the Products that have been added to a Project are displayed. See "**Project Data Matrix** (**PDM**)" on page 266 for more information.

The **Block Tree** tab will display all of the stock **SI 5** Drawings and downloaded Manufacturer Drawings available.

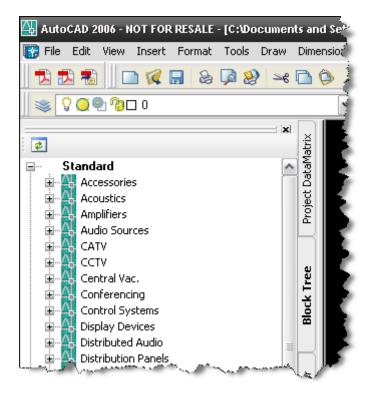
Terminology: Drawings are "containers" for Blocks. Blocks are what are actually displayed on the Drawing Sheets within AutoCAD.

There are three "sections" in the Block Tree: Standard, Manufacturer, and Custom.

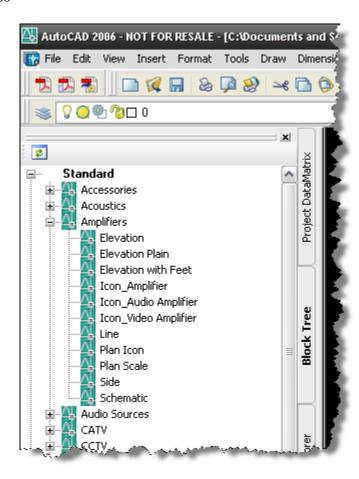


Use the button to refresh the list if you add any Drawings while working on an AutoCAD file.

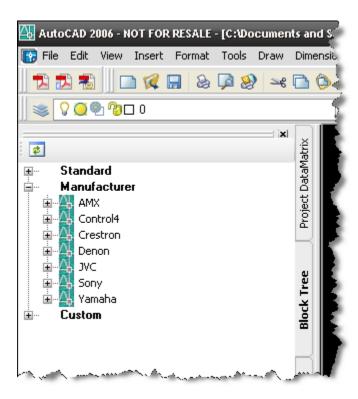
The Standard category lists the stock SI 5 Drawings based on Category. These Drawings contain Generic Blocks. Most of the Generic Blocks have a one-to-many relationship with Products in the SI 5 database.



To view the Blocks by name, click the [+] next to the drawing name:



The Manufacturer section lists any D-Tools Manufacturer Drawings that you have downloaded. These drawings contain specific Blocks created for the particular manufacturer. Most of the Blocks in these drawings have a one-to-one relationship with Products in your **SI 5** database.



The Custom section lists the **SI 5** Drawings that you create as well as one that we created, Cabinet Tools. Cabinet Tools be discussed later in the "**Drawing Sheet Types**" section, see page 427.



The **Product Explorer** tab is very similar to the **Product Explorer** screen within the **Manage My Product Data (MMPD)** interface. For a complete description of the "**Product Explorer**" see page 264 of this manual.

The **Project Summary** tab displays a summarized view of the Project.



This section of the interface is where you will create your drawings. Each drawing sheet will initially have five tabs along the bottom: one Model space, and one Paper space each for the following sizes: ANSI B - 11x17, ANSI C - 17x22, ANSI D - 22x34, and ANSI E - 34x44.



Menu Options

For a complete description of "Menu Options" see page 270 of this manual.

D-Tools->Project Information

For a complete description of the information contained under the "D-Tools->Project Information" tab see page 271 of this manual.

D-Tools->Options

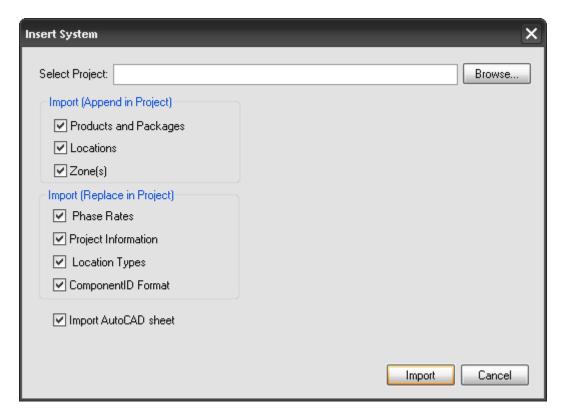
For a complete description of "D-Tools->Options" see page 280 of this manual.

D-Tools->Reports

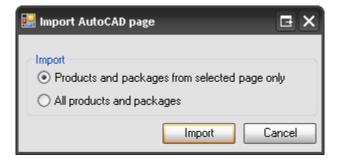
For a complete description of **Reports** see page 471.

D-Tools->Insert System

See page 290 for an introduction to Insert System functionality.



The "Import AutoCAD sheet" option adds a very nice functionality of being able to just import the Products and Packages that are on particular drawing sheets, rather than all Products and Packages from the Project that you are inserting. When this is checked and you click [Browse...], you have the option of selecting an SI 5 Project AutoCAD file into the current Project. You will be prompted on to the Project that you want to insert and click [Import], you will be prompted for what Products and Packages you want to insert:



D-Tools->Export To->Microsoft Project

This option is only available with the Professional version of **SI 5** and with Microsoft Project 2007. This will export the **SI 5** Project information to Microsoft Project.

D-Tools->Find and Replace

For a complete description of **Find and Replace** see "**D-Tools->Find and Replace**" page 288 of this manual.

D-Tools->Update Case

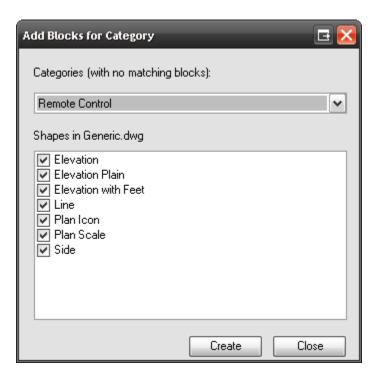
For a complete description of **Update Case** see D-Tools->Update **Case**" on page 291 of this manual.

D-Tools->View

There are five options: Display Project DataMatrix, Display Block Tree, Display Product Explorer, Display Project Summary, and Display Line Item Summary. Use these options if you have closed the window at some point.

D-Tools->Utilities->Create Blocks

If you have created your own Categories in **SI 5**, you may want to create Drawings with some blocks for those Categories. This option will allow you to select the Category to create a drawing for, then list the available blocks from the Generic.dwg drawing.



D-Tools->Utilities->Insert Sheet

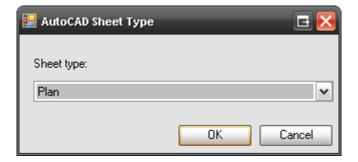
This will open a form where you can select a Sheet Type and a Name for the Sheet that you wish to add:



There are four Sheet Types: Line, Elevation, Plan, and Schematic.

D-Tools->Utilities->Change Sheet Type

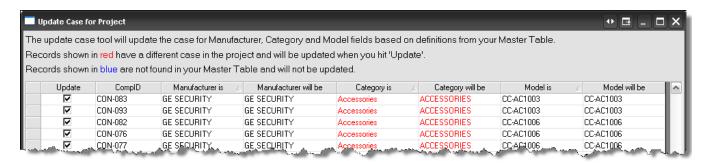
There are four page types in an SI 5 AutoCAD Project: Plan, Elevation, Line, and Schematic. Each of these page types have specific blocks that are designed to work with them. More detail on these page types is in the "Drawing Page Types" section in this chapter. Use this function if you want to change the page type for any page.



D-Tools->OrderTools

For a complete description of **OrderTools** see "D-Tools->Update Case

Use this to update the case settings within a project if you have made changes to your default case settings in the MMPD interface. A window will open showing what will be changed. You can uncheck any products you do not wish to change:



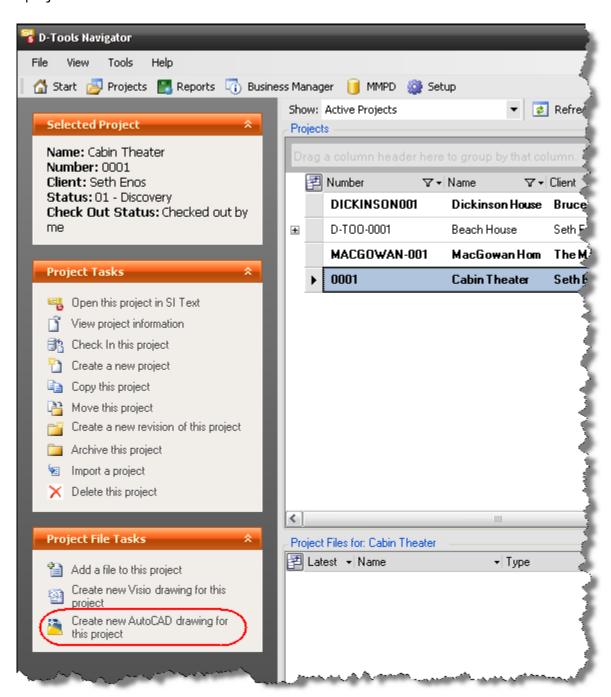
D-Tools->OrderTools" on page 291 of this manual.

D-Tools->Help

This option provides access to a searchable version of this guide.

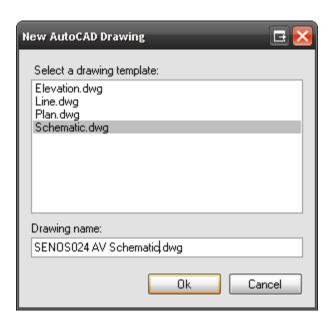
Creating an AutoCAD file for an SI 5 Project

Creating an AutoCAD file for an SI 5 Project takes place in the Projects tab of the SI 5 Navigator. Select a Project in the Projects section of the form and then click the "Create new AutoCAD drawing for this project":

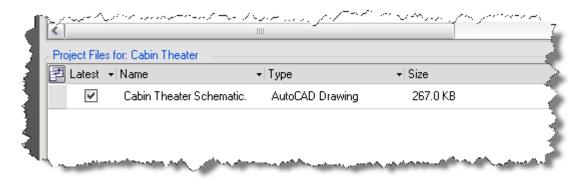


The four types of drawing sheets are: Line, Elevation, Plan, and Schematic. Each sheet type has unique properties, all of which are detailed later in this chapter.

The following form opens:



When you select a template, the default name for the file will be something like "schematic1.vsd" if you select the Schematic.dwg template. We recommend that you change this to something a little more specific to the Project. When finished, click **[OK]**. The AutoCAD file will display in the Project Files section of the Projects tab:



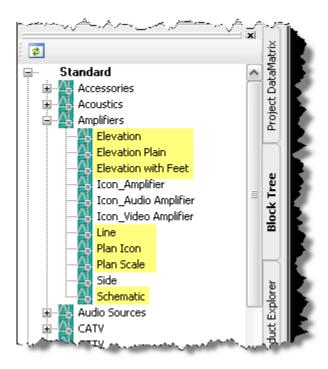
Drawing Sheet Types

The four types of drawing sheets are: Line, Elevation, Plan, and Schematic. Each one of these Sheet Types have blocks that were created to work with them. There are really four "kinds" of blocks that we created for SI 5: **Generic Blocks**, **Specialized Generic Blocks**, **Manufacturer Specific Blocks**, and **Low Voltage Icon Blocks**.

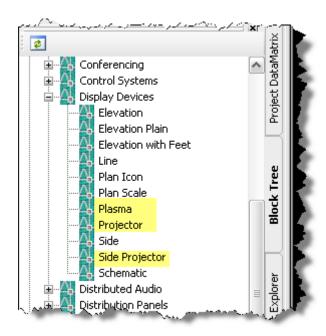
Generic Blocks – Generic blocks generally have the Sheet type right in the name, e.g. Elevation Plain, Plan Icon, etc. Generic blocks are very simple blocks that can be used to represent any

428 AutoCAD Interface

Product in the Project. There are a total of six generic blocks with differing behaviors, designed specifically for use on different drawing sheet types (Line, Plan, Plan Scale, Elevation, Side, and Schematic)

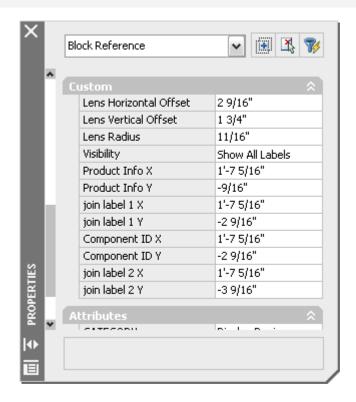


Specialized Generic Blocks - Specialized generic blocks are designed to represent specific equipment types on specific drawing pages. Examples of these blocks are: Fixed Screen, Plasma, Projector (front and side view), and Rack.

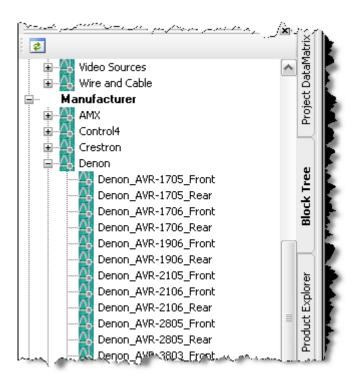




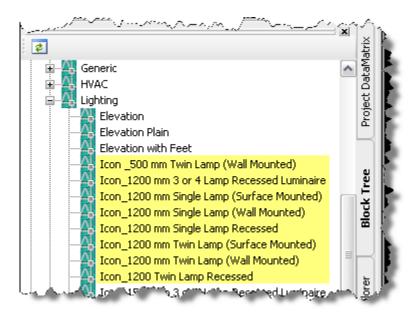
To modify the properties of these blocks, select the block on a sheet, right-click and select Properties. The Properties form will open. The "Custom" section is where you can modify the block:



Manufacturer Specific Blocks – These are blocks that were created to look exactly like the Product. Most of the Shapes in these blocks have a one-to-one relationship with Products in your SI 5 database.



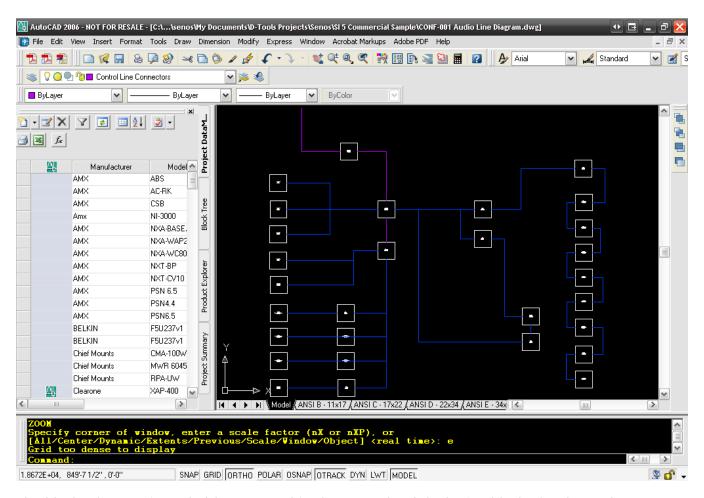
Low Voltage Icon Blocks - Low voltage icon blocks are industry standard symbols used to represent items in the project, most commonly on plan view sheets (they can be used any sheet type you choose). These blocks have the word "Icon" in front them:



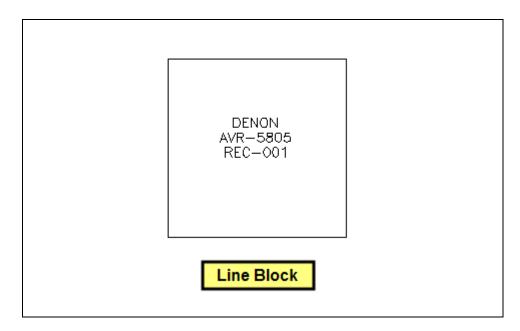
A listing of the low voltage icon blocks available is at the end of this chapter.

Line

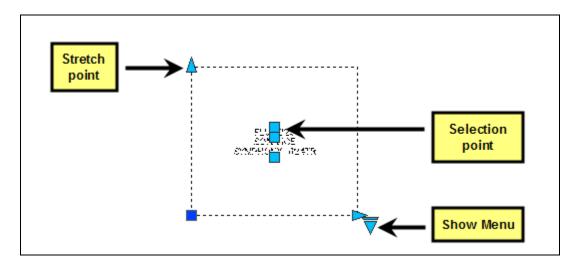
The line sheet type is used to create a flow chart of systems within a Project. An example of a Line Diagram drawing sheet is below:



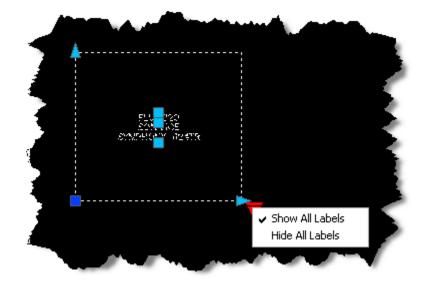
The blocks that are intended for use on this sheet are the default Line blocks for the each Category.



Line blocks are intended for use on a line diagram drawing sheet to provide a conceptual overview of the system. Line blocks are not to scale and can be resized.

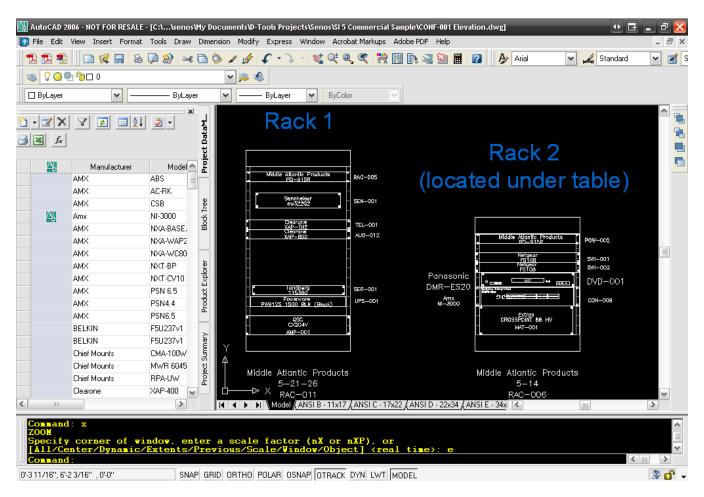


The block can be resized using the Stretch points. The Selection points can be used to move the text fields to another position on the sheet. The Show Menu triangle gives you the options of showing or hiding the text labels for the block. There are two text labels, one that displays Manufacturer and Model and one the displays Component ID.

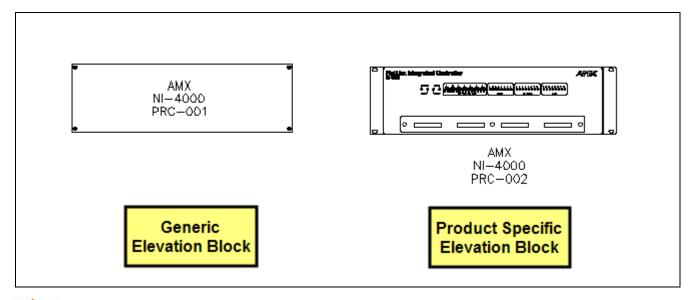


Elevation

The elevation sheet type is used to create a scaled representation of systems within a Project. The most common use for an elevation sheet is for building racks. An example of an Elevation drawing sheet is below:



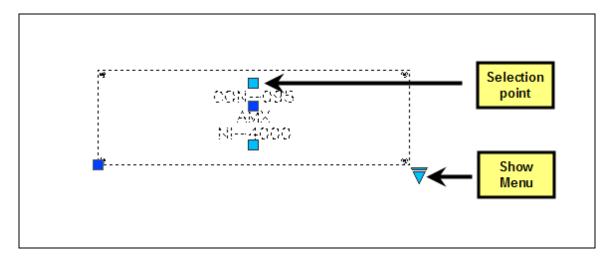
The blocks that are intended for use on this sheet type are either the generic Elevation blocks from the Category drawings or a Product specific block from a Manufacturer drawing.





Even though the block on the left is a generic representation of the Product, the block populates with the Manufacturer, Model, and Component ID, fields. The fields that display vary between blocks.

Elevation blocks are scaled blocks based on the height and width of the Product.



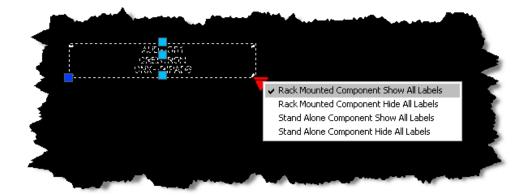
Elevation blocks cannot be resized on the drawing sheets. In order to resize them, you must make changes to the height and width on the Product Properties form for the Product. The Selection points can be used to move the text fields to another position on the sheet. The Show Menu triangle gives you the options of showing or hiding the text labels for the block.



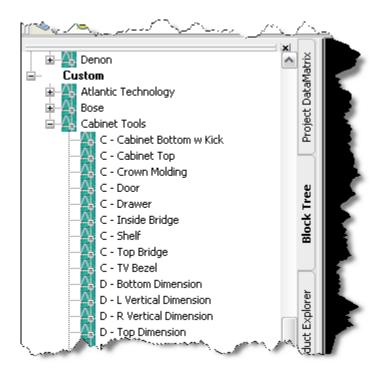
The Elevation Plain and Elevation with Feet blocks are essentially the same block.

The only difference is how they initially display on the page: Elevation Plain has screws to represent a rack mounted Product and the Elevation with Feet does not.

The display of both of these blocks can be changed using the Show Menu dropdown:



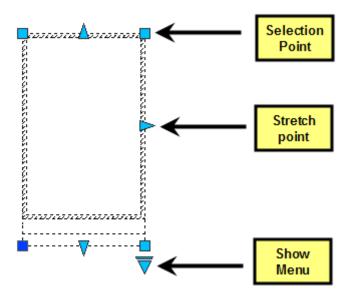
There is a Cabinet Tools drawing under the Custom section of the Block Tree that is intended for use on this sheet.



These blocks are not linked to Products in the database so nothing is added to the PDM when you use these blocks.

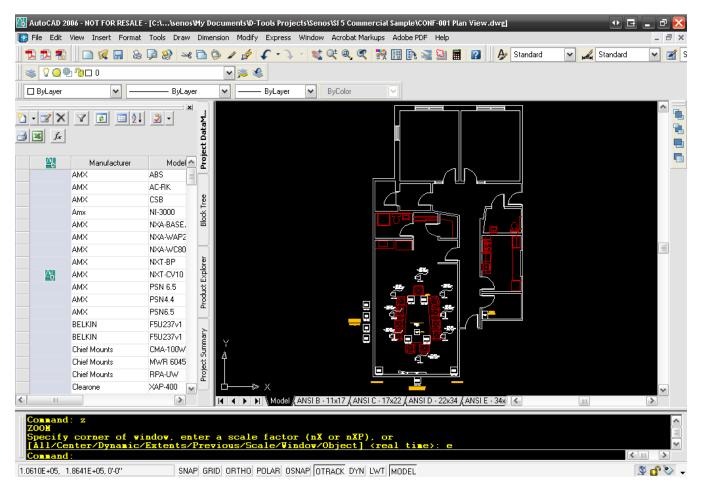


Use the Stretch points to properly size the cabinet shapes for your needs. Use the Show Menu triangle for options such as adding a door or showing a top view.

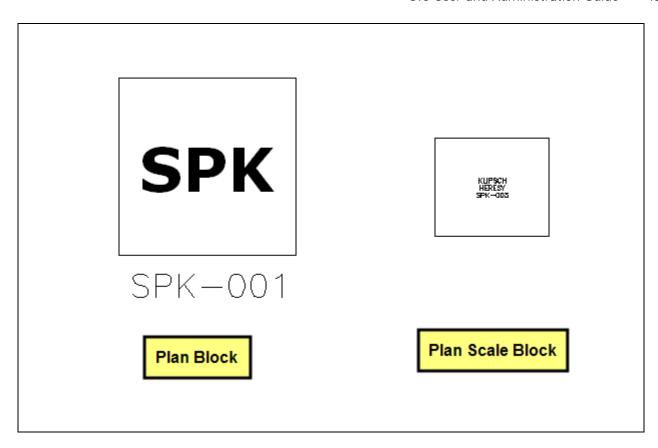


Plan

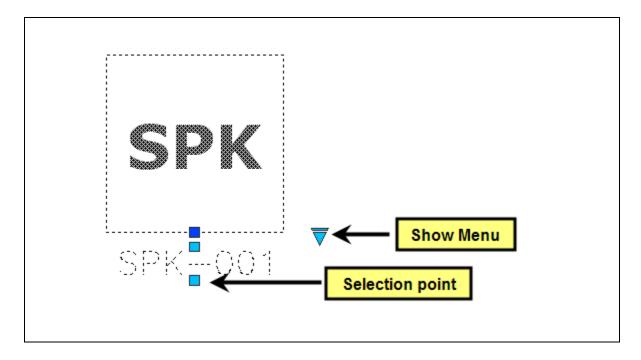
The plan sheet type is generally used with a floor plan to show an overhead view of where certain products are installed in a Project. An example of a Plan drawing sheet is below:



The blocks that are intended for use on a plan drawing sheet type are very basic blocks. There are two different style blocks you can use on this sheet type: Plan blocks and Scale Plan blocks.

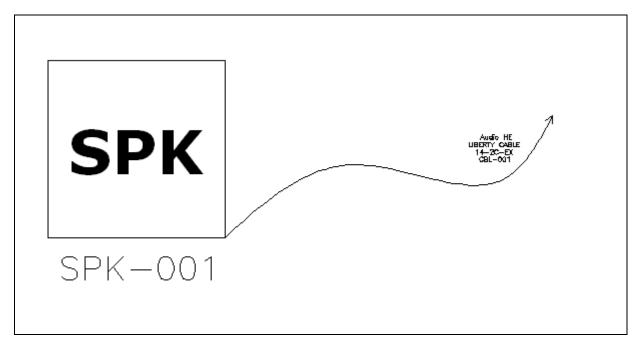


Plan blocks are not to scale. Most drawings also have a Scale Plan block that is to scale based on the Products width and depth. Scale Plan blocks cannot be resized on the sheet. In order to resize them, you must make changes to the width and depth on the Product Properties form for the Product.

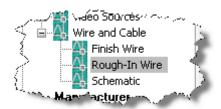


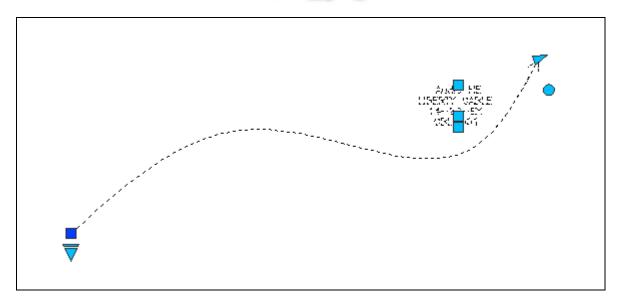
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The Selection points can be used to move the text fields to another position on the sheet. The Show Menu triangle gives you the options of showing or hiding the text labels for the block. These blocks are intended for use mainly with Wire and Cable blocks. The connections made with Wire and Cable shapes are **NOT** recorded for reporting like they are in Visio.



The wire and cables block that drops by default on a plan sheet is the Rough-In Wire block:





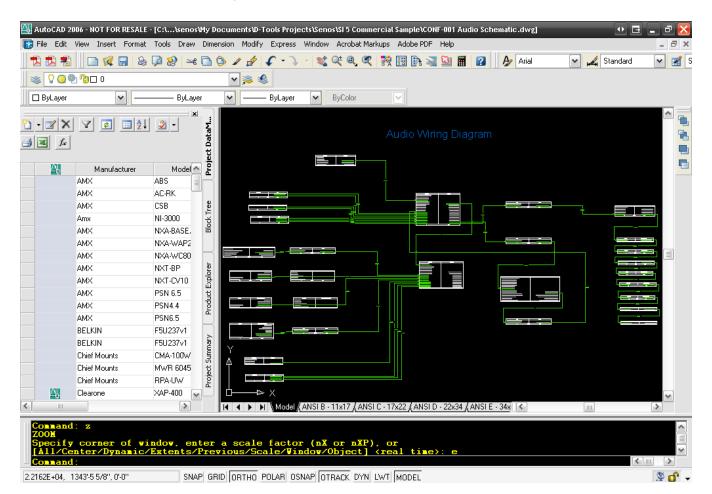
There is a selection point at one end of the block and on each text label. The Show Menu triangle gives you the options of showing or hiding the text labels for the block. There are two text labels, one that displays Manufacturer and Model and one the displays Component ID. There is a stretch point on one end of the wire and a circular handle that can be used to rotate the block.

Unlike in Visio, connections made with Plan blocks do not generate data for the SI 5 Installation reports. Schematic blocks do generate data for the SI 5 Installation Reports.

Inserting a file of the floor plan as an xref is ideal on this sheet because it saves you the trouble of drawing out rooms.

Schematic

The schematic sheet type is used to create the wiring diagrams for systems within a Project. An example of a Schematic drawing sheet is below:



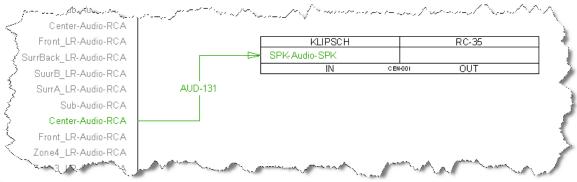
440 AutoCAD Interface

The blocks intended for use on this drawing sheet type list the inputs and outputs for the Product.

RUNCO		DHD W PACKAGE	
R S232-R S-232-DB9			
RGBHV-RGBHV-RCA			
RGBHV-RGBHV-RCA			
DM2-DM-DVI			
DM1-DM-DVI			
CMD-CMD-RCA			
SMD2-SMD-SVID		RGBHV-RGBHV-BNC	
SMD1-SMD-SVID		TRIGGER 3-DC-1/8 in	
VIDEO 1-VID-RCA		TRIGGER 2-DC-1/8 in	
120 VAC-AC-120 VAC		TRIGGER 1-DC-1/8 in	
IN	DIG-001	OUT	

Schematic blocks size vertically automatically based on the number of inputs and outputs for a Product. Each input and output listed has a "connection point".

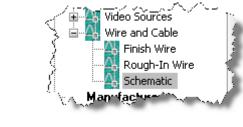
Wire and Cable shapes are used on this page to connect Products. The connections made with Wire and Cable shapes are recorded for reporting. Example reports are the Brother Wire Labels and the Wire Connection reports. For a complete description of **Reports** see page 471.

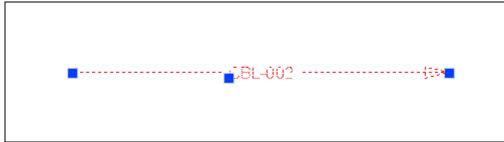




The default color for an unconnected wire on the Schematic sheet is red. Once the wire is connected between two Product blocks, the color is green.

The wire and cables block that drops by default on a schematic sheet is the Schematic block:





There are selection points at each end of the block, one in the middle, and one on the text label.

Paper Space Sheets

Each AutoCAD file that you create for an SI 5 Project starts with four paper space tabs: ANSI B - 11x17, ANSI C - 17x22, ANSI D - 22x34, and ANSI E - 34x44. You do not have to use all or any of these pages if you prefer to create your own. If you want to use the provided sheets, you may want to replace the D-Tools logo with your own logo (we don't mind if you leave the D-Tools logo though, ©).

Example: In this example, the following logo is used:

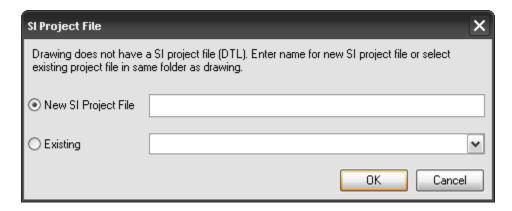


The logo that you insert must be in .dwg format.

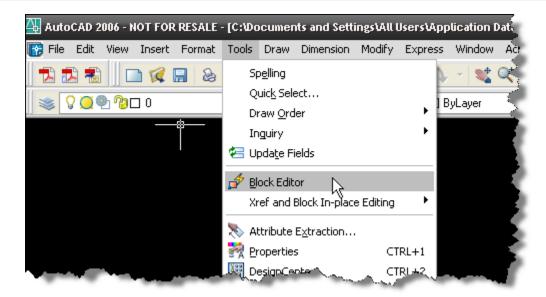
1) Browse to the following location: C:\Documents and Settings\All
Users\Application Data\D-Tools\SI5\Templates\AutoCAD.

(VISTA: C:\ProgramData\D-Tools\SI5\Templates\AutoCAD) Double-click the
template you wish to edit. In this example, the Elevation.dwg was selected. The
following steps will need to be completed on each template.

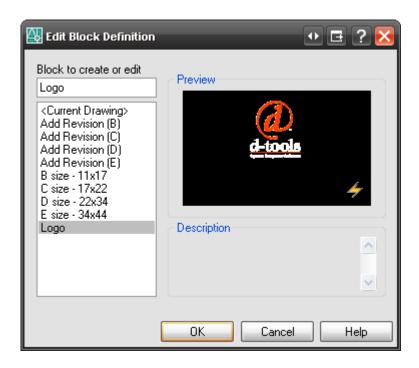
2) The file will open in AutoCAD. If you are prompted create an SI file, click [Cancel]:



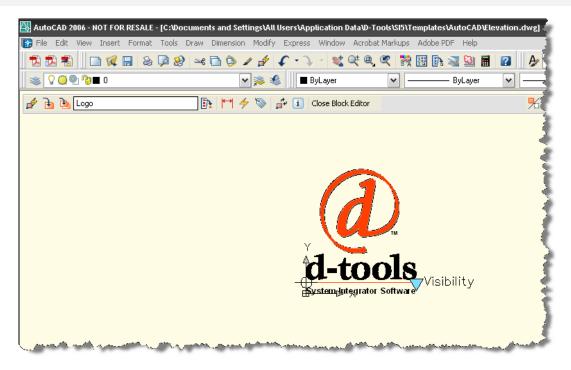
3) Select Tools->Block Editor:



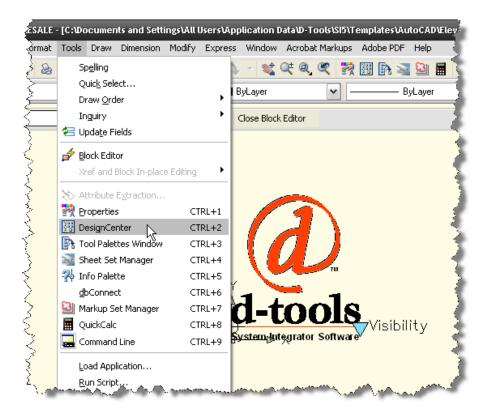
4) Select the Logo block and then click [OK]:



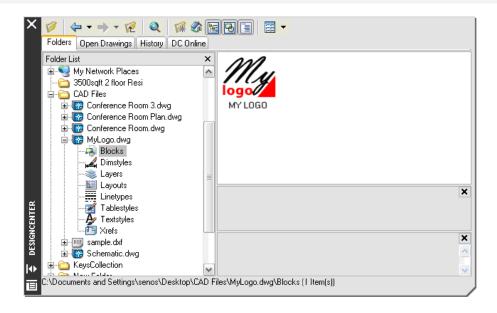
5) The block editor opens:



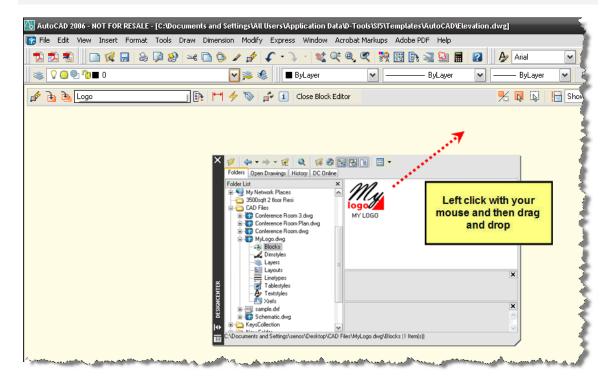
6) Select Tools->DesignCenter:



7) In the DesignCenter form, browse to your logo file. Expand the [+] next to the file and select "Blocks":



8) Drag the block to the Block Editor "page":



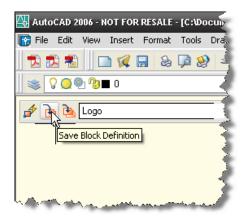
9) Make sure that your logo does not exceed the existing D-Tools logo in size:



10) Delete the D-Tools logo block and move the new logo over into place:



11) Save the Block Definition:



12) Close the Block Editor: Close Block Editor

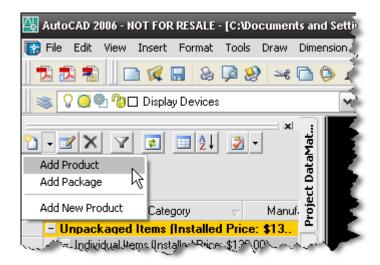
13) Save and close the Elevation.dwg.

Adding Products and Packages

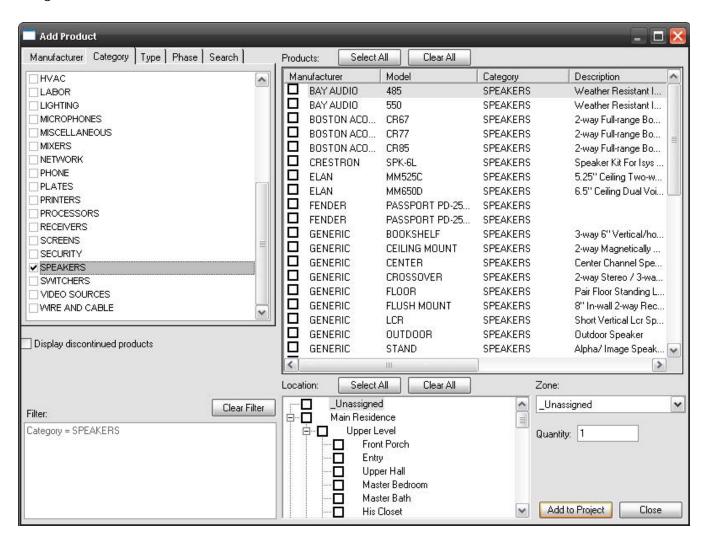
There are multiple ways to add Products and/or Packages to the PDM. One way to add Products and/or Packages to a AutoCAD Project is to use the button in the **PDM** section of the screen.



Clicking the page icon button will open the Add Product form. If you want to add a Package, use the arrow section of the button and select "Add Package" from the menu:

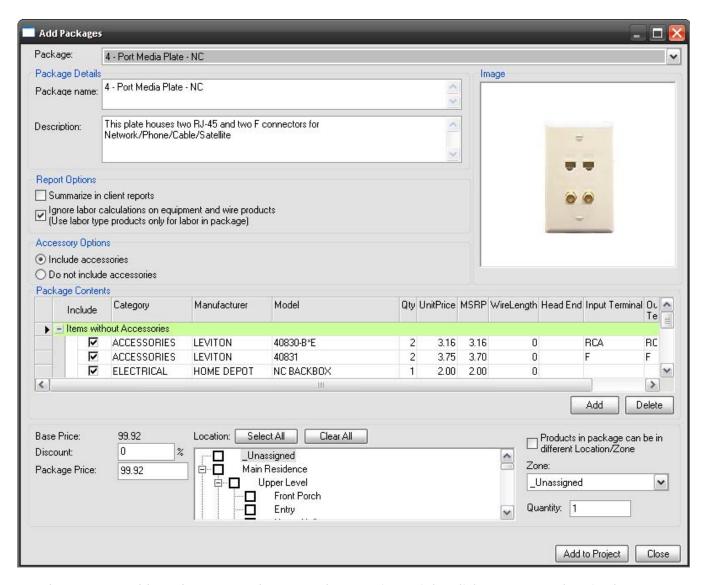


The Add Product form allows you to filter using the tabs to find the Product(s) you want to add to the Project. You can select multiple Products to be added at one time to your Project. You can also assign the Location and/or Zone as well.

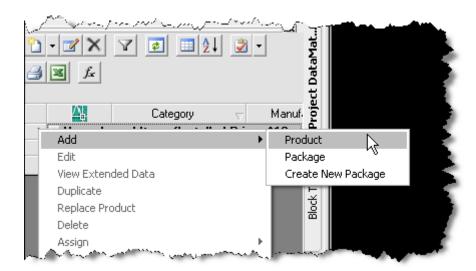


448 AutoCAD Interface

If you choose to add a Package with the dropdown arrow, the Add Package form will open. This form allows you to choose a Package to add to the Project as well as a place for you to select your Location and/or Zone for the Package.



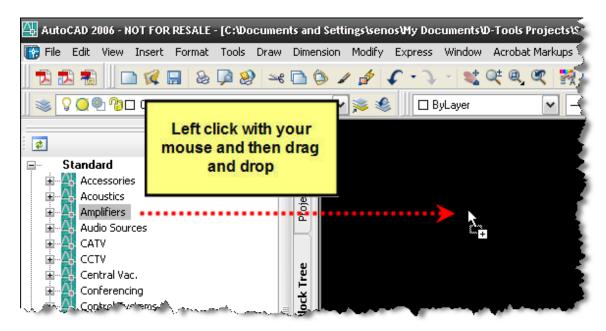
Another way to add Products or Packages to the PDM is to right-click on any Product in the PDM and select Add->Product (or Package).



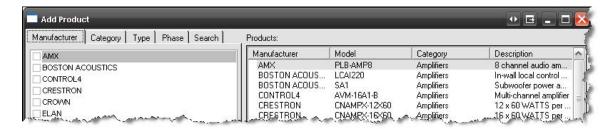


In the methods described above, adding a product to the PDM does not automatically add a Product block to any of the drawing sheets. You must drag and drop the Product from the PDM to the drawing sheets.

Another way to add products to the PDM is to add a block for the project to one of the Drawing Sheets. You can do this a few different ways. The first way is to drag a drawing from the Block Tree over to a Drawing Sheet:



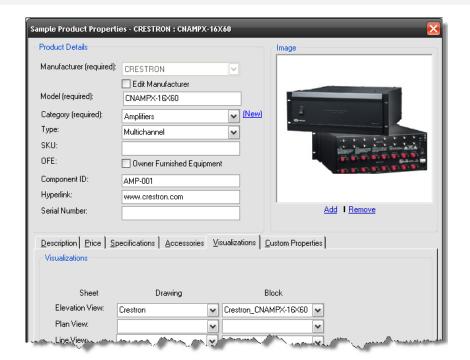
You will then be prompted to select a Product from your database:



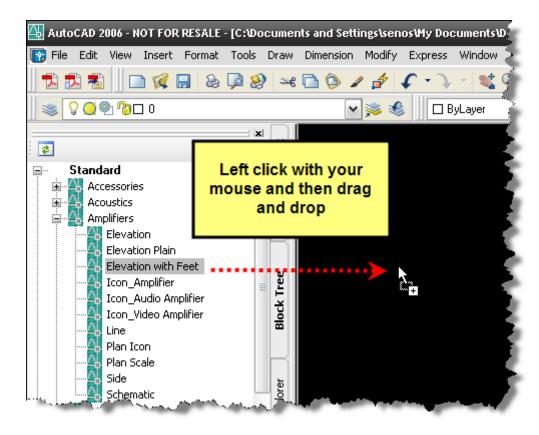
The default block for that sheet type will drop on the sheet and the Product will be added to the PDM.



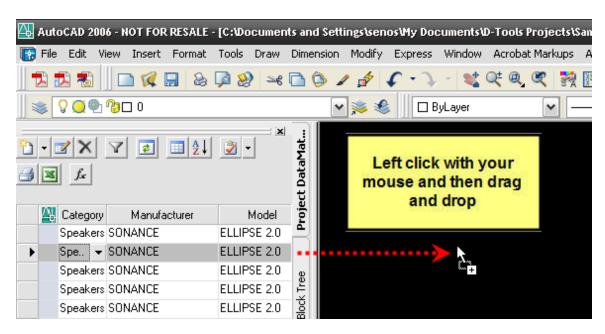
The default block will drop for a particular sheet type unless you have specifically assigned a particular block to drop for that Product. You can assign a specific block to drop for a particular sheet type on the **Visualizations** tab in the Product Properties for a Product.



You can also drag over a particular block to the drawing sheet instead of the dragging the drawing if you prefer. You can do this by dragging and dropping from the names displayed when the [+] next to the drawing name is expanded:

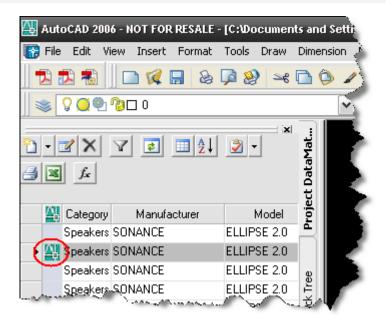


To get blocks on the drawing sheet for Products already in your PDM, you simply have to drag the Product from the PDM to a drawing sheet:





Notice that the AutoCAD icon will display in the far left column in the PDM to indicate that the Product is on the currently selected drawing sheet.



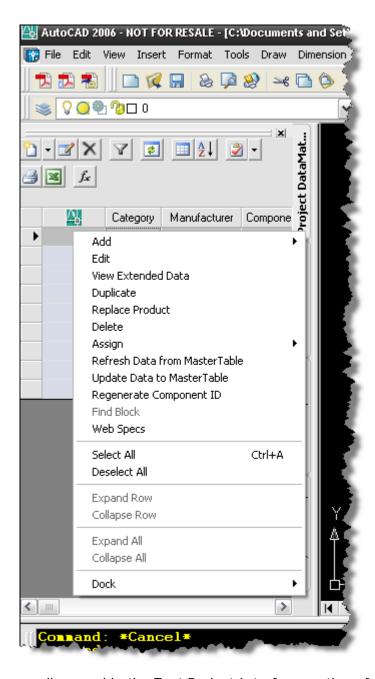
Assigning Locations and Zones

For a complete description of how to assign **Locations** and **Zones**, see "Assigning Locations and **Zones**" on page 299 of this manual.

Additional Right-Click Options

In addition to the Add Product/Package option described above in this section of the guide, there are additional right-click options available to you. Your right-click menus will vary depending on whether you right-click a Product in the PDM or if you right-click in the Drawing Area.

When you right click selected Product(s) or Package(s) in the PDM, the right click menu displays as shown below:

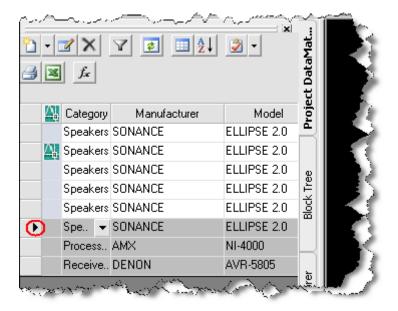


Most of these options were discussed in the Text Project Interface section of this guide, see "Additional Right-Click Options" starting on page 306. The AutoCAD Project Interface specific options are discussed below.



Some of these options will apply across multiple Products, some only for the primary selected Product. A selected Product is indicated by a gray row color, and the

primary selected Product is indicated with an arrow in the PDM:



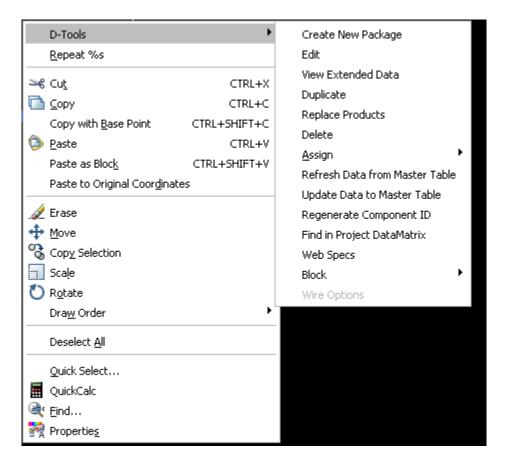
Right-Click->Find Block

This works for the primary selected Product in the PDM. This option will find and select the block for that product on the drawing sheet.

Right-Click->Dock->Left/Right/Top/Bottom/Float

This option applies the entire PDM and will dock or float the window based on your choice.

When you right-click in the drawing area on a drawing sheet, the right click menu displays as shown below:

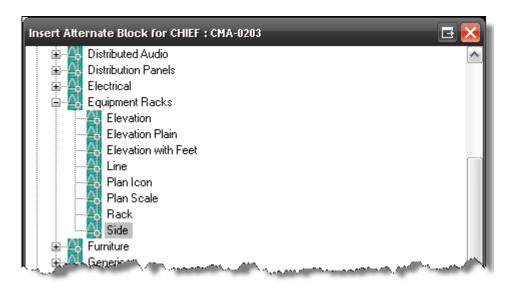


Right-Click->D-Tools->Find in Project DataMatrix

This option works for only one selected Block at a time. This will find and select the Product in the **PDM**.

Right-Click->D-Tools Block->Block->Insert Alternate View

This will open the Insert Alternate Block form which allows you to choose any block from the Block Tree to represent an alternate view of the Product. The blocks will have the same Component ID as each other. You can choose any block from any drawing for this second alternate view.



Right-Click->D-Tools->Block->Change Block

If the default block that displays on a drawing sheet is not the block you want, you can change the block to any block from any drawing.



There is a "Save as default visualization for this view" option at the bottom of the form:



This will fill in the fields on the Visualizations tab of the Product Properties:



Right-Click->D-Tools->Block->Link To D-Tools

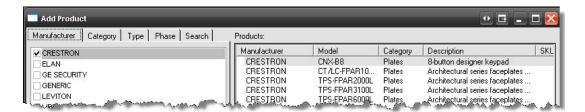
This option allows you to link a block that you have created to a Product in the **SI 5** database. Once you create a block and link it to a Product in **SI 5**, you may want to add the block you created to a drawing so that you can use it in future Projects.

Example:

1) Select the block you want to link then Right-Click->D-Tools-> Block->Link To D-Tools. The Add Product form opens.



2) Select the Product that you want to link this block to in the Add Product form then click [Add to Project]:

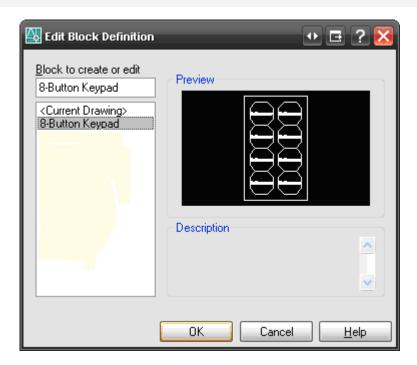


3) The block is now linked to the Product that you selected and the Product has been added to the PDM.

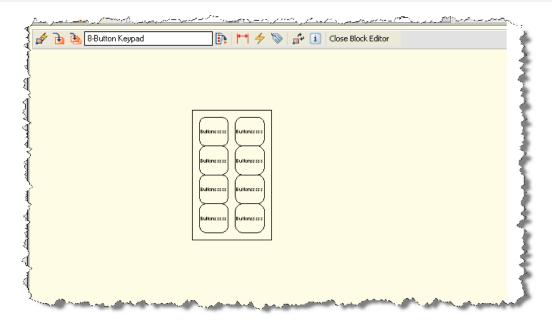
To add this block to a drawing for use on future Projects:

4) Select the block and then in the command line type: bedit

The Edit Block Definition form will open:

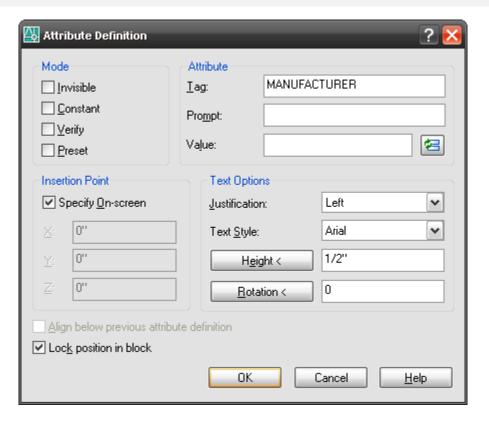


5) Select the block you created from the list and click **[OK]**. The block will now show in the Block Editor screen:

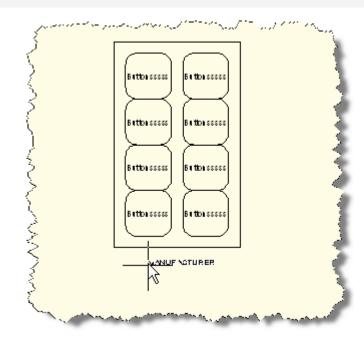


6) In the command line type: attdef

The Attribute Definition form will open.



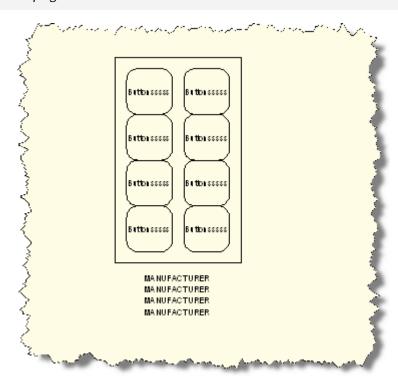
- 7) Type "Manufacturer" in the Tag field then click [OK]
- 8) The attribute will be displayed on the cursor. Pick a spot you want this attribute and left mouse click to place it page:



9) In the command line type: copy

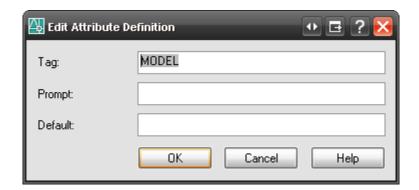
A copy of the attribute will be made, left click where you want to place the attribute.

10) Repeat step nine two more times until you have a total of four "Manufacturer" attributes on the page:

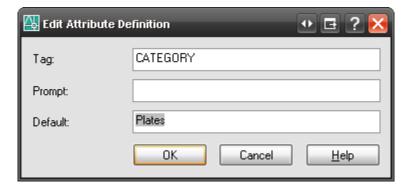


10) In the command line type: ddedit

Select one of the three copied attributes and change the tag for each as shown below. You will need to complete step ten a total of three times.

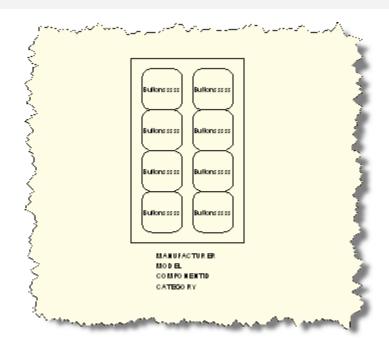






For the Category attribute, add an appropriate Category name to the Default field.

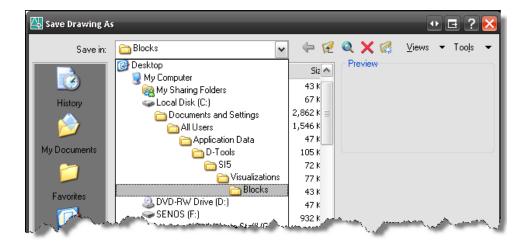
When finished, the block should look this:



- 11) Use the commands bsave and bclose to close the block editor.
- 12) In the command line type: saveas

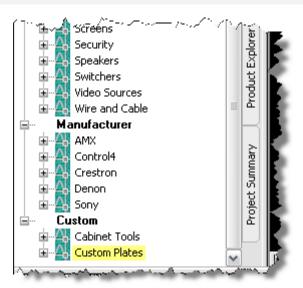
The Save Drawing As form will open. Type in a filename and then choose the following path in the "Save in:" dropdown: C:\Documents and Settings\All Users\Application Data\D-Tools\S15\Visualizations\Blocks. Name the drawing. In this example I named the drawing: Custom Plates.dwg

VISTA: C:\ProgramData\D-Tools\SI5\Visualizations\Blocks



13) Click [Save]

14) When you open an AutoCAD file for an SI 5 Project, the drawing you created will display in the Custom section of the Block Tree:

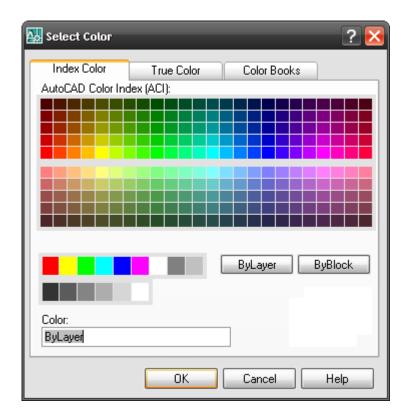




The block is a one-to-many relationship with Products in the SI 5 database.

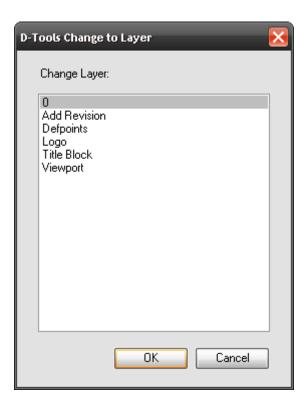
Right-Click->D-Tools->Block->Change Color

This function does not work for SI 5 Schematic blocks. This will open the AutoCAD Select Color form:



Right-Click->D-Tools->Block->Change Layer

This function does not work for SI 5 Schematic blocks. This will open the D-Tools Change to Layer form. All SI 5 blocks are assigned to layer "0" by default. Use AutoCAD functions to create your own layers.



Right-Click->D-Tools->Wire Options->Show ComponentID

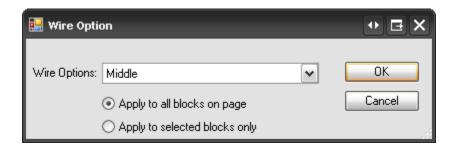
This only applies to schematic sheet types and only to the Schematic block in the Wire and Cable drawing:



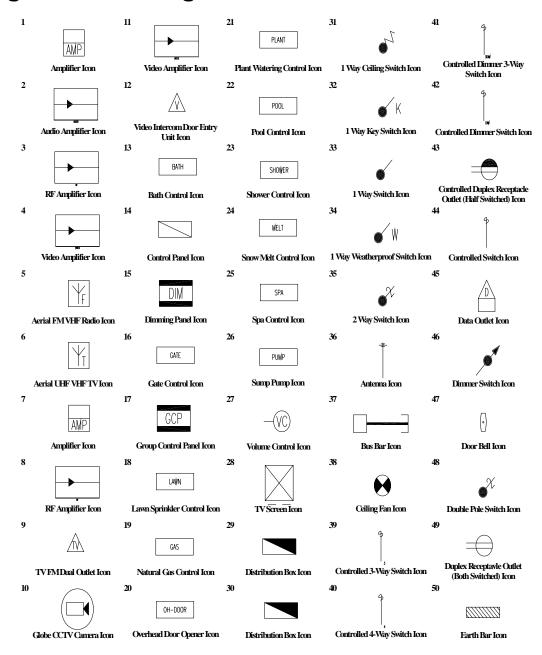
This option will open a dialog that allows you to choose where the Component ID text label displays on the block:

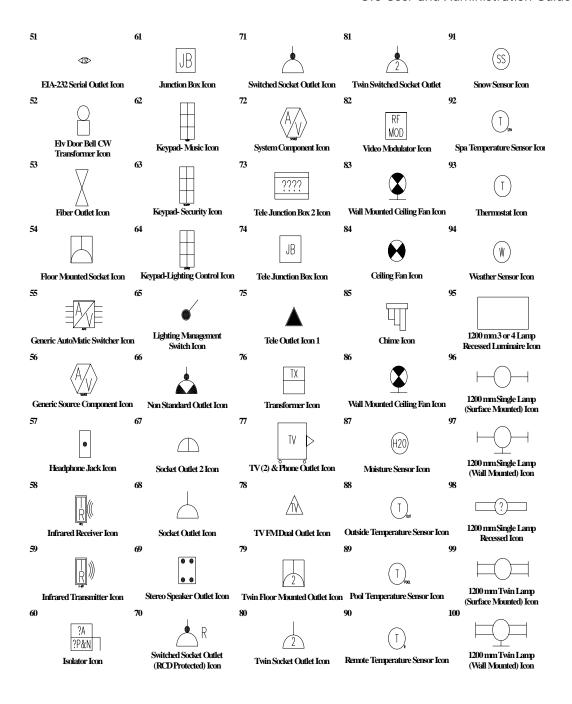


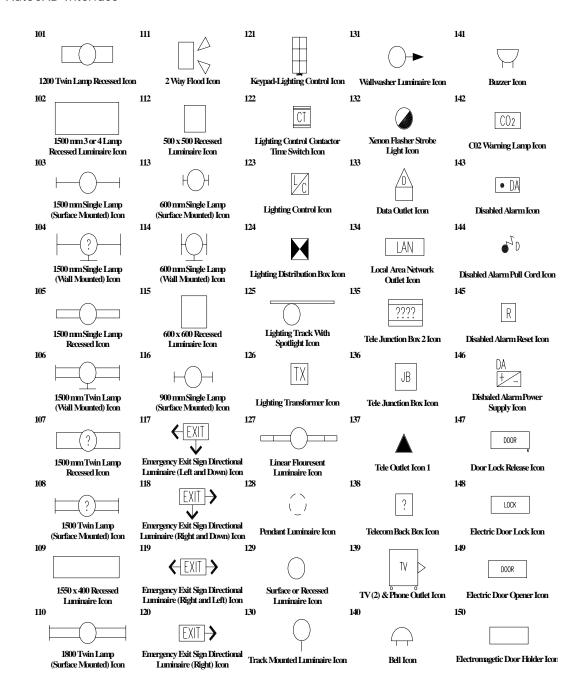
You can do this for just the selected blocks on the sheet or all of the blocks:

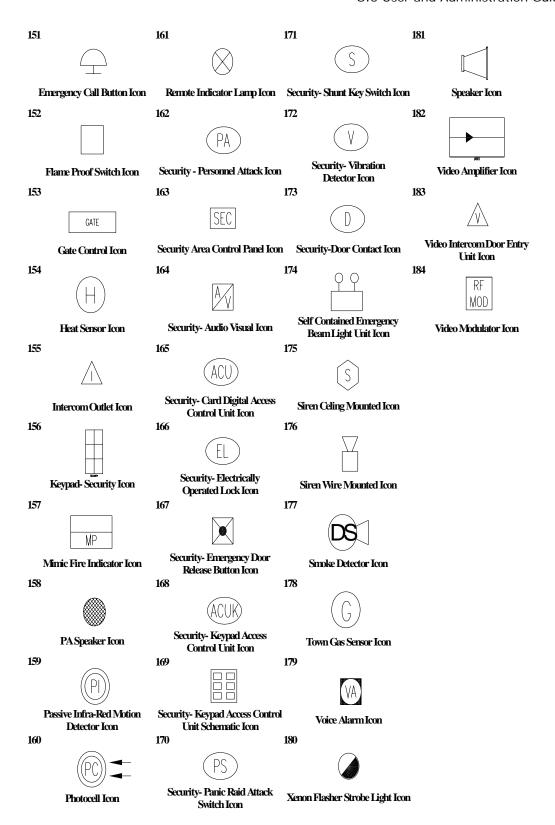


Listing of Low-Voltage Icon Blocks



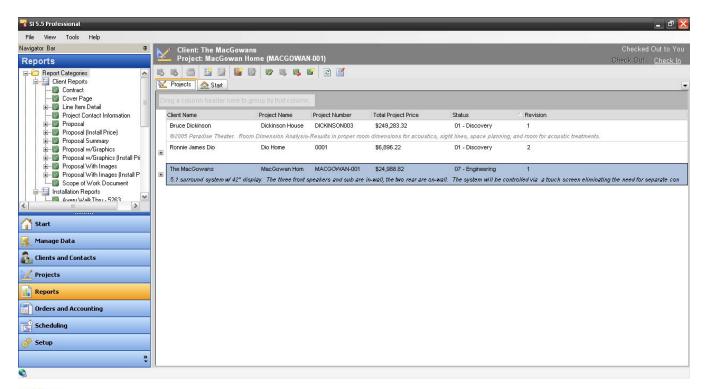






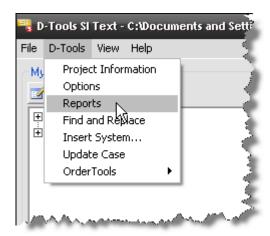
Reports

The Reports tab allows you to run reports for the selected project. For additional information about reports see this section of the D-Tools Blog: http://www.d-toolsblog.com/si-reports/





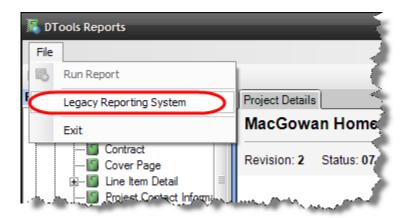
You can also run reports from within an open Project by selecting D-Tools->Reports from the menu bar:



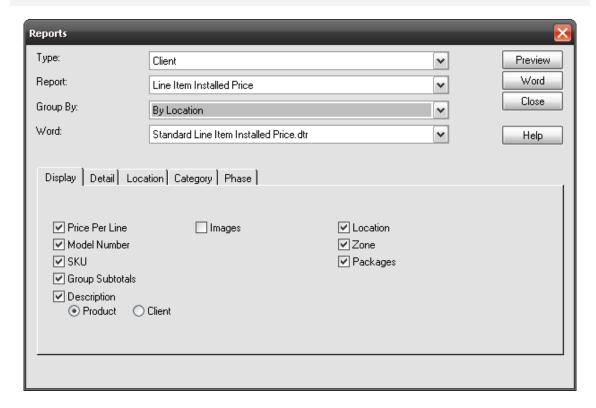
472 Reporting Center

Although not shown, you can do this from within the Visio and AutoCAD project interfaces as well.

If you were also a V4.6 user and have SI 5 loaded on the same machine where SI 4 is installed, you may access your legacy reports from within an open project by selecting D-Tools-> Reports, then select File-> Legacy Reporting System as shown below.

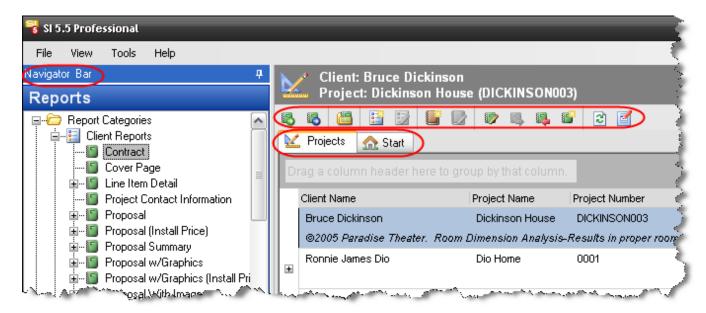


A familiar form will open. While we hope this is comforting to you, you must abandon these archaic reports and embrace the new SI 5 reports at some point, the sooner the better...seriously.



See the <u>SI4 Users Guide</u> for more details on how to use this interface. http://www.d-tools.com/update/SI4Installs/eD-ToolsSI45UserGuide.zip

The Reports interface consists of two main tabs: Projects and Start. There is a Toolbar with buttons that will be described below. The Navigator Bar displays a list of all of your Reports.



The Projects tab lists all of your projects while the Start tab has help links for Reporting:

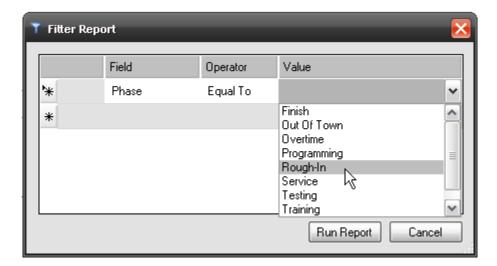


Toolbar

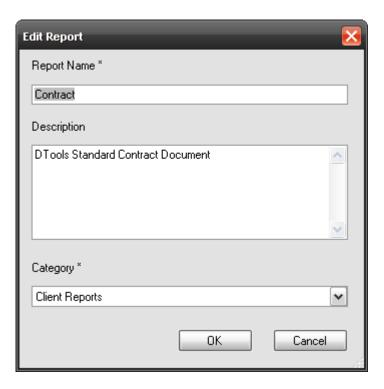


The toolbar has a collection of icons for quick access to these common actions

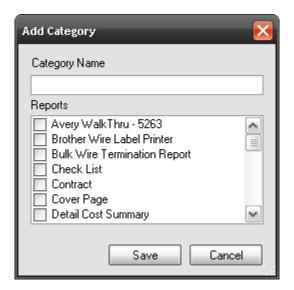
-Run Report
-Run Report with Filters opens the following form. Click in each column to choose a Field, Operator, and Value.



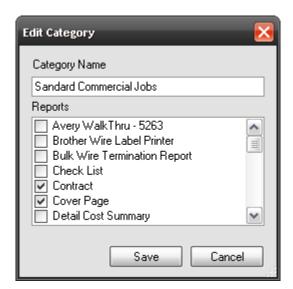
.....Edit Report opens the following form and allows you to change the Name, Description, and Category of the report.



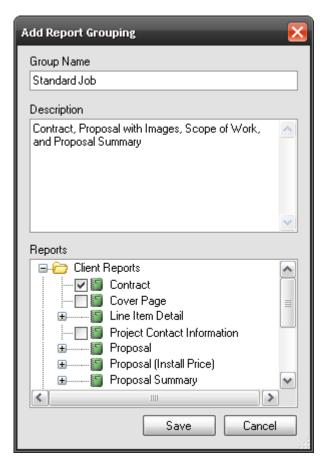
.....Create New Report Category opens the following form. Name the Category and then select the reports you want to add to the Category. There are three stock Report Categories in SI 5: Client, Management, and Installation.



.....Edit Report Category allows you to edit the selected Category.

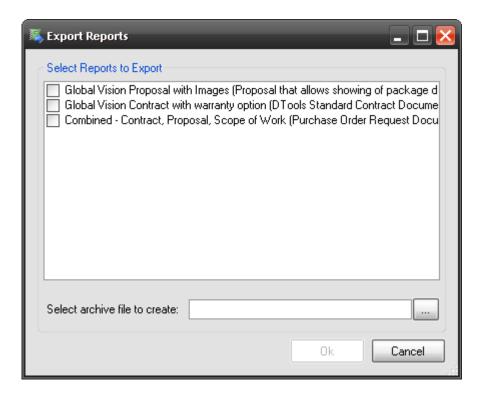


.....Create New Report Group opens the following form. Groups run multiple reports at a time. Name the Group, add a Descriptions, and select the reports for the Group.



.....Edit Report Group allows you to edit a Group.

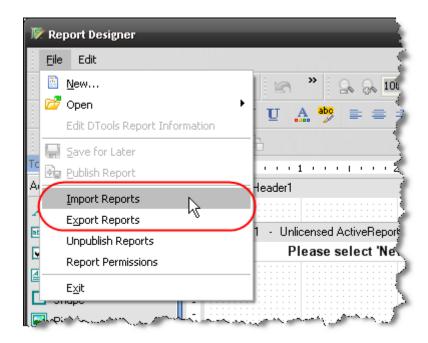
-Report Designer opens the interface to customize existing SI 5 reports. See pg. **500** for details on the **Report Designer**.
-Export Reports allows you to export any custom reports that you have created. Reports do not synchronize so in order to share you must export the report and then transfer to another machine and import. A zip file will be created.



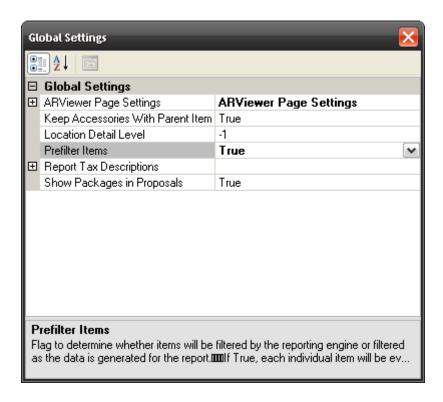
.....Import Reports allows you to browse to a .zip file created via the Export reports function.

The Export/Import functions here are only for the Standard Reports that display within this interface. To Export/Import custom "Orders and Scheduling" Reports you must do this within the "Orders & Scheduling" Report Designer:

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-New Excel Report opens the following form. See Excel Reports on pg. 532 for details.
-Refresh Project List refreshes the grid.
-View/Change Global Settings opens the following form.



ARViewer Page Settings – allows you to choose whether or not to default to MultiPageColumns and Multipage Rows view.

Keep Accessories With Parent Item – Options are "True" or "False". When set to "True", accessories will be listed beneath the parent item and the price of all the accessories will be included in the price displayed next the parent product. When set to "False", accessories will be listed independently and the price of the accessories will not be included in the price of the parent product.

Location Detail Level - Options are "-1" through "5". "-1" will display the full hierarchy of your Location Types for a project. Using any number 1-5 will run the reports to the specified level. Remember, you can have up to five Location Types in SI 5.

Example: You are using a Location Type Hierarchy as follows: Building->Floor-> Room. You only want your reports to show by Room. Since "Room" is the third Location Type in your hierarchy you would choose "3" for this setting.

Prefilter Items – Options are "True" or "False". This function will filter the products in a project prior to sending the data over to the report. The default is "False" (so as not to make a setting change for existing users) but you should set this to "True".

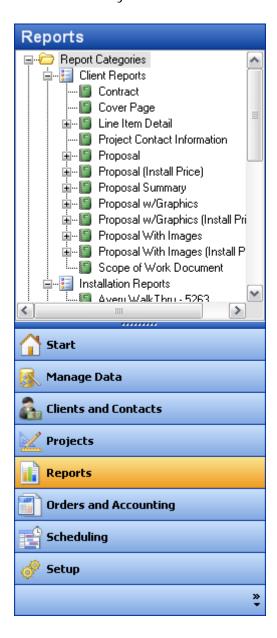
Example: You have a package in SI 5 with some products in the Rough-In Phase and some in the Finish Phase. If you run a report filtered to the "Rough-In" Phase, the products Rough-In products from the package will not display in the report when this value is set to "False". When set to "True" the filtering will include the products within the package on the report.

Report Tax Descriptions – Expanding this list gives you three text fields for overriding either the GST, PST, or Sales Tax Descriptions on your reports.

Show Packages in Proposals - Options are "True" or "False". When set to "True", the price of all the products in a Package will be included in the price displayed next the Package name in the report. When set to "False", the products will display in the report individually and there will be now entry for the package name displayed.

Reports List

This section lists all of the reports available to you. "Orders and

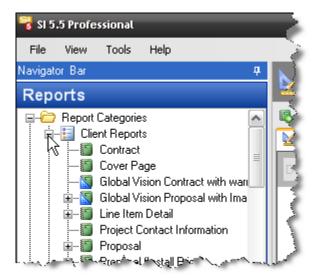


Report Categories

Report Categories allow you to organize your reports for quick access. Standard reports are initially organized into four categories: Client Reports, Excel Reports, Installation Reports, and Management Reports.

Click on the

■ symbol next to the report category name to see which reports can be found.



- Standard reports are noted by a green icon
- Sustom reports you have created or imported have a blue triangle on the icon

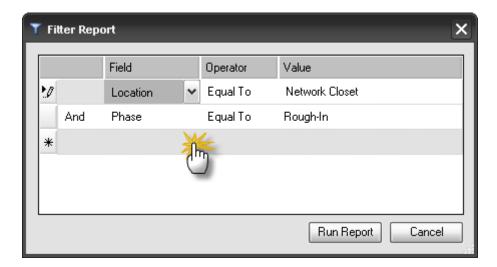
To create a new report category, *right-click* anywhere in the report list and select **New -> Report Category**. You can then drag and drop reports into your new category.

Running a Report with Filters

If you want to filter the project data before running a report, *right-click* on the report name and select Run Report with Filters. The Filter Report dialog will appear.



On the row with an asterisk, click on the field column to select which data field you wish to filter by. Similarly, click on the Operator and Value fields to determine how this data field will be filtered.

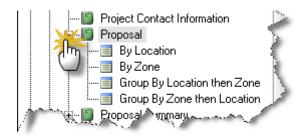


You can select multiple fields to filter by. Each row of the filter is joined by either an AND or an OR statement, selected in the column on the far left. The example above will filter by Location = Network Closet AND Phase = Rough-In. Click [Run Report] to run the report with filters.

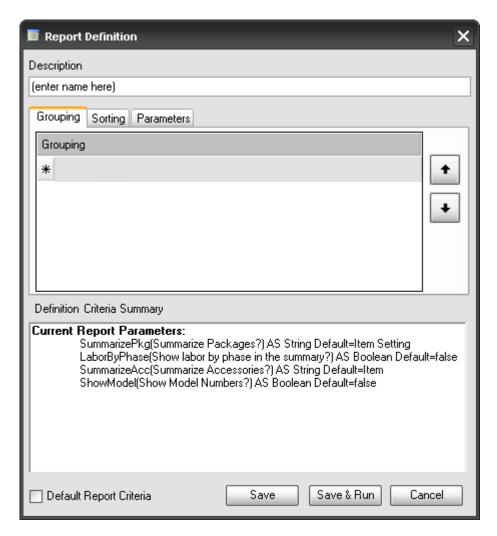
Report Definitions

Many reports have the ability to be run with custom grouping, sorting and parameter options that you can define and save. These stored options are called Report Definitions.

If a report supports report definitions, you can see them by clicking on the \blacksquare symbol next to the report name.



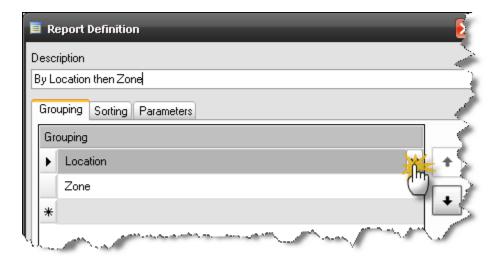
To create your own report definition, *right-click* on the report name and select **New -> Report Definition**. The Report Definition dialog will appear.



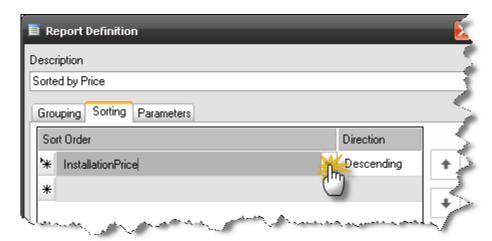
<u>Description</u> is the name of the definition that will appear in the report list.

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To create your own grouping order for this report definition, select the **[Grouping]** tab and click on the grey area next to the asterisk. Some reports (like Line Item Reports) support up to three levels of groupings; others support none, one or two levels.

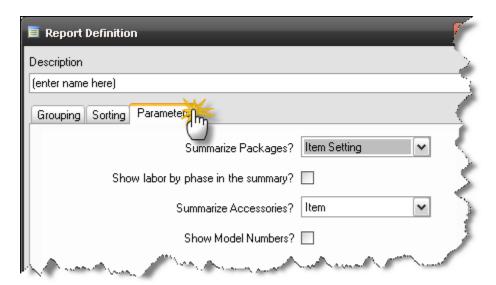


To sort the individual items within groups, click on the **[Sorting]** tab and select the fields you wish to sort by and how they are to be sorted. Note that not all reports can be sorted in this fashion.



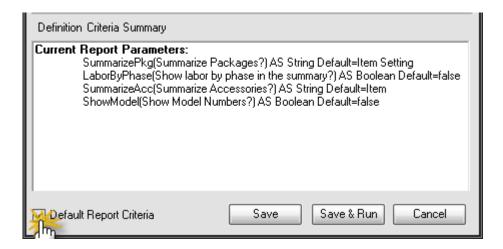
Report Parameters

Some reports have parameters that affect the way the report runs. To see which options exist for a particular report, go to the **[Parameters]** tab of the Report Definition dialog. Here you can modify the report parameters for this report definition.



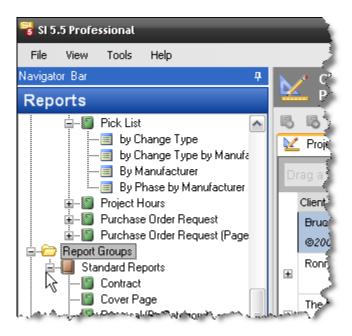
Making a Report Definition the Default Definition

If you would like your report definition to run by default when you double-click on the report name, just check the <u>Default Report Criteria</u> box before you save your report definition.



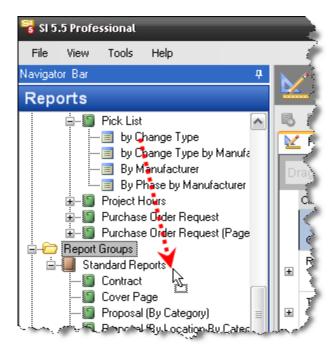
Report Groups

Report Groups are a way for you to define a collection of reports that will run together. Report groups are shown at the bottom of the reports list. Click the [+] symbol next to the group name to see which reports are included.



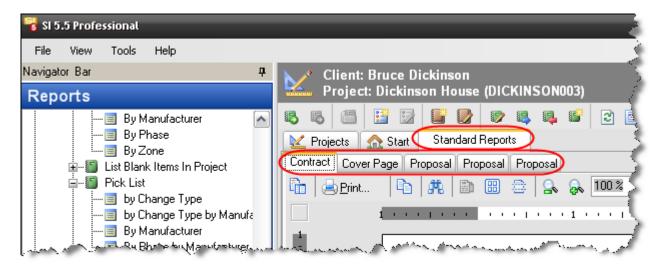


To add reports to a report group, drag a report from the top section (Report Categories) to the group header.



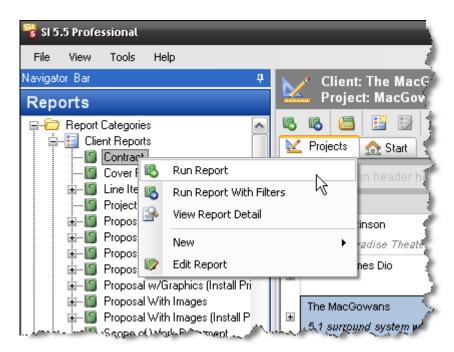
To define a new report group, *right-click* in the Report List area and select **New -> Report Group**.

To run a report group, just double-click on the group name. The results will appear in the Projects and Reports area. Individual reports appear in sub-tabs and can be printed or exported separately.

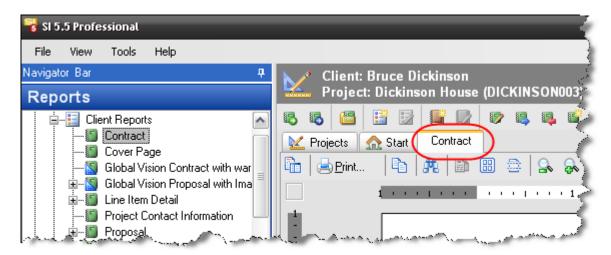


Running a Report

To generate a report you can: double click a report, right-click the report and choose "Run Report" or select a report in the list and click the button on the function bar:



The report will generate and display on a tab in the **Display Area**:

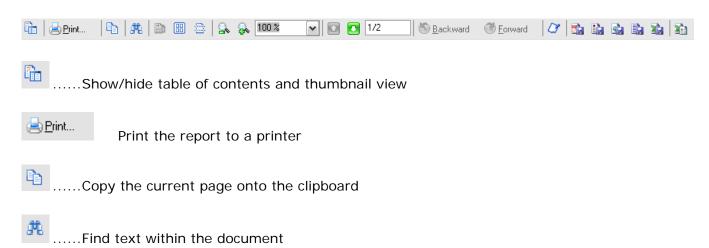


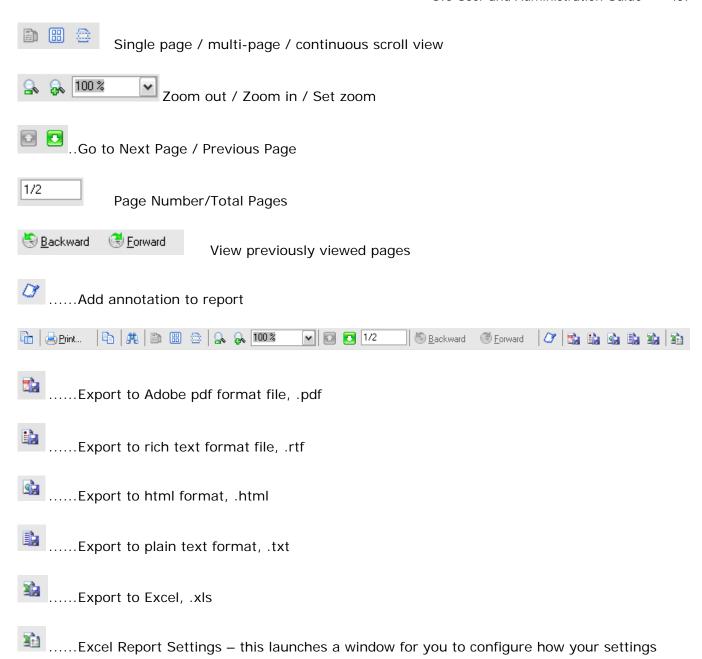
Viewing a Report

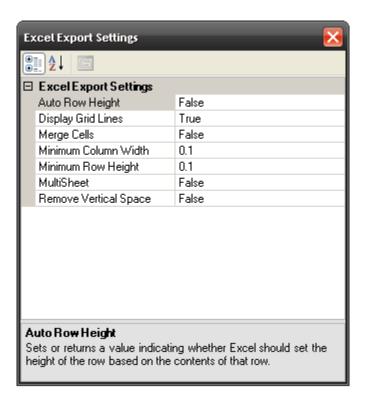
Once you run a report, it will appear as its own tab in the Projects and Reports area. You can have a large number of report tabs open at once, which makes it easy to compare reports.



When viewing a report, you have a row of tools at the top for performing different actions.



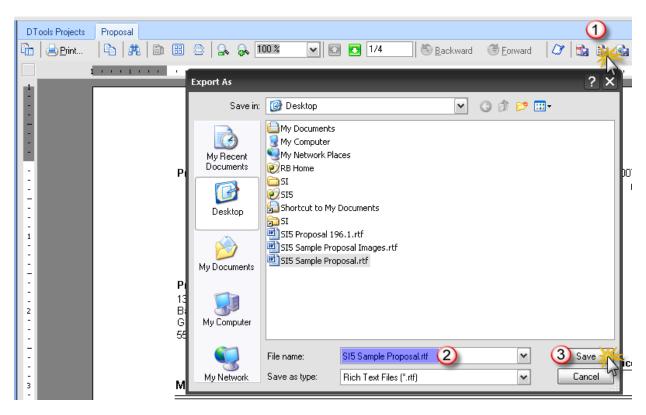




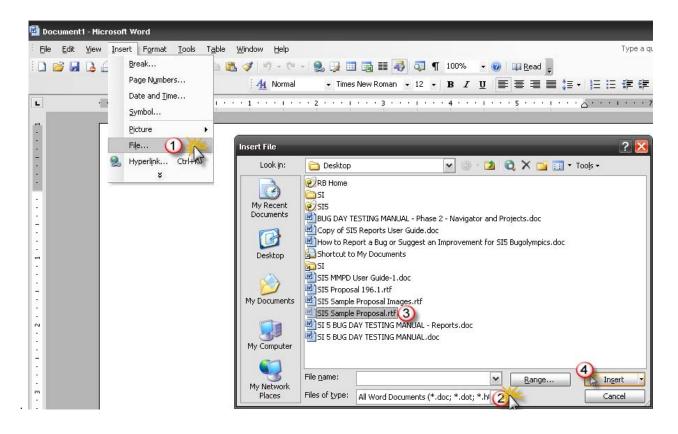
Importing a report into MS Word

To import a report into MS Word for continued editing, follow these steps:

1) Click on the Export to Rich Text Format icon or the Export to Plain Text Format icon and select a name and location for the file.



- 2) Open Microsoft Word
- 3) Go to Insert > File, select "All Word Documents" in the file type dropdown, and browse to the file.



Using your own Word Templates with Proposals or Line Item Reports

If you want to fine tune the look of your Proposals and Line Item Reports in Word, you can do this by running these reports with no headers or footers, then inserting into your own custom-made Word template. Follow these steps:

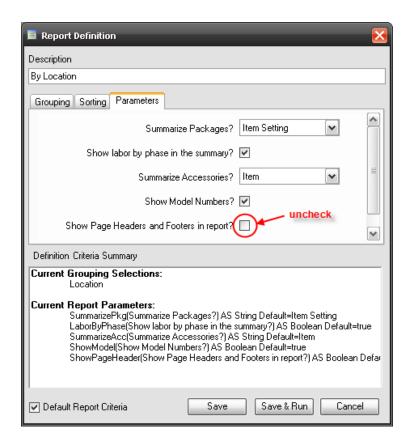
1) Create a Word template with the desired headers and footers you want to use.



D-Tools provides sample templates in your Global Application folder (in Windows XP, C:\Documents and Settings\All Users\ Application Settings\D-Tools\SI5\Other Files).

See SI5 Proposal Template 1.dot. VISTA: C:\ProgramData\D-Tools\SI5\Other Files

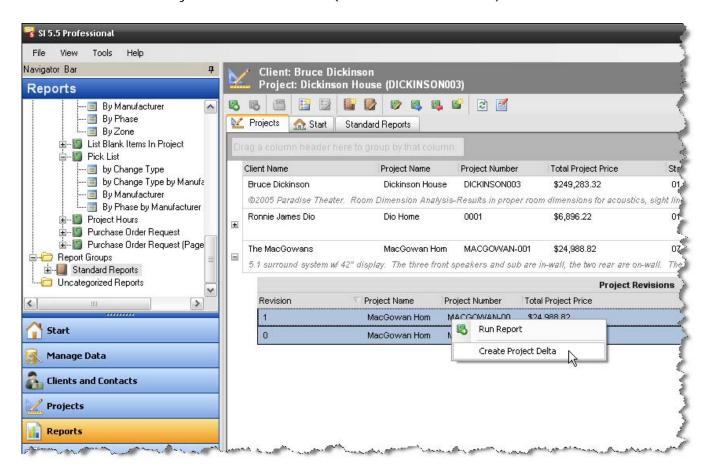
2) Create a custom report definition (see below) and uncheck the "Show Page Header and Footer" parameter.



- 3) Run the report using the custom report definition.
- 4) Export to Rich Text Format (see above)
- 5) Create a new Word document based on your custom template.
- 6) Go to Insert > File and browse to the rtf document (see above)

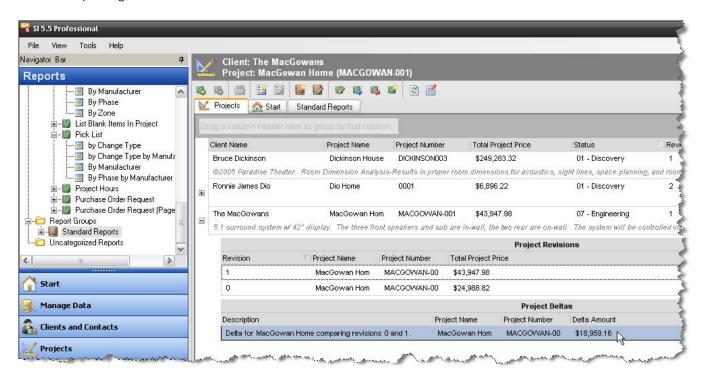
Comparing Two Revisions of a Project

If you want to compare two revisions of a project with each other, select the revisions in the project list and *Right-Click* to select <u>Create Project Delta</u>. The order of the selection is important. The difference will always be Delta Amount = (Selection1 – Selection2).



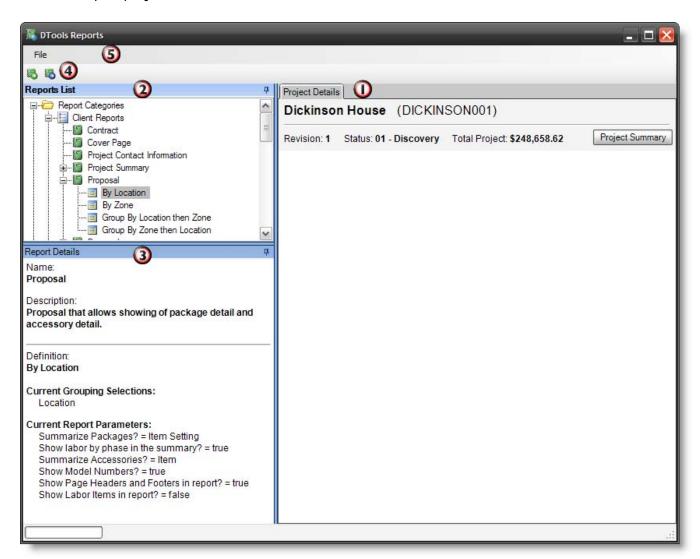
Once you have created a delta project, which only includes the differences between the two revisions, you can select the delta project and run reports against it.

494 Reporting Center



Projects Interface

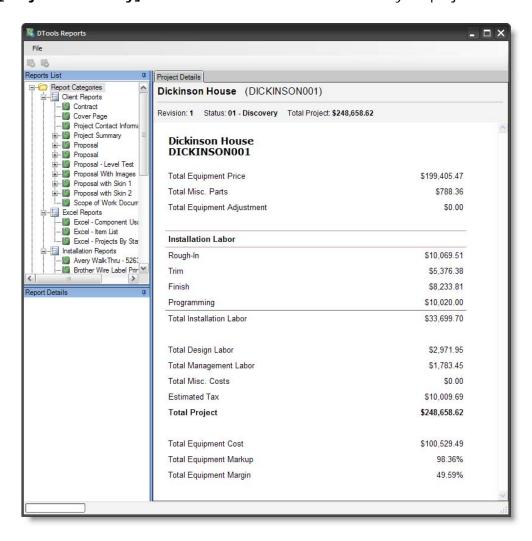
The Reporting Center projects interface allows you to run reports on a project that you have open in the Text, Visio, or AutoCAD interfaces. To open, go to the **D-Tools > Reports** menu option from within an open project.



This window is divided into five areas: 1) The Project Details and Reports area, 2) the Reports List, 3) the Report Details, 4) a Menu Bar and 5) a Toolbar.

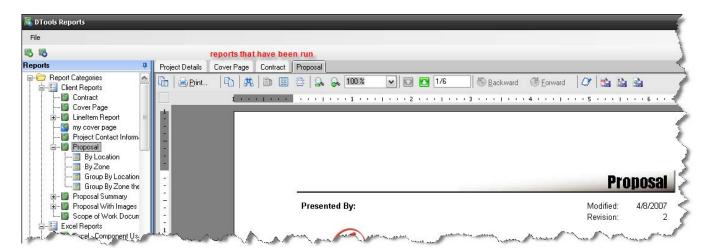
Project Summary

Click the [Project Summary] button to see a financial overview of your project as shown below.



Project Details and Reports Area

The lower right area shows you some basic information about the project in the Project Details tab. Also, when you run reports, these will appear as tabs in this same area. See "Viewing a Report" on page 488 for more details.



Reports List

The Reports list on the upper left shows all of the defined reports.



To create a new report definition, report group, or custom report, go to the Reporting Center primary interface. You cannot modify the Reports List from within the projects reporting interface.

To Run a Report

Double-click on the report name in to run the report. This will run the report using the default Report Definition. The results will appear in a tab in the Project Details and Reports area.

If the report has multiple Report Definitions, click on the
■ symbol next to the report name to see the definitions, and double-click on the one you want to run. See "Report Definitions" on page 482.

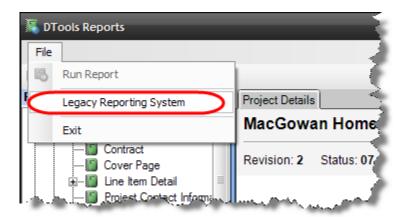
To Run a Report with Filters

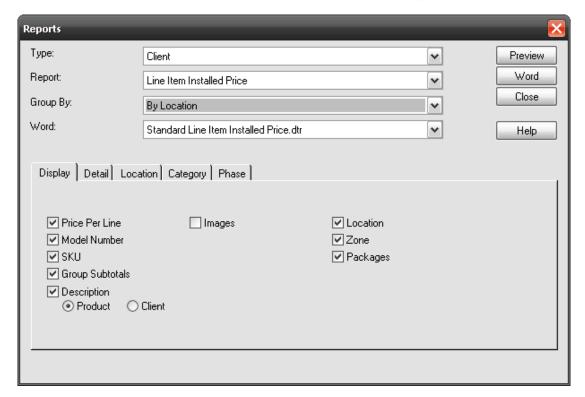
To filter the project data before running a report, right-click on the definition and select "Run Report with Filters". Note that not all reports support filtering. See **Running a Report with Filters** on pg. **481** for details.

To Run a SI4 Legacy Report

498 Reporting Center

If you have SI4 installed on this computer, you can run any non-Business Manager SI4 report, including custom reports, for your project. Go to **File -> Legacy Reporting System** in the menu bar and the SI4 Reports interface will open.





Report Details

The report details area shows some basic information about the selected report, such as its name, a description, and what the Report Definition settings are. The information in this section changes whenever you select a different report in the Report List. See the reporting center primary interface guide above for more information.

Menu Bar

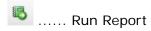
The reporting center projects interface has these menu bar options:

File > Run Report Run the selected report

System

Taskbar

The taskbar has two icons for quick access to these functions:



..... Run Report with Filters

Report Designer

To access the Report Designer, from the Reports tab select **Tools -> Report Designer->Standard Reports/Order & Scheduling Reports**.





Creating custom reports is for advanced users only. It is the sole responsibility of the user to debug any custom reports. However, for a great list of help options, check: http://downloads.d-tools.com/si5/documents/Custom_Reporting_Documents.htm

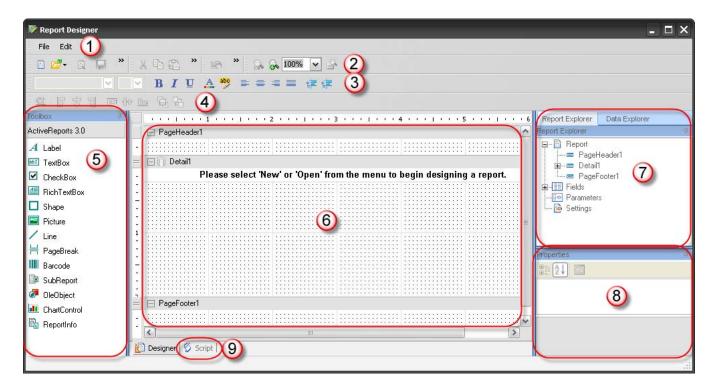


The D-Tools Report Designer is based on ActiveReports for .Net 3.0 by Data Dynamics. For a complete user guide on this interface, see the <u>ActiveReports User</u>
<u>Guide</u> located at

http://www.datadynamics.com/forums/72/ShowForum.aspx.

"Standard Reports" display on the Reports tab within the Navigator. "Orders and Scheduling Reports" will display on their respective tabs within the SI 5 Navigator.

The Report Designer interface will open:



This interface consists of these parts: 1) menu bar, 2) shortcut toolbar, 3-4) formatting toolbars, 5) toolbox, 6) design pane, 7) data and report explorer, 8) properties, and 9) script tab.

Menu bar

File -> New (New Report Wizard)

To create a new custom report, go to File... New. The New Report Wizard will open



Select **New Report Based on Existing Report** to create a custom version of an existing report, or **New Blank Report** to create a report from scratch.

If you chose New Report Based on Existing Report, you should then select which report you wish to modify.



If you selected "Orders and Scheduling Reports" this screen will display Orders and Scheduling options. These Reports display in on their respective tabs within the SI 5 Navigator:



The next screen allows you to set the report name, enter a description, and determine which report category the report will appear in. It also allows you to mark this report as a Sub-Report or a Business Manager report ("Business Manager" is a legacy term, this option means that the report will display under your Orders and Accounting Reports lists).





From here on, just hit "Next" at every screen to duplicate the report you are modifying.



Note 1: Sub-reports do not appear in your reports list. They are generally smaller reports which are included in other reports. An example is the Miscellaneous Costs sub-report.

Note 2: The Report Name is the name that will appear in the Reports List

Note 3: The "Data Source" field should always say "D-Tools Report Data".

In the next screen, set the page orientation and margins.



Next, choose whether the report will support sorting, filtering, and dynamic grouping. Also, choose which fields are available to be grouped and/or sorted by.





Only some of the standard reports are set up to support Dynamic Grouping, regardless of whether this checkbox is checked.

506 Reporting Center

The next step is to define the required groupings. In Line Item reports this determines how data is aggregated. Just click 'Next' if you are uncertain. The example below would be good for creating a BOM where you want a quantity followed by the Manufacturer and Model. This process would group all like Products together. Other useful groups could include: Category, Location, Phase, and Zone.



Next choose a required sorting option, if desired



Now, set any required filters, if desired.



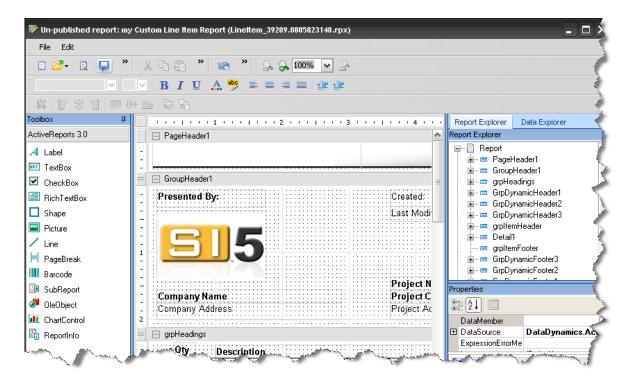
The next screen allows you to save report parameters.



The final screen is a review of your report definition. Click Finish to save and start editing the report.

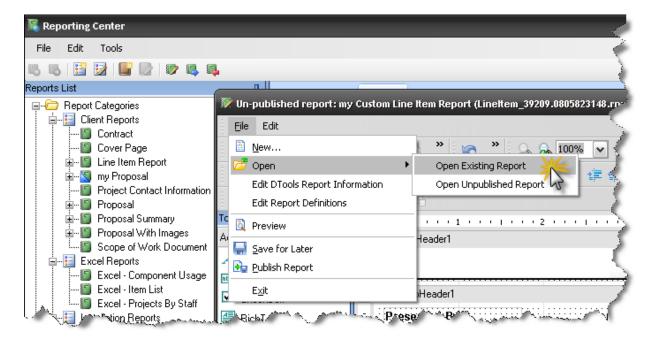


The report opens and is now an **Unpublished Report** that can be edited.



File -> Open

Allows you to open a custom report that you have already created.



Existing reports are published custom reports that appear in your Reports List

Unpublished reports are custom reports that you are still working on. They do not appear in the reports list until you publish them

File -> Edit DTools Report Information

To change the report information you entered during the New Report Wizard, use **File -> Edit D-Tools Report Information**. This will re-open the wizard and allow you to change the settings, including report name, grouping/sorting/filtering settings, and other options.

File -> Edit Report Definitions

If you want to create some custom report definitions for your report, go to **File -> Edit Report Definitions**. Report definitions created here will appear in the Reports List beneath the report name.

File -> Preview

Allows you to preview your report vs. a sample project without having to publish the report or exit the report designer.

File -> Save for Later

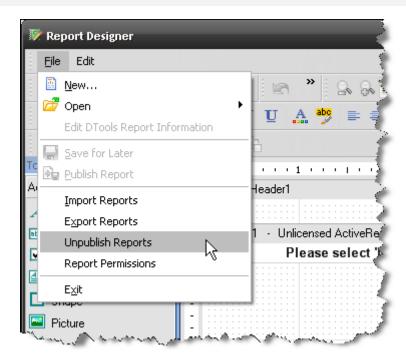
510 Reporting Center

Use File > Save to save an **unpublished** copy of your report for future editing. You will need to publish your report later if you wish to see it in your Reports List.

File -> Publish Report

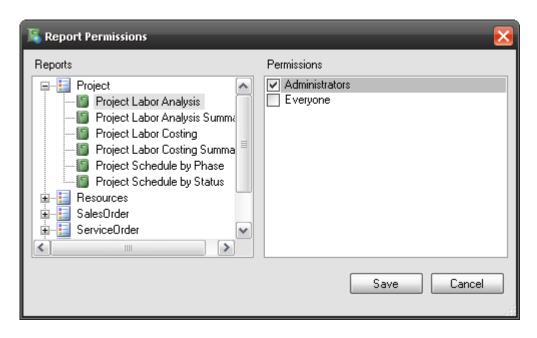
This will publish the report you have open so that it will appear in your Reports List. Choose this when you are satisfied and want to start using your custom report. Note that this will close the report for editing.

There are a few additional options within the "Orders & Scheduling" Report Designer:



File->Unpublish Reports – this will remove a published report from the list of reports in their respective interfaces.

File->Report Permissions – Opens the following form. Here you can select reports and choose what Groups have access to the report. See the **SI 5 Installation and Administration Guide** for information on Groups.



Edit

The Edit menu has an assortment of commands which are helpful when editing your custom report: Undo, Redo, Cut, Copy, Paste, Delete, and Select All.

Toolbars

There are two sets of toolbars. The first has one-click shortcuts for most of the items in the Menu Bar: New/Open/Save/Preview Report, Cut/Copy/Delete, Undo/Redo, and Zoom In/Out.

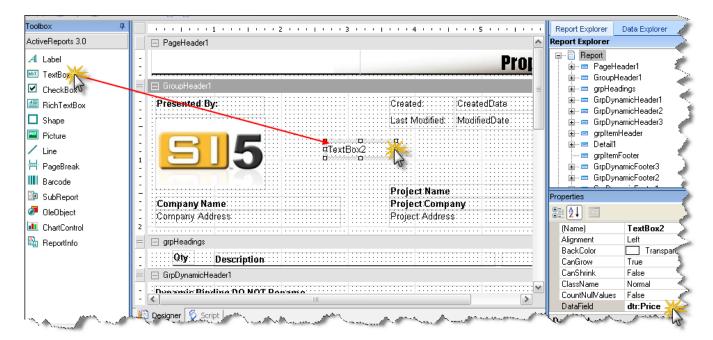


The second set of toolbars is used for editing textboxes and other objects within your report: Font settings, Colors, Alignment, Indentation, and Grouping. Use these to set the properties of report objects when you have one or more objects selected in the Design Pane.



Toolbox

The Toolbox contains a selection of objects that you can drag onto the Design Pane: Labels, Text Boxes, Lines, and Pictures are the most common. Text Boxes in particular can be bound to a data field for display in your report.





To bind the text in a TextBox to a data field, select the TextBox, then go to the Properties area and select DataField. Type in the name of the data field (e.g. dtr:Price) you wish to bind to the Text Box. D-Tools Report data field names are found in the Data Explorer.

Design Pane

The Design Pane, located in the center of the Report Designer, is where you go to modify the layout of your report. You can drag and drop objects from the Toolbox or Data Explorer onto the design pane for display on your reports.

Page Headers and Footers

Objects in the Page Header or Page Footer sections will appear at the top or bottom of each page, respectively.

Group Headers and Footers

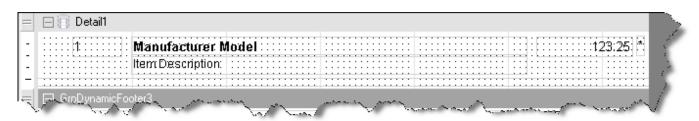
Group headers affect the way the data is iterated over. Most often, groups are linked to a data field, such as dtr:Location or dtr:Category. This causes this section of the report to repeat itself once for every member of the group.



Some reports come with special groups named **GrpDynamicHeader1**, **2 or 3**. DO NOT RENAME THESE as they are used to implement dynamic (run-time) grouping. Similarly, the group name is in a textbox with name **txtDynamicHeader1**, **2 or 3**, which should also not be renamed.

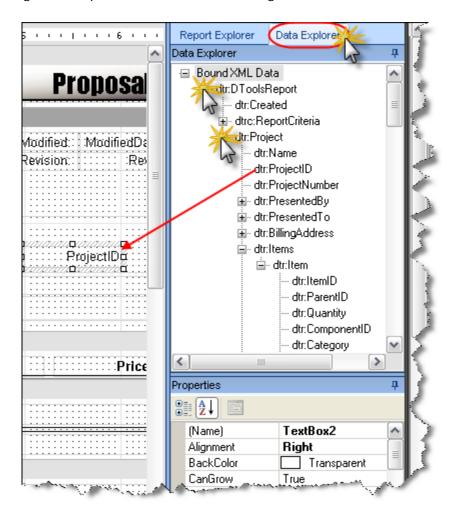
Detail

The Detail section shows what happens for each member of the data set. Use this section to add or remove data fields for each item in your report.



Data Explorer

The Data Explorer is where you go to find data fields for your report. It is initially located on the right, as a tab behind the Report Explorer. Use the Data Explorer to browse through the XML structure, then drag-and-drop data fields onto the Design Pane.



The Data Explorer is where you go to find data fields for your report. It is initially located on the right, as a tab behind the Report Explorer. Use the Data Explorer to browse through the XML structure, then drag-and-drop data fields onto the Design Pane.



Most of the information you will be looking for can be found under dtr:Project. Data fields for specific items are found under dtr:Items/dtr:Item.

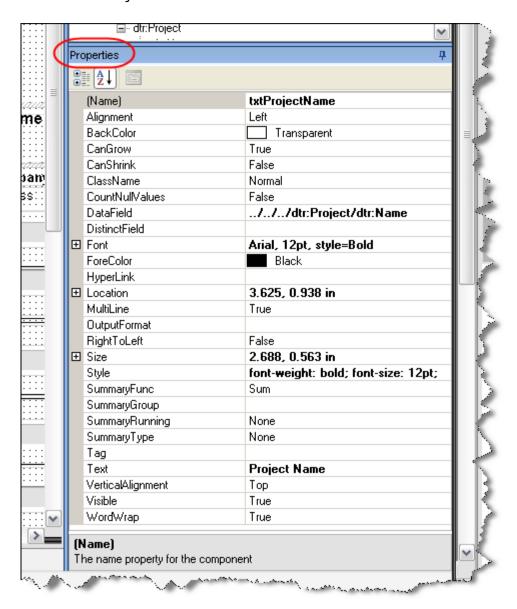
D-Tools XML Structure

D-Tools report data is based on an XML schema that is defined here:

http://www.d-tools.com/schemas/si5/reports/dtoolsreport.xsd

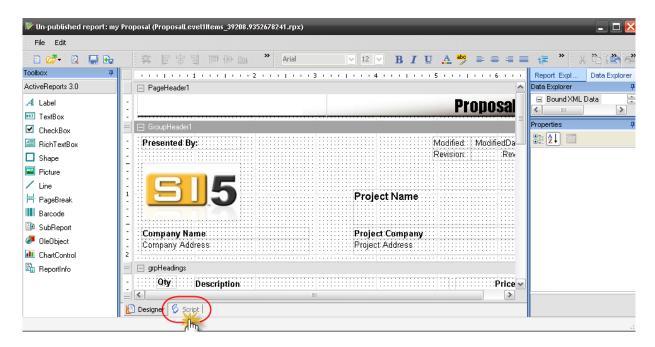
Properties

The properties window is where you go to change fonts, alignments, and any other properties of objects in your Design Pane. Select an object in the design pane first, then go to properties to modify the behavior of the object.



Script

The Script tab, located behind the Design Pane, is where you go to enter in .Net code. This allows you to take programmatic control of your reports. Either C# or VB.NET can be used. Note that all D-Tools reports have some amount of script code in them already.

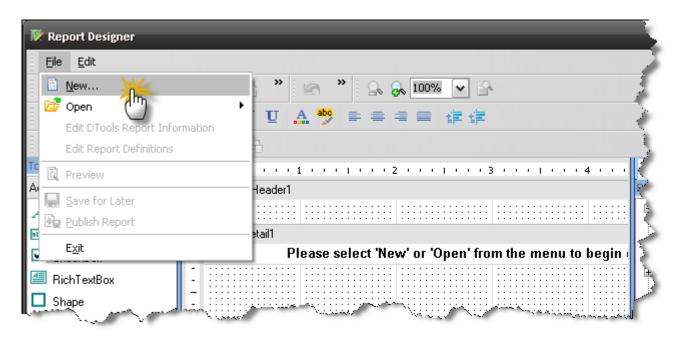


Custom Report Example

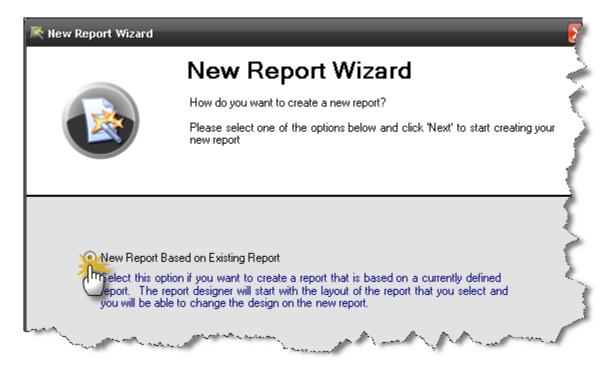
To give a simple example of how to customize a report, let's change the page header on a proposal. Here's how:

Step 1: Create a custom report based on an existing report

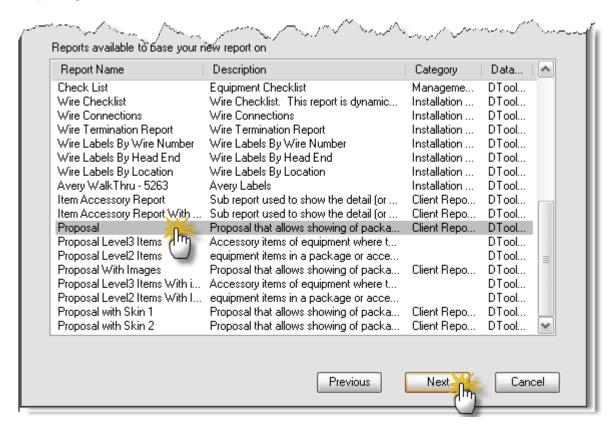
- 1) In the Reporting Center, go to Tools > Report Designer.
- 2) In the Report Designer, go to File > New...



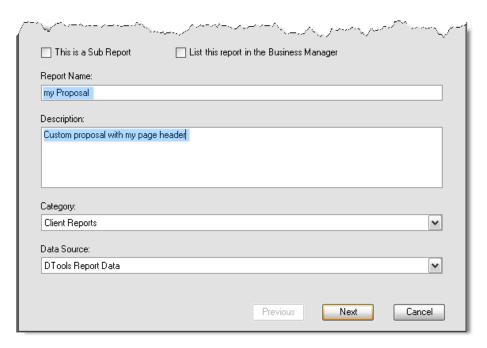
3) Choose "New Report Based on Existing Report" and click Next



4) Select "Proposal" from the list and click Next



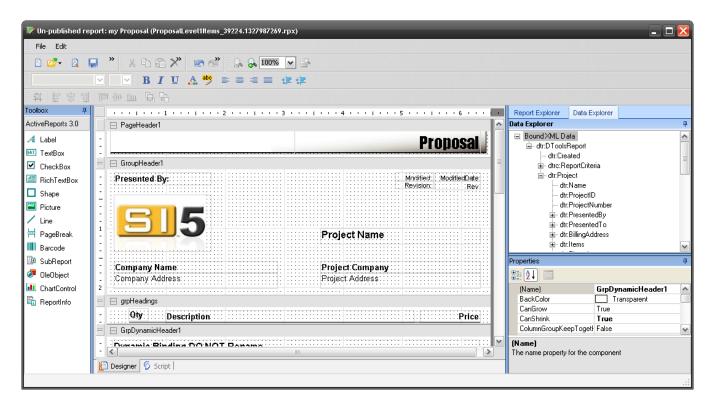
5) Name the report "my Proposal" and enter a description



6) Click 'Next' at all further screens until you get to 'Finish', then click that as well.

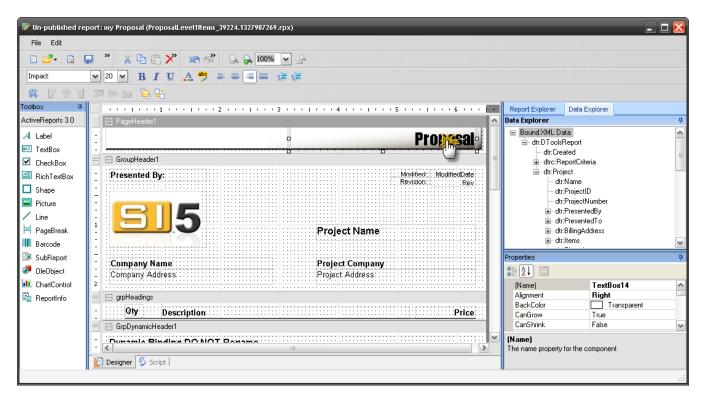


At this point the report has been created and can be edited.

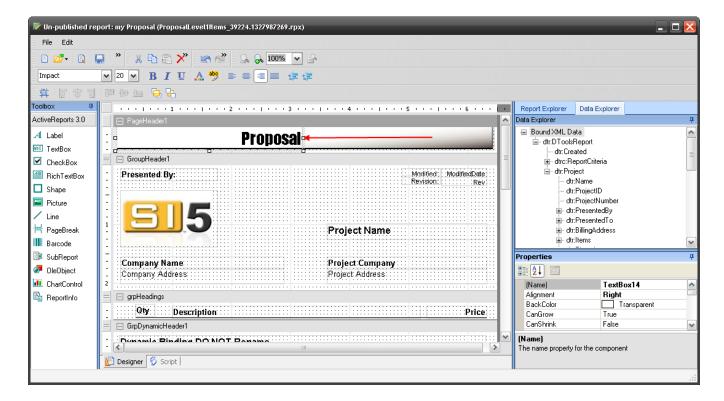


Step 2: Modify the Page Header

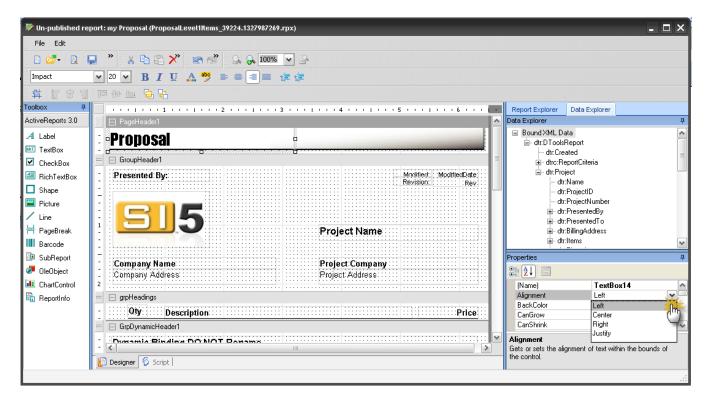
1) In the design pane, in the PageHeader1 section, click on the text that says "Proposal".



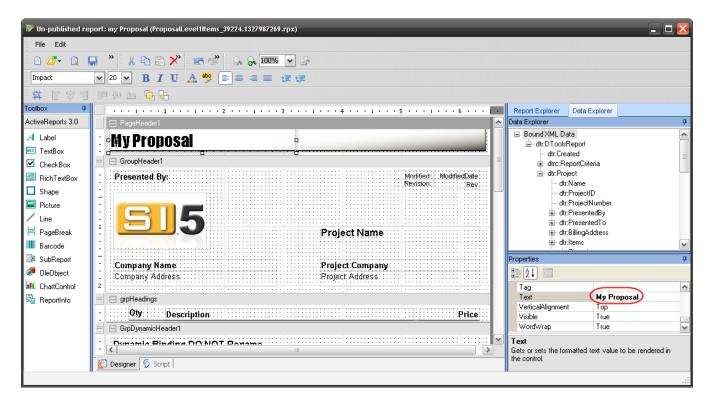
2) With the mouse, move this textbox (TextBox14) until it is aligned with the left side of the page



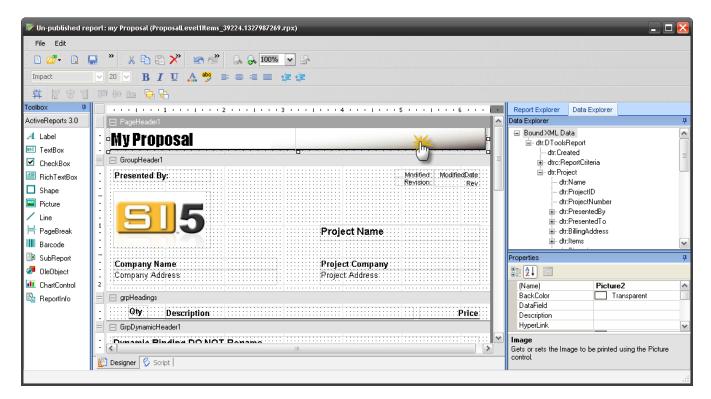
3) With the textbox still selected, go to the Properties window and set Alignment = Left



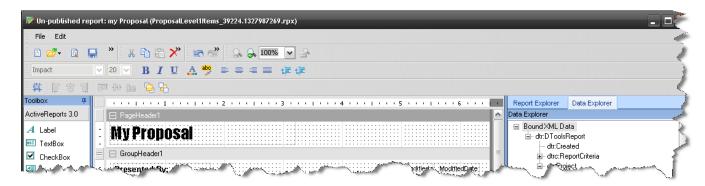
4) With the textbox still selected, go to the Properties window, scroll down to the Text property, and replace "Proposal" with "My Proposal"



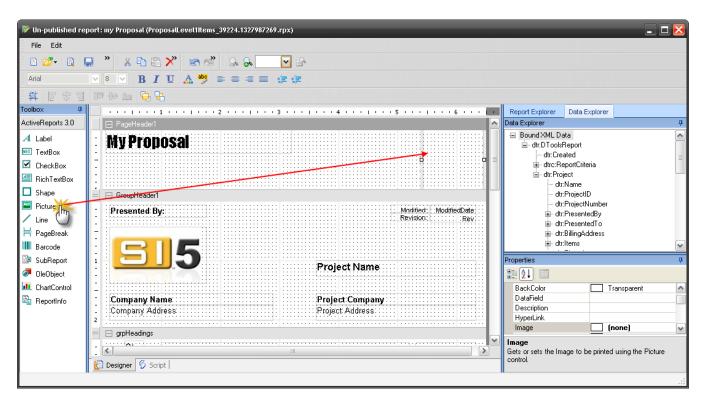
5) To change the image in the header, first select it with the pointer



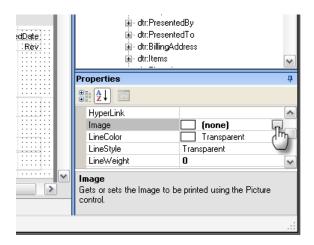
6) Now hit Delete to remove the image



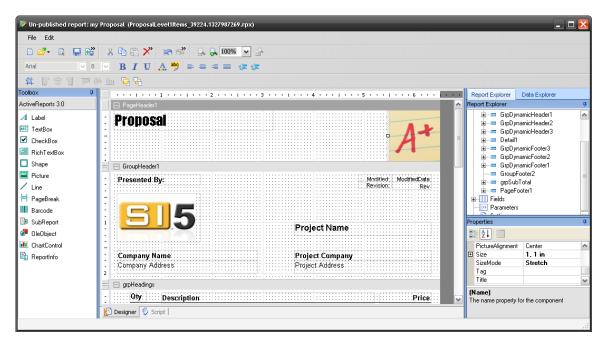
7) To add a new image, drag and drop the Picture icon from the toolbox to the PageHeader1 section



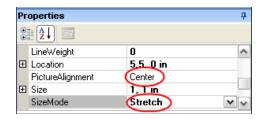
8) In the properties window, click on the image property and browse to the desired image file on your hard drive



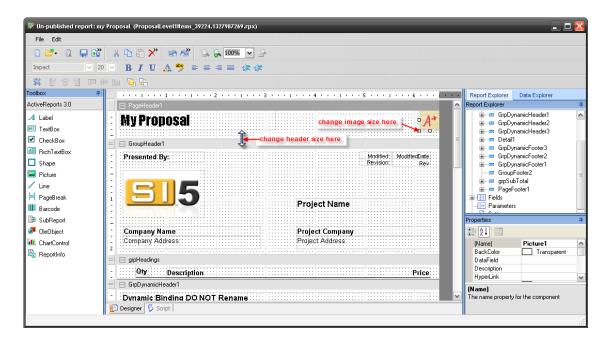
9) At this point you will see the image in the design pane



10) You may also need to set the SizeMode and Picture Alignment properties to see all of the picture

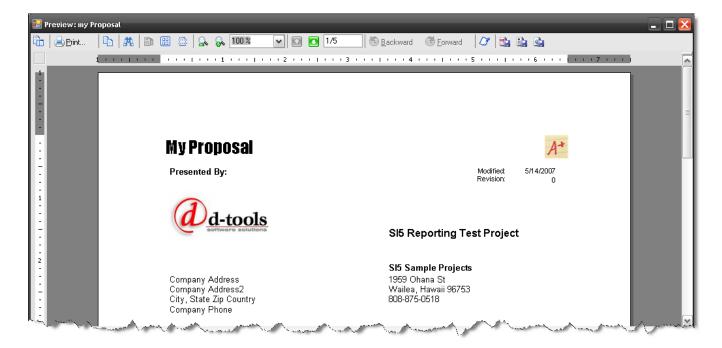


11) Resize the image using the handles on the image. You may need to adjust the size of the Header area before or after you do this.



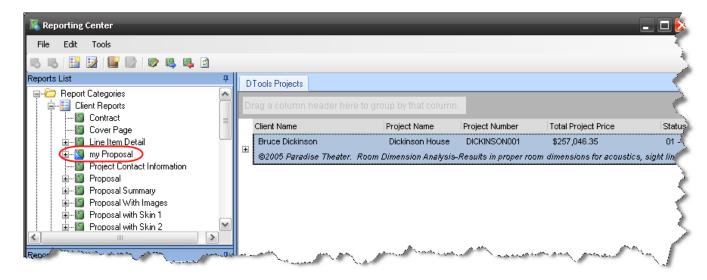
Step 3: Preview and Publish the Report

1) Go to File -> Preview to preview the report vs. a sample project. Close the window when done.



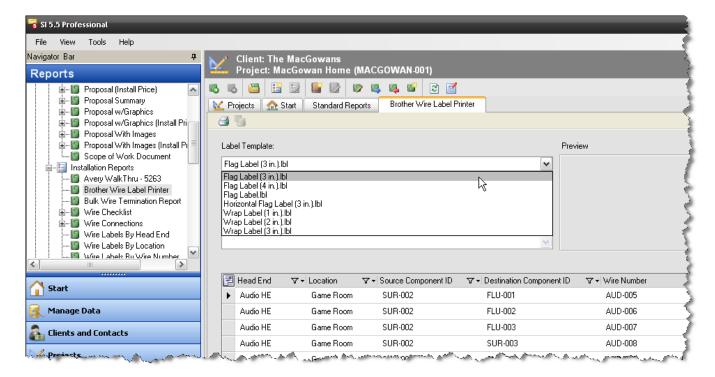
526 Reporting Center

2) When satisfied, go to File -> Publish. Click 'Yes' at the prompt. You will be returned to the reporting center and your custom report will appear in your reports list.



Brother Wire Labels

When you generate the "Brother Wire Label Printer" report, you have the option of choosing from the stock SI 5 templates:



When you select a label template, a preview will display:



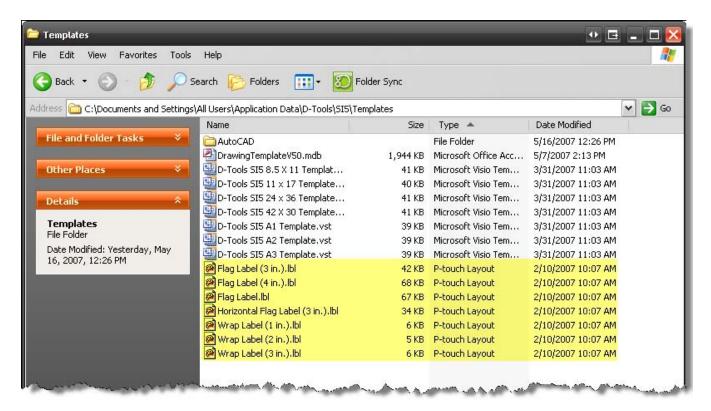
Click the button to print all of the labels or select just the labels that you would like to print (use Ctrl or Shift to select multiple labels) and click the button.

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All of the stock SI 5 templates are designed to work with 1" wide labels. They are stored in the following location:

XP: C:\Documents and Settings\All Users\Application Data\D-Tools\SI5\Templates

VISTA: C:\ProgramData\D-Tools\SI5\Templates



If you wish to create your own templates, we recommend that you use on of our stock templates as a starting point. All editing of these templates is done with the Brother P-Touch Editor software that comes with your Brother PT-9500 PC/ PT-9600 PC printers.

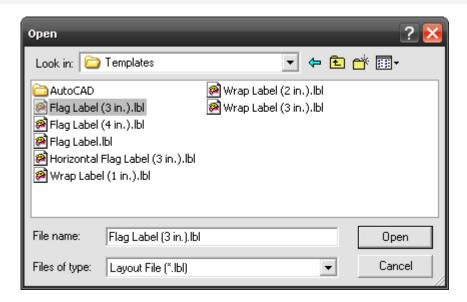
Example: You want to change your company logo on the 3" Flag Label.

1) Launch the Brother P-Touch Editor applications. If you are prompted for a layout, choose "Open an Existing Layout", otherwise select File->Open:

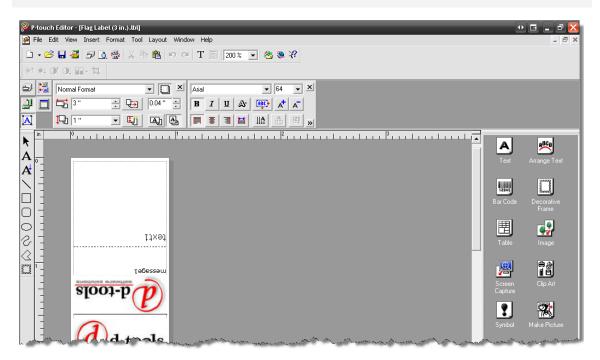


- 2) XP Users: Browse to the C:\Documents and Settings\All Users\Application

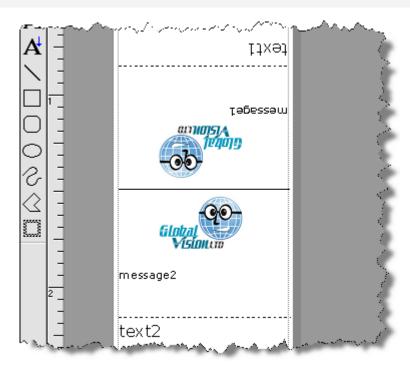
 Data\D-Tools\SI5\Templates folder, select the template and then click [Open]:
- 3) VISTA: C:\ProgramData\D-Tools\SI5\Templates



4) The template will open:



- 5) Select and delete the existing logos.
- 6) Select File->Insert->Picture->From file.
- 7) Browse to your logo and click **[Open]**. The logo will be inserted into the editor. Move/resize/flip the logo until you are pleased:



- 8) XP Users: Select File->Save As... Name the file and save to the C:\Documents and Settings\All Users\Application Data\D-Tools\S15\Templates folder.
- 9) Vista Users: C:\ProgramData\D-Tools\SI5\Templates

For detailed information on using the Brother P-Touch Editor software, select Help->User's Guide from within the application.

Excel Reports

It is possible to export data directly to MS Excel by using the Excel Reports feature. This allows you create a custom report using Excel and have the data populate automatically based on how the report is run in SI.

The basic steps to using this feature are:

- Create an excel file that is linked to the D-Tools SI5 XML Schema (http://www.d-tools.com/schemas/si5/reports/dtoolsreport.xsd)
- 2. Map D-Tools data fields into one or more worksheets in this file
- 3. Create pivot tables, graphs, or other reports using this data
- 4. Import the report into the Reports List using File > New > Excel Report from the Reporting Center
- 5. Run the report from the Reports List just like any other report. Excel will open with the specific data populated.



Sample excel reports can be downloaded here, and imported into SI5 using Tools > Import Report from the Reporting Center.

http://downloads.d-tools.com/si5/documents/download_reports.html#Excel

Create a Custom Excel Report File

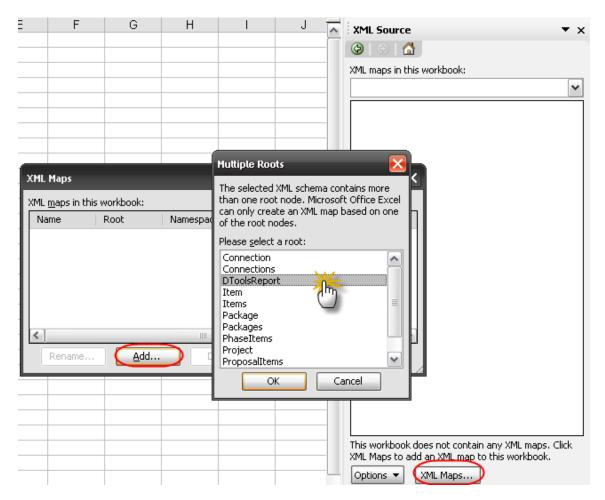
Link to D-Tools XML Schema

In Excel,

- 1) Go to View > Task Pane (Developer > Source in Excel 2007)
- 2) Go To XML Source (dropdown) (not needed in Excel 2007)
- 3) Click on XML Maps... (button)
- 4) Click on Add...
- 5) Copy this URL into the File Name line:

http://www.d-tools.com/schemas/si5/reports/dtoolsreport.xsd

- 6) Click Open
- 7) Select **DToolsReport** as the XML root node



8) Click OK

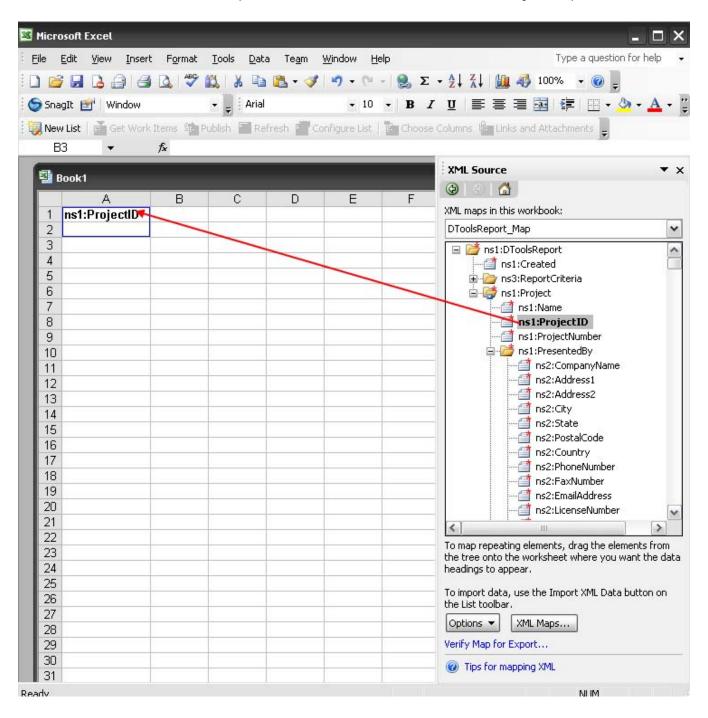


Note: You can map this same XML source more than once if you wish to map the XML data field more than once in the next step.

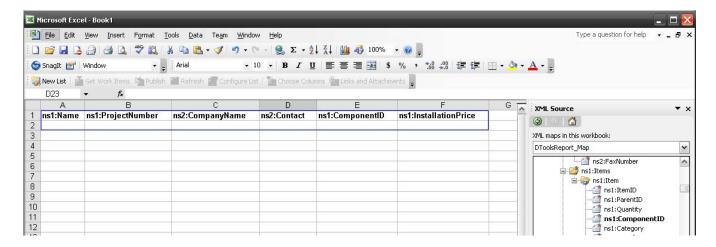
Map the Data Fields into Excel Columns

534 Reporting Center

The Task Pane shows a list of all data fields available. You can drag and drop data fields directly from the Task Pane to an excel spreadsheet. This will add the data field to your report source data.



Keep adding fields until you have all of the data you wish to report on.



Load Sample Data into Excel for Design

In order create a design layout, you will need some sample data. This data will be replaced when you run the report from the Reporting Center, but is useful to see how your report behaves prior to this.

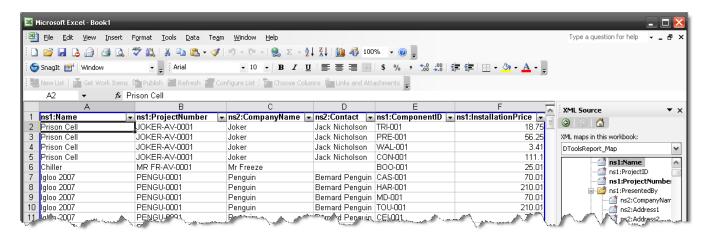
D-Tools provides sample data in your SI5 Global Application folder (C:\Documents and Settings\All Users\Application Files\D-Tools\SI5\Other Files). Unzip the file Excel Report Sample Data.zip to get the sample data.

VISTA: C:\ProgramData\D-Tools\SI5\Other Files

To load the sample data into your report, follow these steps:

- 9) Go to XML > Data > Import... (Developer > Import in Excel 2007)
- 10) Browse to the XML file containing the sample data (C:\Documents and Settings\All Users\Application Files\D-Tools\SI5\Other Files\Excel Report Sample Data.xml in this example) VISTA: C:\ProgramData\D-Tools\SI5\Other Files\Excel Report Sample Data.xml

This will load the sample data into the spreadsheet so that you can design your report.



Create Reports Based on Imported Data Columns

Once you have imported the sample data, you can create your own report using Excel's reporting features, such as Pivot Tables and Pivot Charts. See the Microsoft Excel users guide for details on how to do this.

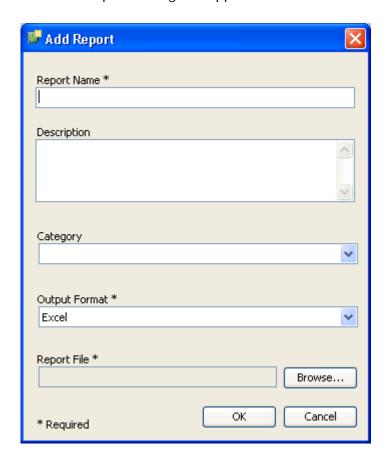


Sample excel reports can be downloaded here, and imported into SI5 using Tools > Import Report from the Reporting Center.

http://downloads.d-tools.com/si5/documents/download_reports.html#Excel

Link Excel Report to Reporting Center

Once you have created a custom Excel report, you can import it into the Reporting Center so that it will appear on your Reports List. To do this, go to the Reporting Center and to to New... Excel Report in the File Menu. The Add Report Dialog will appear.

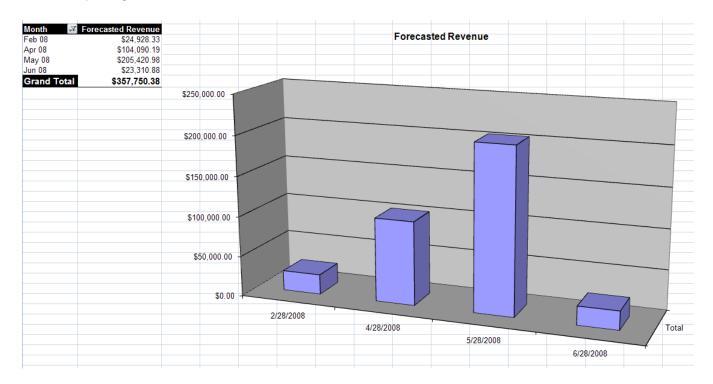


Enter the name of the report and a brief description. You can also choose which report category this will appear in. Output Format should always be "Excel" for Excel reports. Click **[Browse]** to find your custom Excel report file on your computer, then click OK to add the report to your list.

Running an Excel Report

At this point the Excel report will appear in your report list and can be run just like any other report. When you do, Excel will open and the data from your D-Tools project will be populated.

538 Reporting Center



Report Options

Contract

None

Cover Page

None

Line Item Detail

Group up to 3 levels

Show Labor by Phase

Show Page Header and Footer

Show Model Numbers

Project Contact Information

None

Proposal (all stock Proposals)

Group up to 3 levels

Sort

Show Labor by Phase

Show Page Header and Footer

Show Model Numbers

Summarize Packages

Summarize Accessories

Proposal Summary

Group up to 3 levels

Scope of Work Document

None

Avery Walk-Thru 5263

None

Brother Wire Label Printer

None

Bulk Wire Termination Report

None

Wire Checklist

Group by 1 level

Sort

Wire Connections

Group up to 2 levels

Sort

Wire Labels (By ...)

None

Wire Termination Report

None

Check List

Group by 1 level

Sort

Detail Cost Summary

Group by 1 level

Gross Profit

Group by 1 level

List Blank Items in Project

Sort by Price or by Hours

Pick List

Group by 2 levels

Project Hours

Group by 1 level

Purchase Order Request

Group by 2 levels

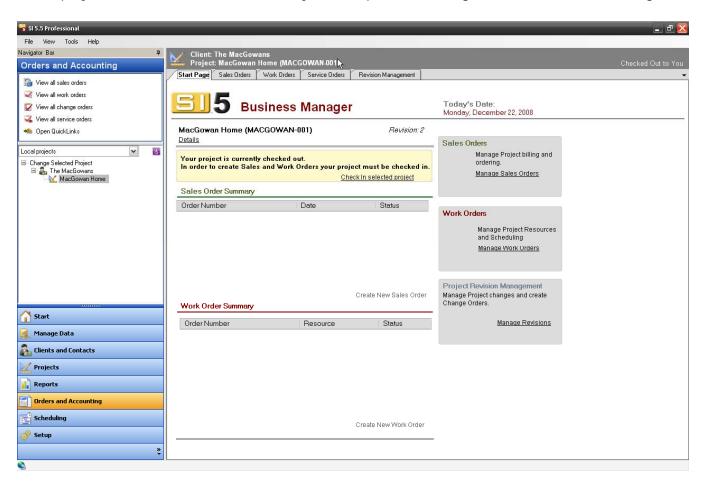
Orders and Accounting

There are four tabs on the Orders and Accounting screen: **Start Page, Sales Orders, Work Orders, Service Orders**, and **Revision Management**.

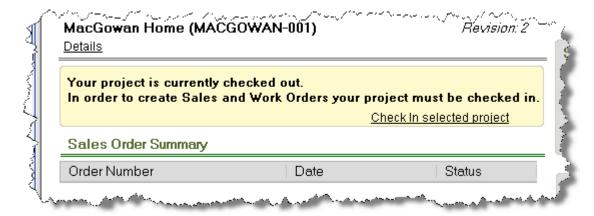


Start Page

This page displays a summary of existing Sales Order and Work Orders. It also displays the name of the project that was selected on the Projects tab prior to clicking the Orders and Accounting tab.

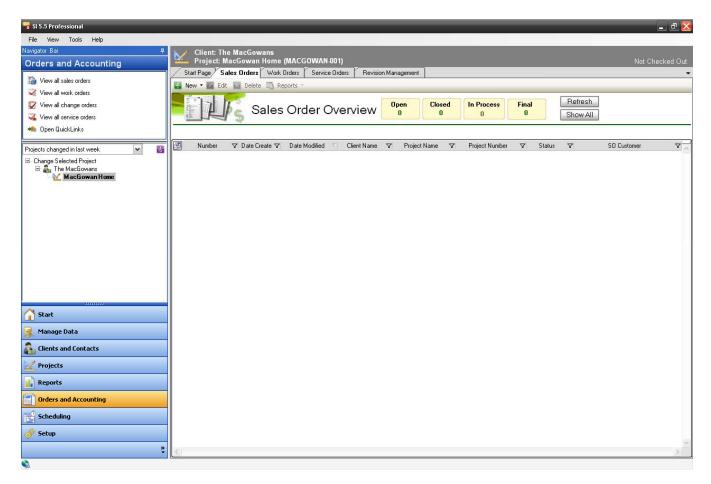


In order to work with Sales, Work, or Service Orders the project must be checked-in. If it is not, you will see a message indicating this as well as a link to check in the project:

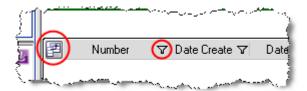


Sales Orders

Sales Orders serve multiple functions. They are used to track Products that are sold and are ready to be installed. They are also used to pass project data (Products) to other software applications such as QuickBooks and Tigerpaw. Once you have "sold" a Project, you will want to create a Sales Order which will include some or all of the Products in the project.



Use the Field Chooser button to choose what columns display. You can also filter most columns:





There are four Sales Order Statuses in SI 5: Open, In-Process, Closed, and Final. A Sales Order Status of Final can only be set on a Sales Order using QuickLinks. Final is a special status that prevents accidental modification of Sales Order information that is shared with the accounting system. For more information see QuickLinks on pg. 582.



Use the Sales Order Status to keep track of a product's "Status" throughout the accounting process. For example, use **Open** to indicate that nothing has been done with the Sales Order, **In-Process** to indicate that some of the Products in the SO have been "accounted for", and **Closed** once you have "accounted for" all Products on the SO. How you choose to use Status indicator is totally up to you.

Creating a Sales Order

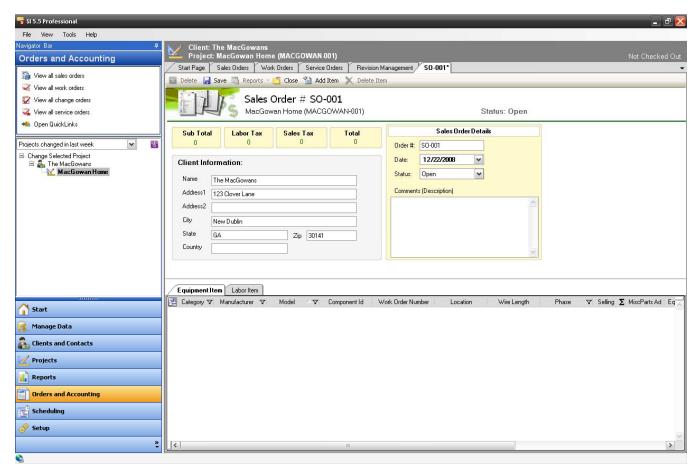
Before you can create a Sales Order, the project you plan to work with must be selected on the Projects tab and the project must be Checked In. If the project is not checked in, the **[New]** button in the process below will be grayed out.

To create a Sales Order, select the project you wish to work with on the **Projects** tab and then click the **Orders and Accounting** tab. Click **[New]** and select Sales Order:



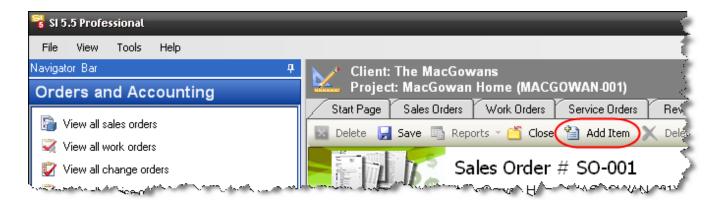
544 Business Manager

A tab is opened for the Sales Order:

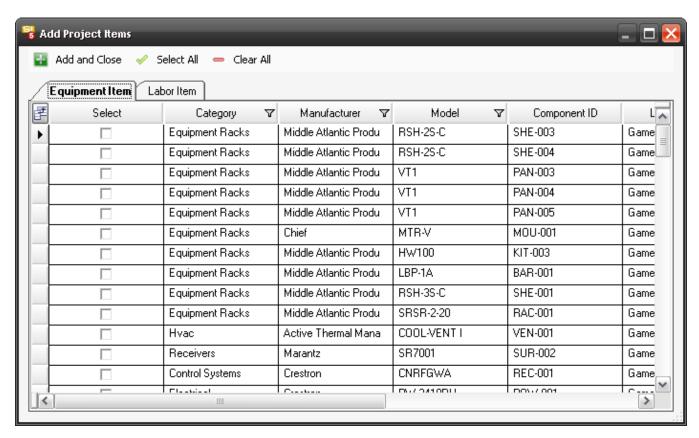


The "Client Information" section will populate with the client and address information from the Project. The "Sales Order Details" section displays the Order #, Date, and Status (all editable). The "Comments (Description)" field can be used to add a description to the Sales Order by Location report.

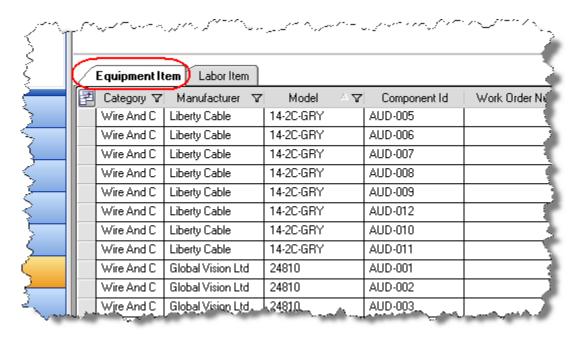
To add Products to the Sales Order, click [Add Item]:



The following window opens:



You can use the **[Select All]** button or you can check off the Products individually. Equipment and Labor are separated on the tabs. You can filter a column by clicking the **b** button in the column of choice. Once you have selected the Products that you want to add to the Sales Order, click **[Add and Close]**. The products then display on the screen:

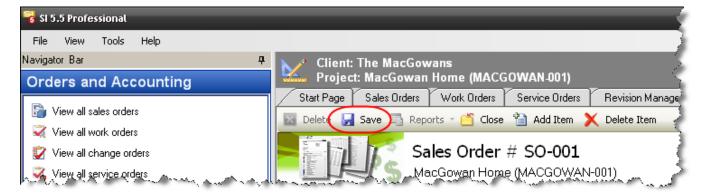


If you want to delete products, select them in the grid and click the [Delete Item]:

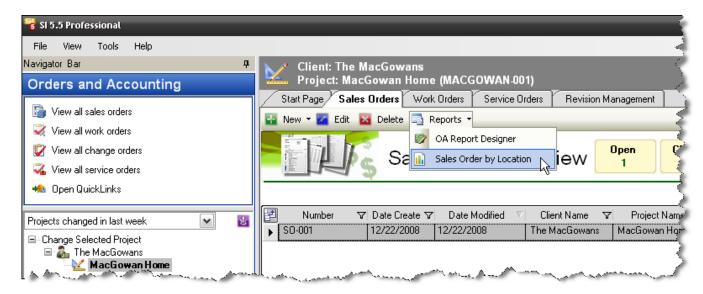
546 Business Manager



When finished, click [Save]:



The Sales Order you created now displays in the grid and you have the option to run a Sales Order by Location report if desired:



The report is generated on a tab:

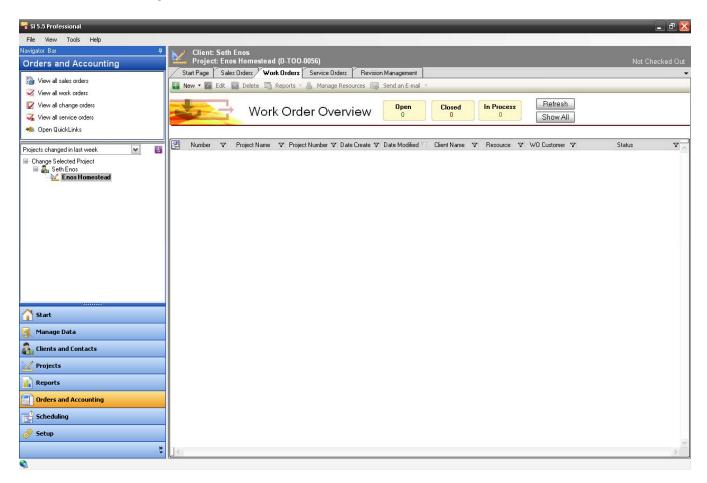


When a Sales Order is selected, you have the options to Edit or Delete the Sales Order.

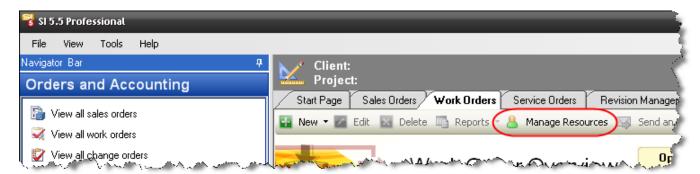


Work Orders

The Work Order function within Orders and Accounting interface allows you to create Work Orders for installation scheduling. We recommend that you create and reconcile Work Orders on a daily basis if possible rather than reconciling in bulk. Accurate tracking of Work Orders will allow your product based labor estimates to improve over time.



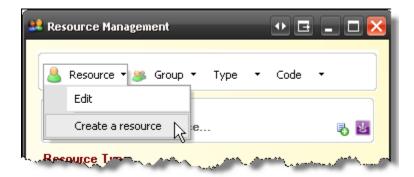
Resources should be setup before creating a Work Order. A Resource is generally considered to be an installer. Click [Manage Resources]:



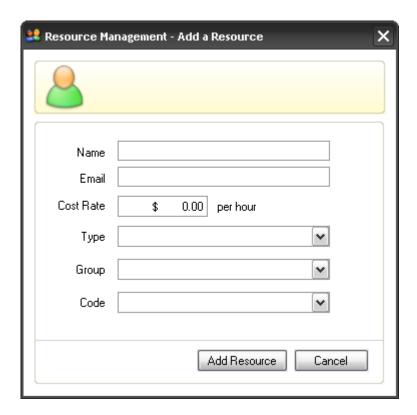
The Resource Management form opens:



There are four options for a resource: Resource, Group, Type, and Code. Resource allows you to edit or add Resources. SI 5 does not use Group, Type, or Code anywhere but you may wish to use Group to organize your resources. These fields are there for D-Tools clients who choose to use them when working with our SDK. To edit any of these fields, use the dropdown along the top of the form:



The following form will allows you to enter information about the Resource. Here you can enter the Name, Email, how much the resource costs you per hour, Type, Group, and Code.

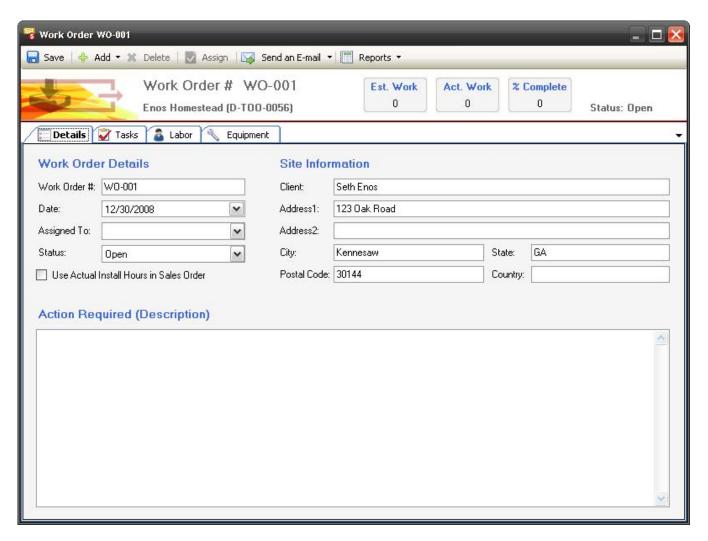


Creating a Work Order

To create a Work Order, click [New] and select Work Order:



The Work Order window opens:

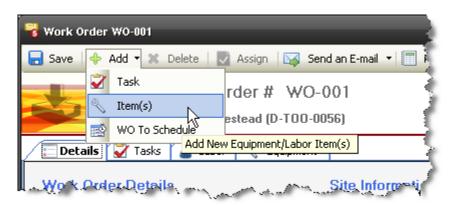


The "Site Information" section will populate with the client and address information from the Project. The "Work Order Details" section displays the Work Order #, Date, Assigned to, and Status (all editable). The "Assigned to" dropdown populates with the Resources that you have created. The "Action Required (Description)" field can be used to add a description to the Work Order by Location report.

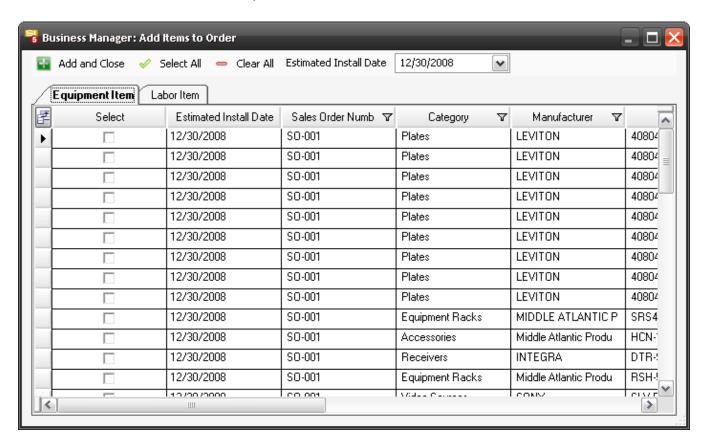
Adding I tems vs. Adding Tasks

Adding Items to a Work Order is the "older" methodology within SI 5 for handling Work Order assignments. The newer methodology is Task based. Work Orders that are assigned Tasks will display on the Project Schedule. Both methods are described below. Choose the one that works best for you.

To add Items to the Work Order, click the [Add] button and then select Item(s):



The Add Items to Order form will open:

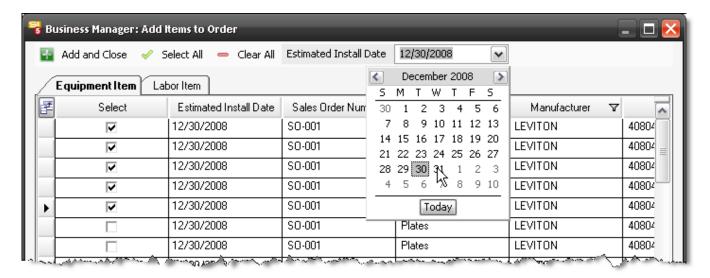




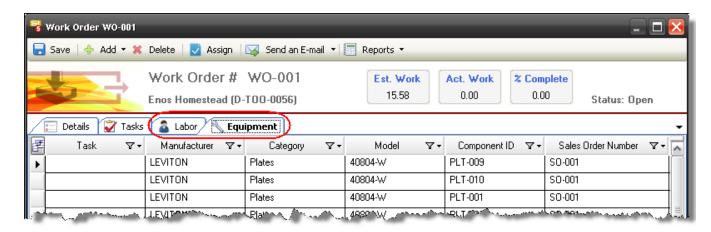


Once a Product is added to a Work Order, the Product is "flagged" so it will no longer be available to add to another Work Order. This saves you the worry of duplicating your work. Once you delete a Product from an existing Work Order, the flag is removed so that you can add the Product to another Work Order if required.

All Estimated Install Date of the products will default to today's date. You can use the **[Select All]** button or you can check off the Products individually. To change the date for the selected products, use the Estimated Install Date drop down:

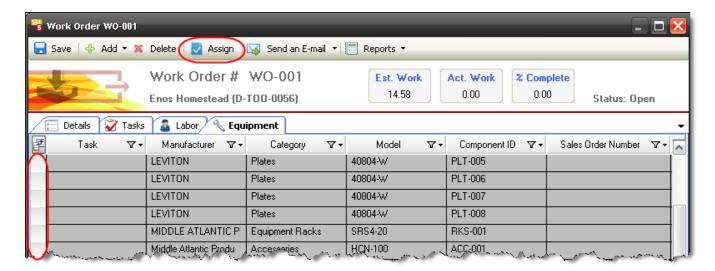


Equipment and Labor are separated on the tabs. You can filter a column by clicking the button in the column of choice. Once you have selected the Products that you want to add to the Sales Order, click [Add and Close]. The products then display on the Labor and Equipment tabs on the Work Order form:

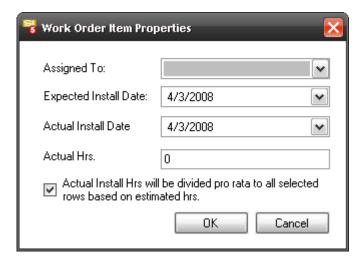


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You may wish to select products from the list now and assign a resource, or, if you haven't already, select an Expected Install Date. To select products click the box next them. Use [Ctrl] or [Shift] to select multiple products. When selected, products display in gray. Click the [Assign] button:

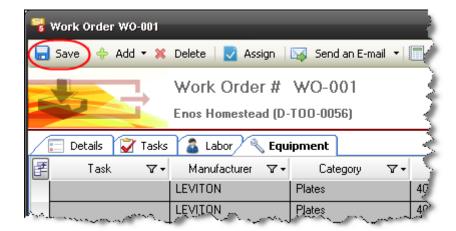


The Work Order Item Properties form opens:



This form also allows you to assign the **Actual Install Date** and **Actual Hours** to the selected products in Work Order once the work has been done. If you are just assigning the Assigned To and Expected Install Date, make sure you clear out the Actual Install Date and Actual Hrs. fields and uncheck the "Actual Install Hrs..." checkbox.

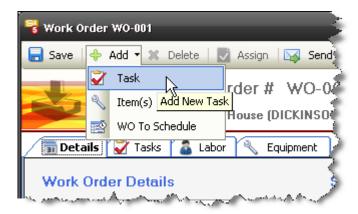
When you are finished creating the Work Order, click [Save]:



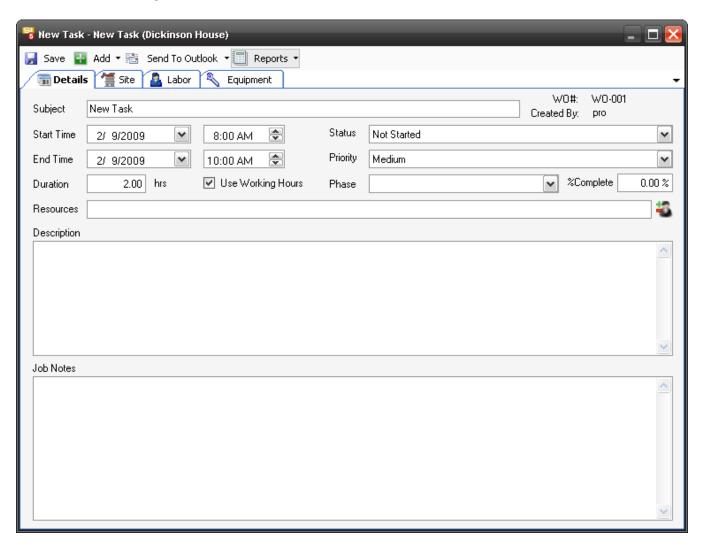
The Work Order you created now displays in the grid and you have the option to run reports:



You can also reopen the Work Order form once it has been saved and add Tasks:

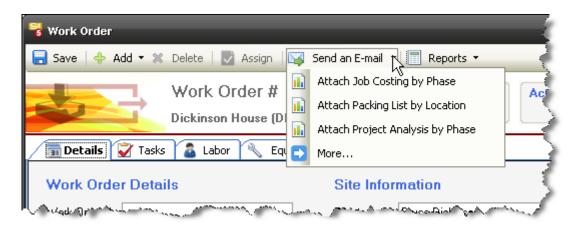


Using Tasks with Work Orders is the preferred method over adding Items as you will have much more control over entering your actual hours and costs. A Work Order that has been assigned at least one Task will display in the Project Schedule for Scheduling purposes. **Add->Task** will open the New Task form:

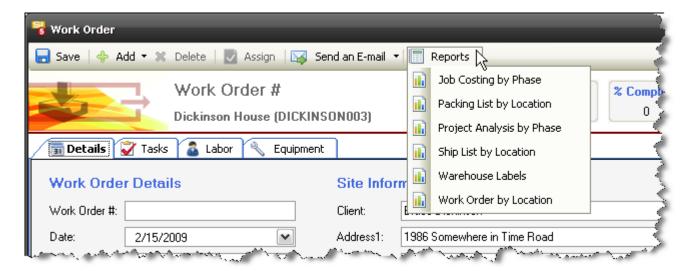


See New->Task on pg. 615 for details on entering Tasks.

The Work Order form allows you to Send an Email of any of the Work Order Reports (see below):



Also on this form you can generate any of the Work Order Reports for viewing and printing.



The reports available to you are: Job Costing by Phase, Packing List by Location, Project Analysis by Phase, Ship List by Location, Warehouse Labels, and Work Order by Location. Two of the reports require that you enter Actual Hours to the Items and/or Tasks in order to provide you data: Job Costing by Phase and Project Analysis by Phase.

Save the Work Order when you are finished adding Items and/or Tasks.



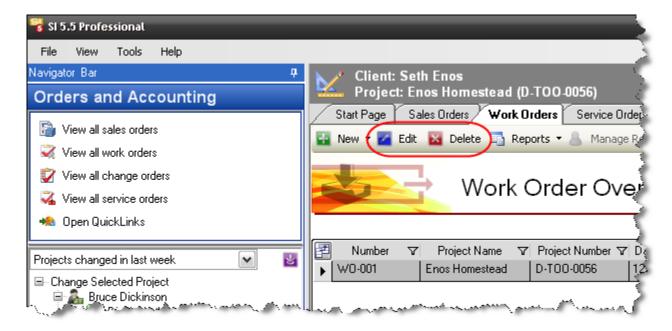
When a Work Order is selected you have that option of running





The reports that could be run at this point are: Work Order by Location, Packing List by Location, Ship List by Location, and Warehouse Labels. The Job Costing by Phase and Project Analysis by Phase reports require that "Actual Hours" be entered for the Work Order. See "Closing out a Work Order" on below for details on adding Actual Hours.

When a Work Order is selected, you have the options to Edit or Delete the Work Order:



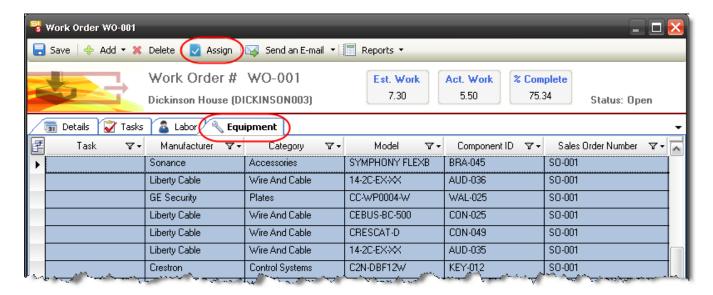
Closing out a Work Order

Once the work is complete, you can add your actual hours to the Work Order Items or to the Items assigned to the Tasks associated with Work Order. Once actual hours are entered you can run the two comparison reports: Job Costing by Phase and Project Analysis by Phase.

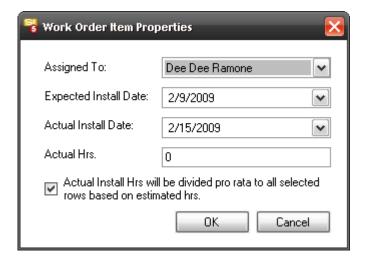
Open the Work Order for edit and enter Actual Hours for Equipment Items added directly to the Work Order and/or for the Items assigned to Tasks.

For Equipment Items you can enter individual values in the "Act. Inst. Hrs." column or you can select multiple products (use Ctrl and/or Shift keys) and click [Assign]:

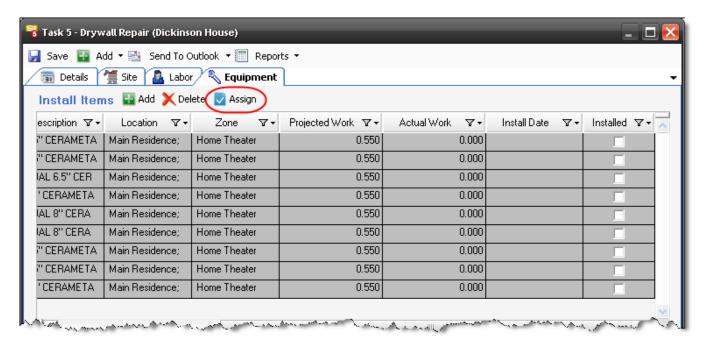




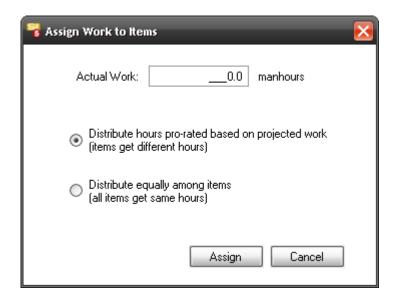
The **[Assign]** button will open the following form and allow you to enter the data across multiple products:



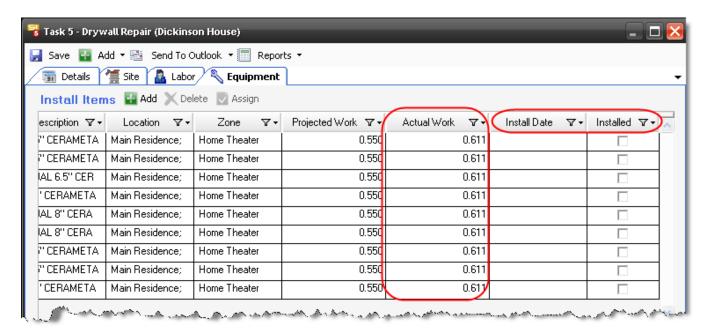
For Items assigned to Tasks, open the Task from within the Work Order tab and select either the Labor or Equipment tabs. You can enter individual values in the "Actual Work" column or you can select multiple products (use Ctrl and/or Shift keys) and click [Assign]:



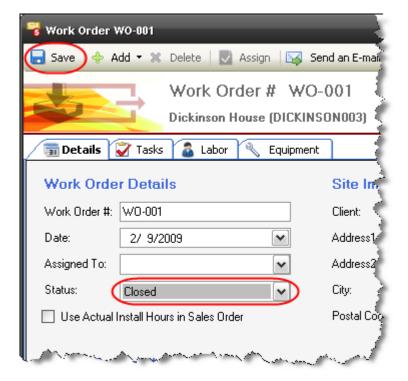
The following form will open:



You can fill in the Install Date fields if you desire:

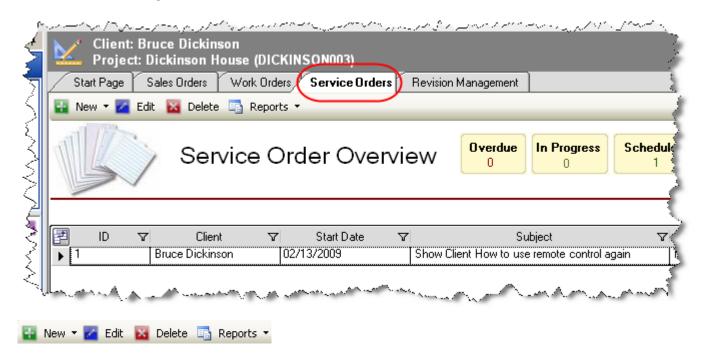


Change that Status of the Work Order to Closed if desired and when you are finished, click [Save].



Service Orders

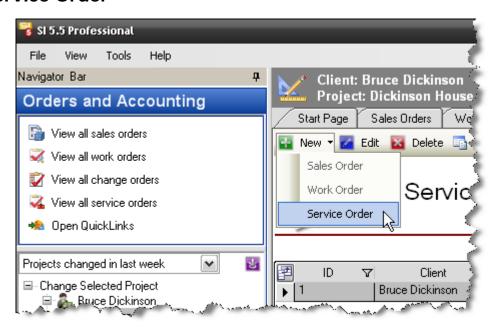
Service orders are used to schedule a time for a technician to go out to a job site, for something other than normal project installation. It is important to be able to quickly specify where to go, what to do, when to do it, what equipment to bring, and how much it will cost to do it. When the order is completed the technician needs to be able to update the order with how much time it actually took, and bill the client appropriately. Service Orders can be pushed over to QuickBooks but unlike most QuickLinks functions, Service Orders are not pushed via our QuickLinks interface.



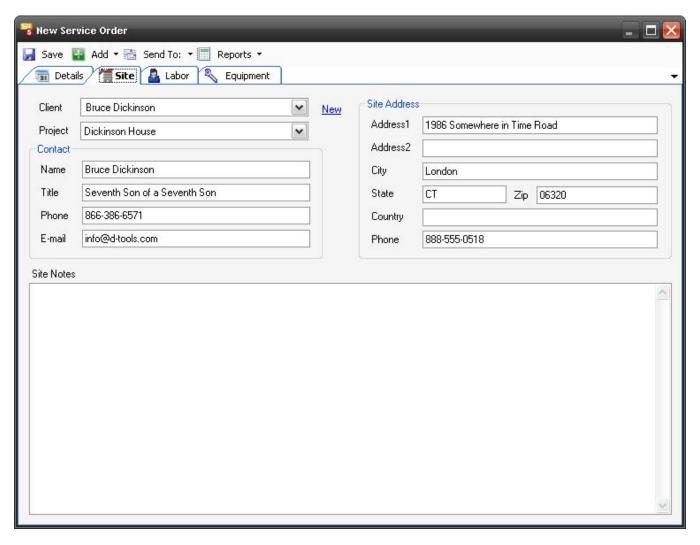
New/Edit/Delete – Use these to create, edit, or delete Service Orders.

Reports – allows you to run Service Order Reports

New->Service Order

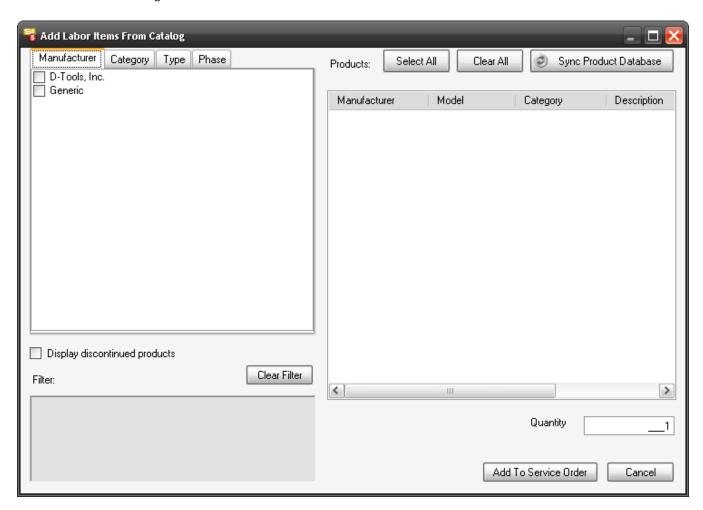


The following form opens:

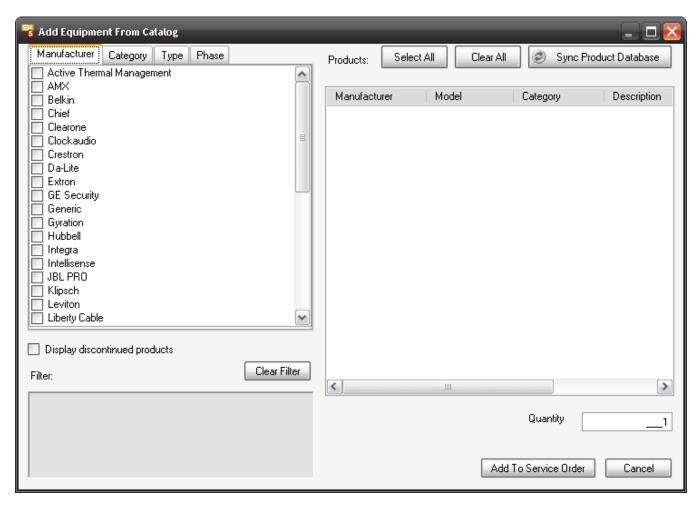


Save - Saves the Service Order

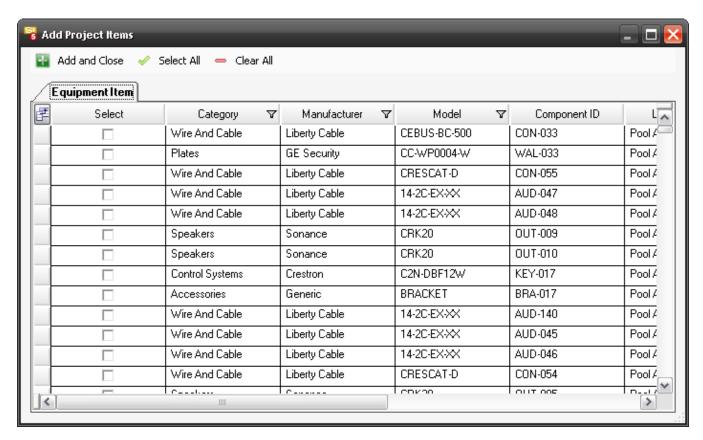
Add->Labor Items – opens the following form that filters your database to display just your Labor Products (see **Labor Products** on pg. **137**). This allows you to add Labor Products to a Service Order.



Add->Equipment Items - opens the following form that filters your database to display just your Equipment Products (everything that is not a Labor Product). This allows you to add Products to a Service Order that were not part of the original project.



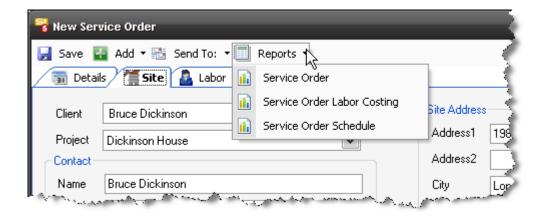
Add->Repair I tems - opens the following form that allows you to add products from the project to the Service Order.



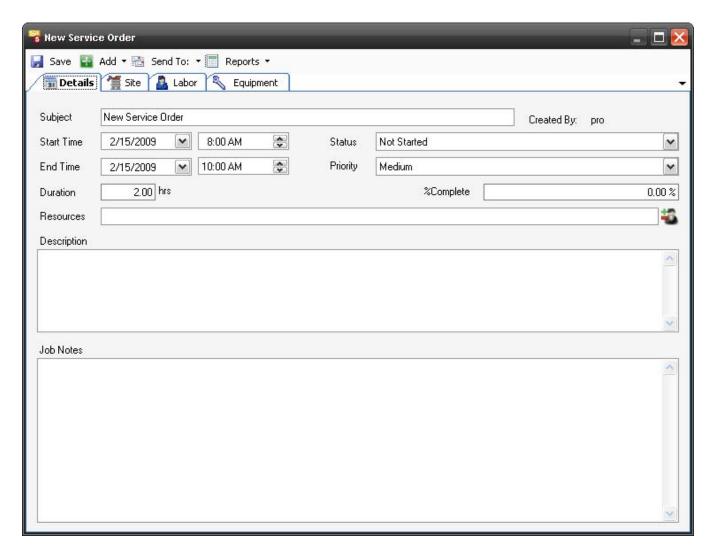
Send To: - allows you to send any of the Service Order reports (see below) to Outlook as either an Email, Appointment, or Task. You can also send a Service Order over to QuickBooks, this is discussed here **Send To->QuickBooks** on pg. **574**.



Reports - will generate any of the following reports for the Service Order: Service Order, Service Order Labor Costing, Service Order Schedule. The Reports will display on a tab within the Task form.



Details Tab



Subject – name the Task

Start/End Time – assign duration of time to the Task

Duration – Displays the value determined by the Start/End Time fields

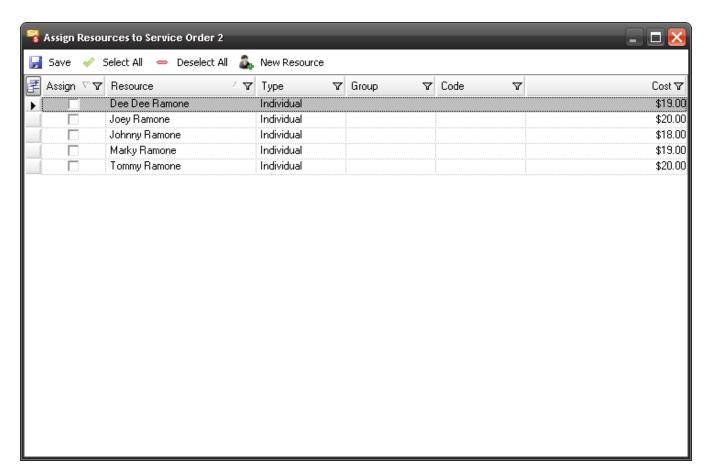
Status - Choose between Not Started, In Progress, Completed, Waiting, or Deferred

Priority - Choose between Low, Medium, or High

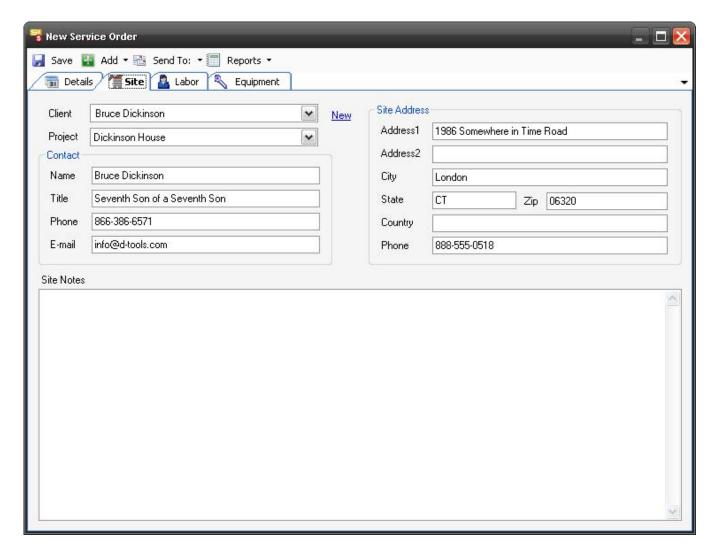
%Complete – this field allows you to manually enter how complete the Task is. If the Status is set to "Completed" this will display 100%. This field is completely independent of any Actual Work that you add to Equipment or Labor Items within the Task.

Description/Job Notes - editable fields for instructions/notes/whatever

Resources – Clicking the button opens the following form and allows you to select resources to add to the Task

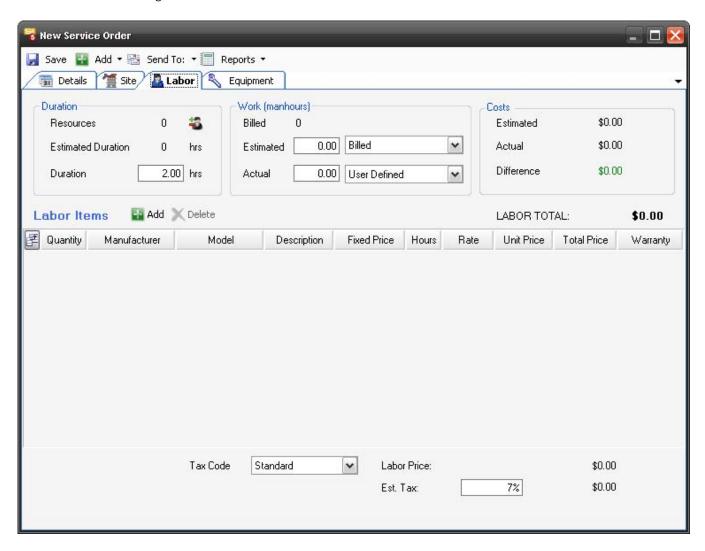


Site Tab



This tab contains the Contact information and site address for the project selected. The Site Notes field is another place to add any comments you desire.

Labor Tab

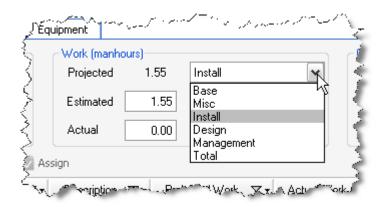


Resources – lists the number of Resources assigned to the Task. Use the button to add or remove Resources.

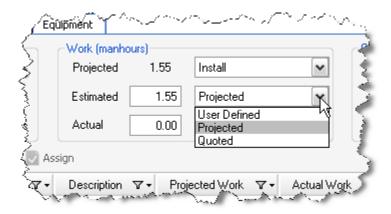
Estimated Duration – populates with the total hours for the Task based on the Equipment and Labor Products that you have added to the Task divided by the number of Resources assigned to the Task. The value that displays here is determined by what value you select for the "Projected" field's dropdown menu, see below.

Duration – editable field that displays the value determined by the Start/End Time fields

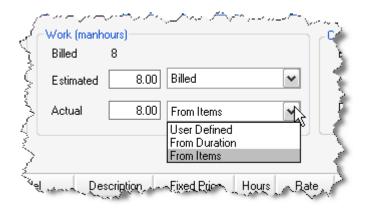
Projected – populates with the total hours for the Task based on the Equipment and Labor Products that you have added to the Task. The value that displays here is determined by what value you select for the "Projected" filed, see below. The dropdown menu allows you to choose between: Base, Misc, Design, Management, Install, and Total. Install = Base + Misc. Total = Base + Misc + Design + Management.



Estimated – populates based on the selection from the dropdown menu. You can use the Projected, Quoted, or User Defined. "Projected" pulls from the Projected field described above. "User Defined" allows you to manually modify this value. "Quoted" does not pull from anywhere and is intended for use to "lock down" a User Defined entry.



Actual – populates based on the selection from the dropdown menu. You can select: From Duration, From Items, or User Defined. User Defined allows you manually modify this field. From Duration will pull from the Duration field. The From Items field populates based on the labor hours assigned the items.



The **Costs** section of the form shows the dollar values of your costs based on your selections on this form.

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In the Labor Items section you can [Add] or [Delete] Labor items.



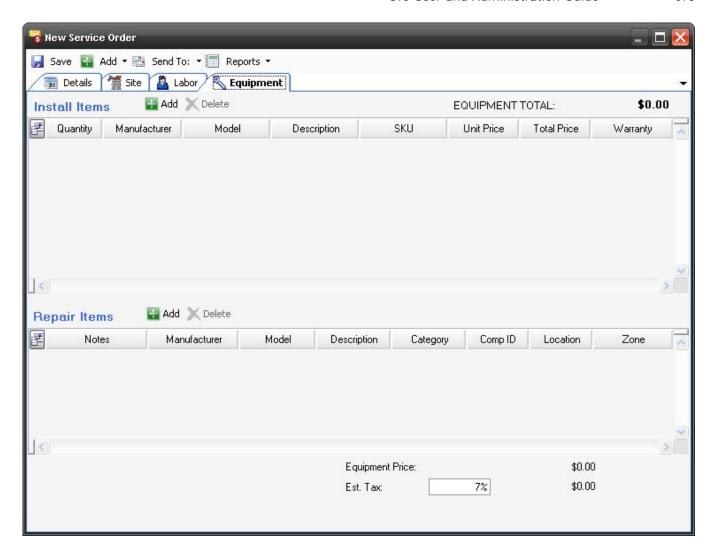
Tax Code and Est. Tax – allow you to add the appropriate tax to Labor if you charge Labor Sales Tax.



Warranty – when the warranty column is checked, the Total Price zeros.



Equipment Tab

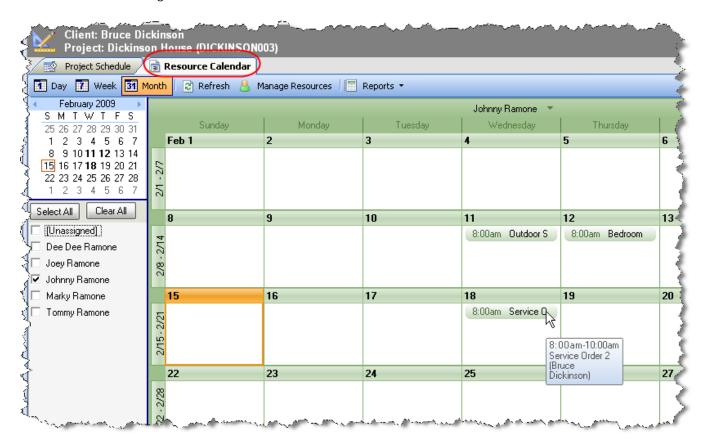


This tab allows you to [Add] or [Delete] Install or Repair items.

Warranty – when the warranty column is checked, the Total Price zeros.

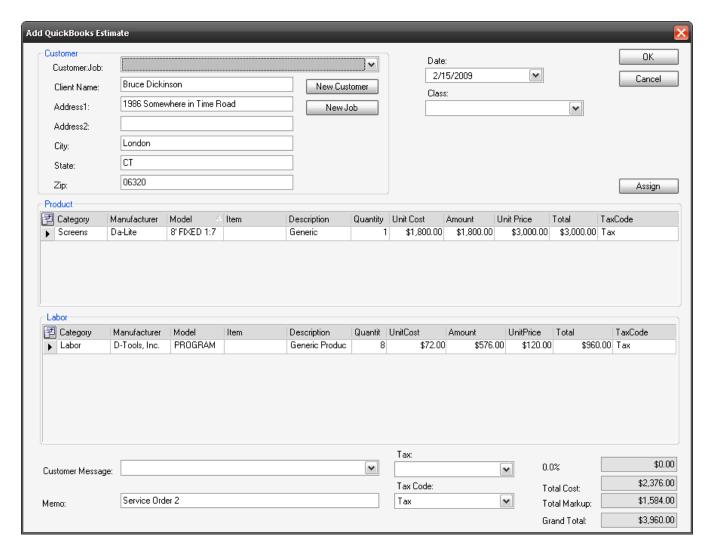


If you have assigned Resources to a Service Order, the Service Order will display on the Resource Schedule. See **Resource Calendar** on pg. **627** for more details.



Send To->QuickBooks

This function allows you to transfer the Products that you have added to the Labor tab and the Products from the Install Items section of the Equipment tab over to QuickBooks as an Estimate. Repair Items from the Service Order are not included in this transfer.



See the **QuickLinks** section starting on pg. **582** for details concerning transferring an Estimate to QuickBooks.

Revision Management

You may compare any two revisions and explore what was responsible for the change in total project installed price. In the following example we started with the sample residential project, created a revision (3). In Revision 3 we:

- upgraded a control panel
- added a Crestron C2N-HBLOCK
- increased the Misc Parts% for the Finish Phase
- increased the base labor selling price from \$75.00 to \$80.00 per hour

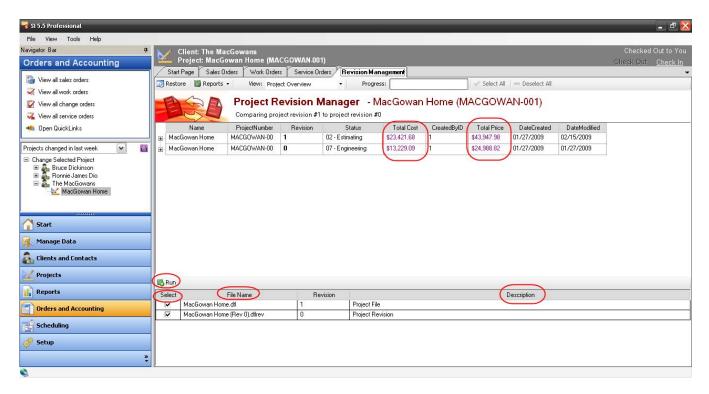
To explore the changes you must

1) "Check In" the project.

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- 2) Select the Project in the Navigator
- 3) Click the Orders and Accounting tab
- 4) Click the Revision Management tab
- 5) Select any two of the revisions and click "Run"

Then you will see:



Select - To see the difference between two revisions check the two revisions you wish to compare and click "Run".

File Name -The names listed here are file names. In this example you see two different names.

"S15 Sample" is the name of the file of the sample residential project. The other names were provided by the user when a new revision was requested, which happen to correspond to the Project Name. The name at the top of the list, in this case "S15 Sample", is always the Current Project. The revisions are listed under the Current Project in the order created. In our example we are comparing the Current Revision with the OLDEST revision, (Rev 0), which may also be referred to as the Original Proposal.

Description – The Current Revision will always be called "Project File"

Total Cost & Total Price - Prices shown I color indicate a change in Cost or Installed Price between the two revisions.

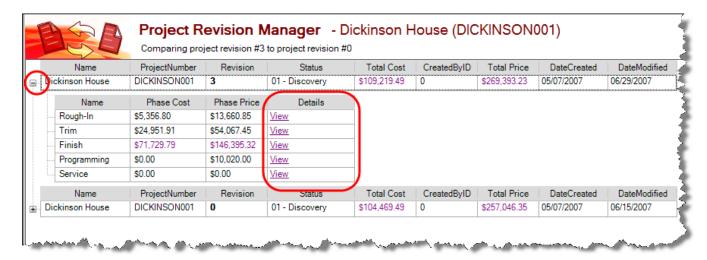
View

Once you "Run" the compare you may view the comparisons in three different ways as shown below.



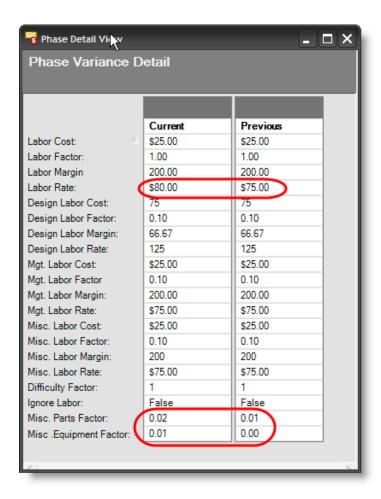
View: Project Overview

From the project view you are able to identify changes that typical take place at a "Project" level. This would include changes to global factors or changes to Phase specific information. Expand the desired comparison data by clicking the "+" in the far left column. A row with a colored font indicates a change has occurred for that Phase.



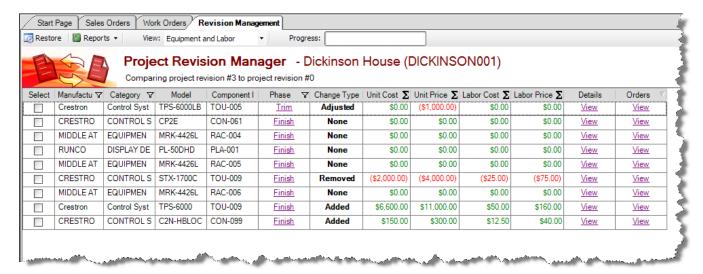
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Select "Details" > "View" to open Variance Detail form. Selecting "View" for the Finish Phase will open the Phase Variance Detail form. From here it is easy to see the changes in the Phase information that generated a change in Installed Price. The fields are for viewing only and cannot be modified.



View: Equipment and Labor

The Equipment and Labor tracks changes to Products (Equipment and Labor).



Types of changes include

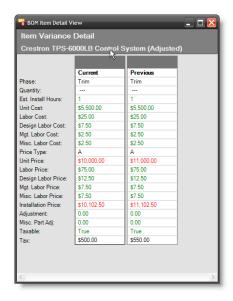
None The Product itself did not change but may be associated with a Phase or other global change that would affect Install Price

Added A Product was added to this revision that was not in the previous revision

Removed A Product was removed from this revision that was in the previous revision

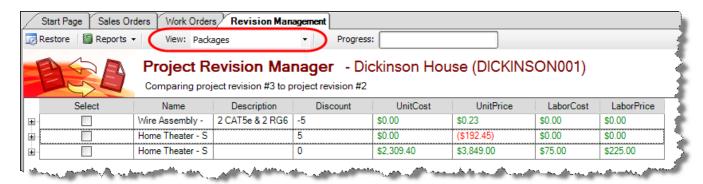
Adjusted The Products Price or the Labor Price associated with the product was

modified. Select "View" for that Item to see what was adjusted.



View Packages

View > Packages allows you to see changes in packages between revisions. In this case we a) increased the selling price of the Wire Assembly by 5%, b) decreased a Home Theater Speaker Package by 5% and c) added another Speaker Package to the project. You Change Order reports will allow you to group the changes by Package.

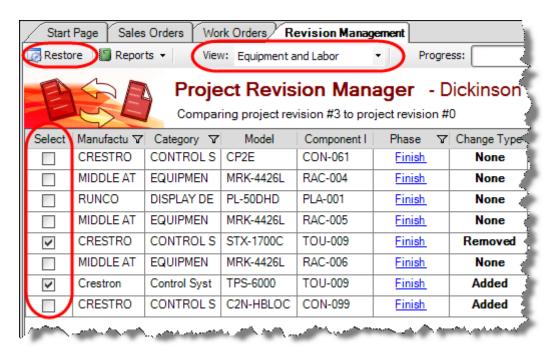


Restore

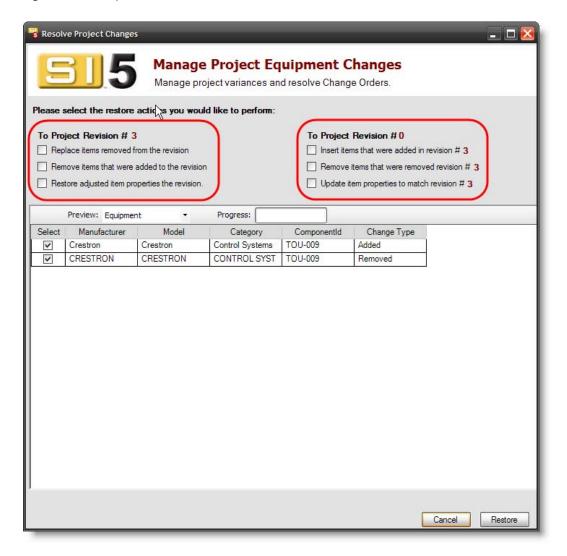
Restore is a very powerful feature, and can be used in support a variety of business processes. Use restore if you want to:

- Rollback changes you have made to the current project. This saves a lot of time if the client rejects a particular change order or proposal.
- Apply changes to a previous revision. This can be particularly useful if you are tracking "As Sold" and "As Built" projects. This allow you to have one revision that tracks only the changes the client has agreed to pay for ("As Sold") while at the same time maintaining another revision that tracks ALL the changes to the project ("As Built").

The Project **MUST** be Checked-Out before requesting a "Restore". After selecting the revisions and clicking "Run", select **View:** > **Equipment and Labor**. To execute a "Restore", select the Products involved in the desired transaction and click Restore. ONLY check the Products you need to complete the desired business process.



The following form will open.



QuickLinks

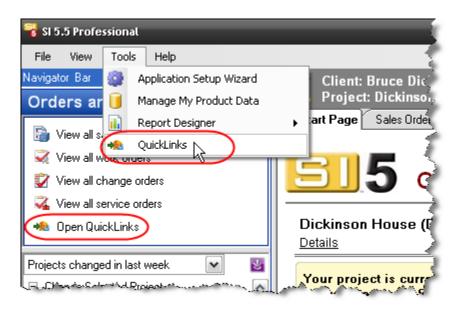
Quicklinks is a module used with SI 5 to link project information to your accounting software. This module is also sometimes referred to as LinkTools. The main purpose of QuickLinks is to reduce data entry time for many of the routine business tasks associated with managing projects with your accounting software. Using QuickLinks, one can produce Estimates, Invoices and Purchase Orders with one of the supported accounting systems. In order to work with QuickLinks, you must establish a connection between QuickBooks and SI 5. Please see the SI 5 Installation and Administration Guide for details.

In order to work with QuickLinks, all Products in a Project must be assigned to a corresponding **Item** Name/Number in QuickBooks.



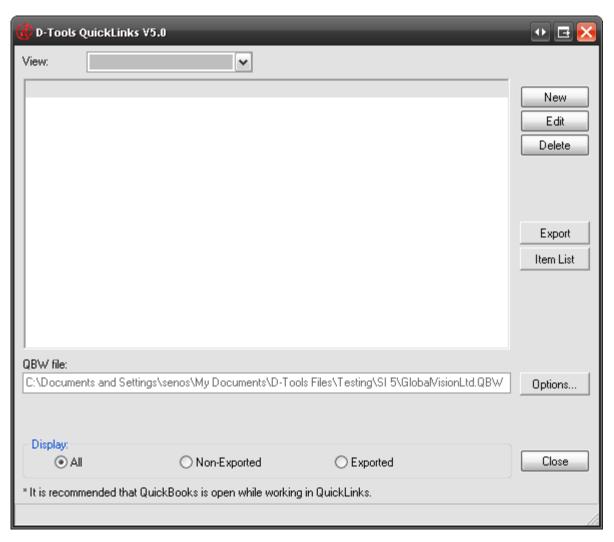
Terminology – In SI 5, records in your MasterTable database are referred to as Products. In QuickBooks, records in your database are referred to as Items. SI 5 and QuickBooks records are linked via the SI 5 Account ID field. The Product Accounting ID field must match the QuickBooks Item Name/Number. This linking is handled automatically by QuickLinks. One should avoid modifying the Accounting ID field unless instructed to do so by your SI 5 administrator.

With the QuickLinks interface you can create an Estimate, Invoice, or Purchase Order to export to QuickBooks. To open the QuickLinks interface, select Tools->QuickLinks (you can also click the link if you are in the Orders and Accounting interface):



Interface

The QuickLinks interface consists of one main form:



View – this dropdown allows you to select whether you want to create an Estimate, Invoice, or Purchase Order.

[New] – create a new Estimate, Invoice, or Purchase Order.

[Edit] – edit an existing Estimate, Invoice, or Purchase Order.

[Delete] – delete an existing Estimate, Invoice, or Purchase Order.



[Delete] will only delete the Estimate, Invoice, etc. from SI 5, it will not delete it from QuickBooks.

[Export] – use to export Estimates, Invoices, and Purchase Orders from SI 5 to QuickBooks. This button is only used if you chose not to export when you create the Estimate, Invoice, or Purchase Order.

[Item List] – this will open a form where you may create QuickBooks Items from SI 5 Products or link SI 5 Products to existing QuickBooks Items. You can also map Customized Properties between the two databases (SI 5 and QuickBooks) and scan for differences between the two databases.

[Options...] – this opens a form where you map to your QuickBooks file as well as choose your defaults.

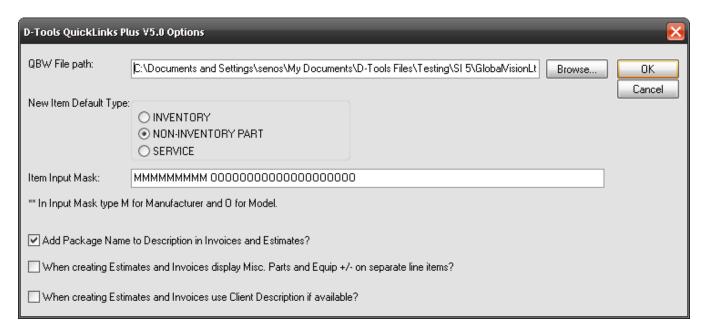
[Close] - closes the form.

QBW File - this section displays the path to your QuickBooks company file

Display – this section allows you to filter the display by exported vs. non-exported Estimates, Invoices, and Purchase Orders

Setup and Maintenance

Click the **[Options...]** button:



QBW File path - path to where your QuickBooks company file is stored

New Item Default Type – set your default type for QuickBooks items that are created through QuickLinks: Inventory, Non-Inventory, or Service

Item Input Mask – set a mask for how QuickBooks item number will be created through QuickLinks. QuickBooks has a 30 character limit for Item numbers. See the Pre-Implementation section of this guide for examples.

Add Package Name to Description in Invoices and Estimates? – Packages in SI 5 are broken out into the individual items when transferred to QuickBooks. This option will add the Package name from SI 5 to the descriptions for the items.

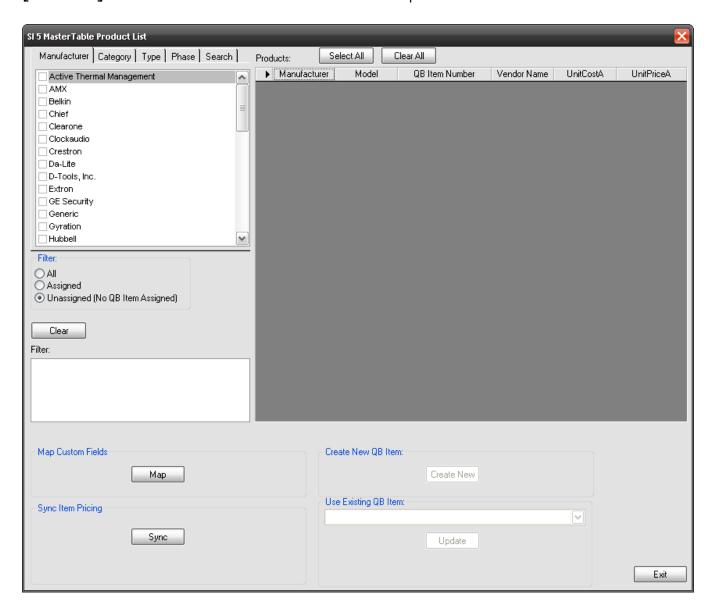
When creating Estimates and Invoices display Misc. Parts and Equip +/- on separate line items? – This option will add a single line item for the Misc. Parts % and a single line item for the Equip +/- % to Estimates and Invoices. Without this checked, each item's price will reflect the %.

When creating Estimates and Invoices use Client Description if available? – the default is to use the Product Description.

You must setup the connection between Products in your SI 5 database and Items in your QuickBooks database. This is an ongoing process since you will most likely be adding new Products to your SI 5 database all the time. However, you only have to make the connection one time for each Product in your SI 5 database.

You have two options: link Products from your SI 5 database to Items that already exist in your QuickBooks database or you can have SI 5 create the Items in your QuickBooks database. Either of these options can be done while creating an Estimate/Invoice/Purchase Order or independently via the [Item List] shown below.

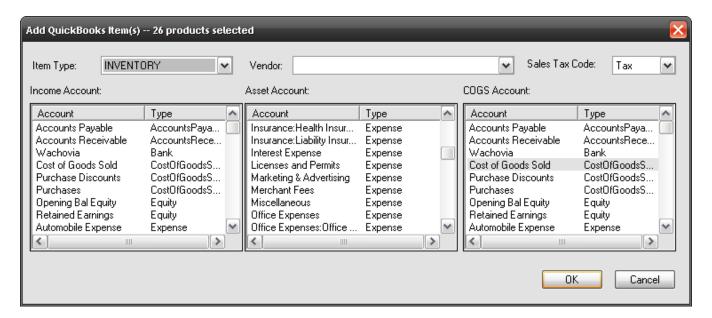
To link a Product from your SI 5 database to an existing **Item** in your QuickBooks database, click **[Item List]**. The SI 5 Master Table Products **List** form opens:



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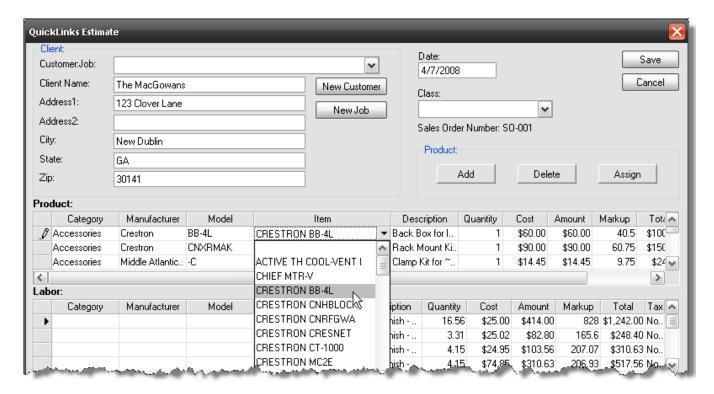
The left side of the form has tabs that allow you to filter the Products in your SI 5 database. You can assign products to existing QuickBooks Items using the dropdown in the "Use Existing QB Item" section to select an item from your QuickBooks database and then click **[Update]**. The SI 5 product and QuickBooks item are now linked.

When you are creating new QuickBooks Items you can assign products one at a time or you can select multiple products to do a bulk transfer by holding down the [Ctrl] and [Shift] keys when selecting in the grid. When you click **[Create New]** the following form will open where you will select your Item Type, Vendor, Sales Tax Code, and Accounts.

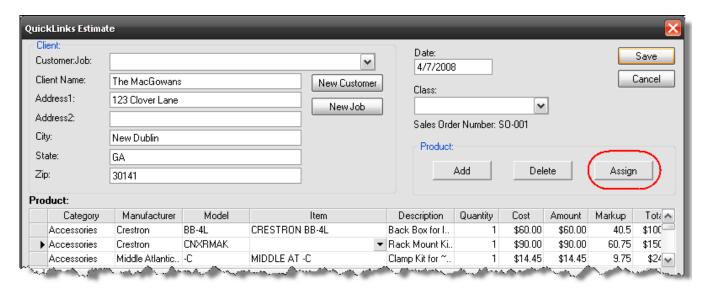


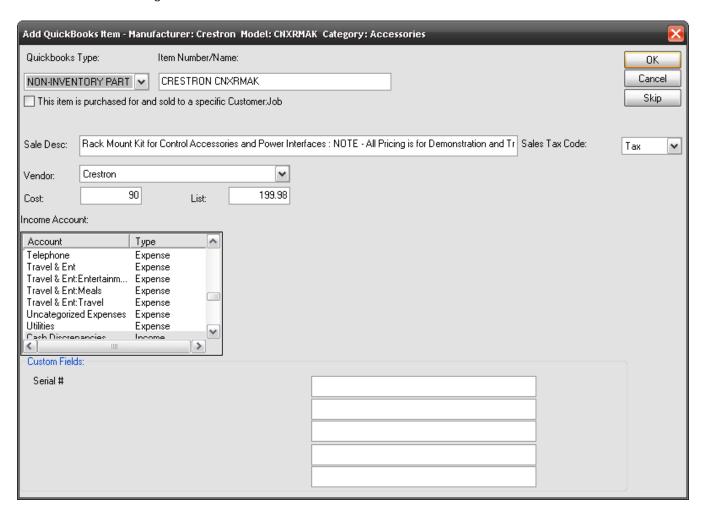
Although not shown in the form above, descriptions also transfer, see below for details.

If you want to link an SI 5 Product to an existing QuickBooks Item from within an Estimate, Invoice, or Purchase Order, use the dropdown located the in the Item field on the form as shown below:



If you want to create a QuickBooks **Item** from an SI 5 Product from within an Estimate, Invoice, or Purchase Order, click **[Assign]** on the form to open the Add QuickBooks Item form.





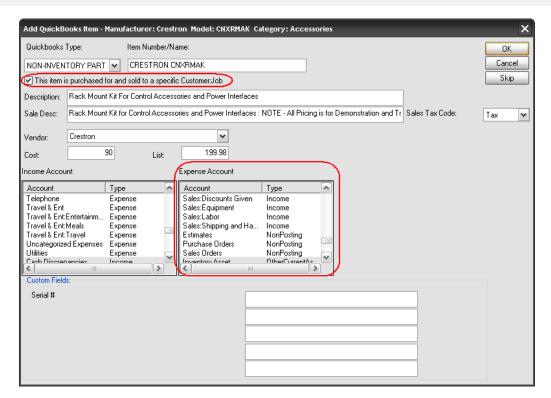
This form looks different than the form for doing a bulk a transfer but the information transferred is the same with one exception. The "This item is purchased for and sold to a specific Customer:Job" option is only available on the form within an Estimate, Invoice, or PO.

The fields that populate from the SI 5 Product data are listed below:

Add QuickLinks Form/QuickBooks Fields	SI 5 Product Fields		
Description	Product Description		
Sale Desc	Client Description		
Cost	Unit Cost		
List	Unit Price		
Custom Fields 1-5	Mapped fields. See below for details.		

The dropdown fields that populate with data from your QuickBooks company file are **Sales Tax Code**, **Vendor**, **Income Account**, **Asset Account**, and **COGS Account**.

The fields on this form will vary depending on whether you are creating an Inventory, Non-Inventory, or Service Item. Remember, QuickBooks does not store a Cost for Non-Inventory parts, just a List. If you would like the Cost to be transferred to QuickBooks when you are creating an Item, make sure you check the "This item is purchased for and sold to a specific Customer:Job" option on the form. When this is checked, an Expense Account field is added to the form. You do not have this option when doing a Bulk transfer of products.



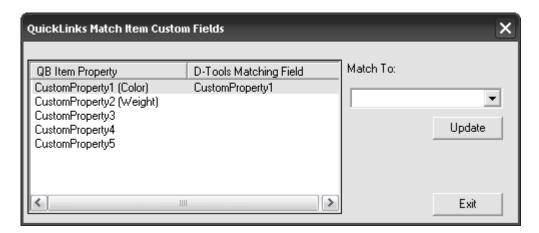
The Item Number/Name populates with data based on the Mask you set when you configured QuickLinks. Please see the SI 5 Installation and Administration guide for details.

Make all selections on this form and then click [OK]. The Item will be created in your QuickBooks database.

Also on the SI 5 Master Table Products List form there are two additional function buttons: [Map], and [Sync].

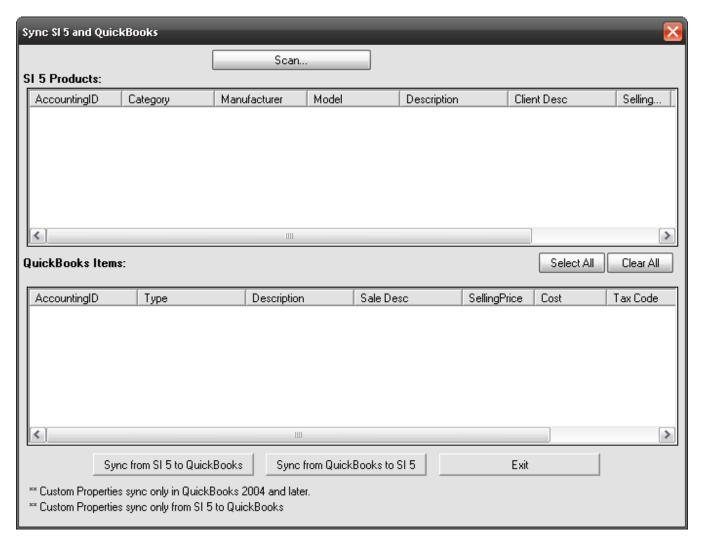


Clicking [Map] will open up the QuickLinks Match Item Custom Fields form:



Highlight a QB Item Property on the left, select an SI 5 Product data field from the "Match To" dropdown, then click [Update]. This does not play a role in overall functionality, it is just an optional way to add more data to the QuickBooks Items that you create via the QuickLinks interface.

Clicking [Sync] will open the "Sync SI 5 and QuickBooks" form:



When you click **[Scan...]**, a comparison takes place between all linked SI 5 Products and QuickBooks Items. If differences are found, the Products/Items will list in the appropriate fields. Use the **[Select AII]** button or manually check the boxes next to the Products/Items that you want to synchronize and then choose either **[Sync from SI 5 to QuickBooks]** or **[Sync from QuickBooks to SI 5]**.

Estimates

Estimates are the main "export" from SI 5 to QuickBooks. Once an Estimate has been exported to QuickBooks, you can use QuickBooks functions to create Invoices and Purchase Orders from the Estimate.



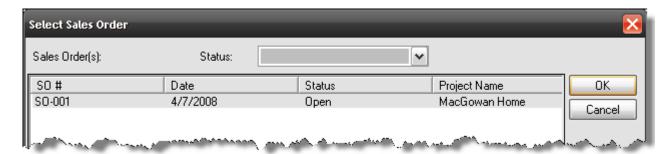
A Sales Order must exist before you can use QuickLinks functionality. See Sales Orders on pg. 542 for details.

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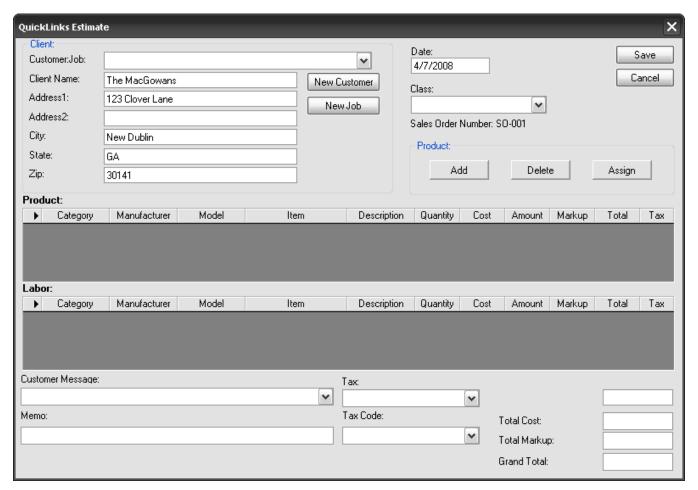
To create an Estimate, select "Estimate" from the View dropdown on the D-Tools QuickLinks form:



Click **[New]**. The Select Sales Order form opens. Select the Sales Order you want to use and click **[OK]**.



The QuickLinks Estimate form will open:

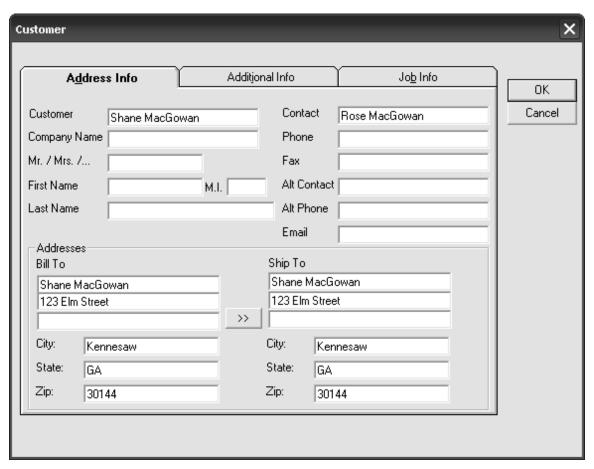




Terminology: In SI 5, we use the terms "Client" and "Project". Their equivalents over in QuickBooks are "Customer" and "Job".

The "Client" section populates with information from the Sales Order. The Customer: Job field has

a dropdown that is populated with Customer: Jobs from your QuickBooks database. If you have created an Estimate, Invoice, or Purchase Order for this Client and Project before, you can select the Customer: Job from this dropdown menu. If this is a new Customer that does not exist in QuickBooks, click [New Customer]. The Customer form will open. Make edits if needed and then click [OK]. This will create a Customer: Job entry in QuickBooks.





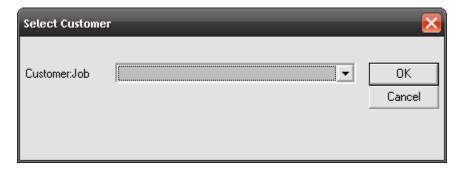
The ":" represents a "Parent/Child" or a "sub-item of" relationship between

Customer and Job in QuickBooks. This format lists all Jobs beneath a "parent"

Customer.



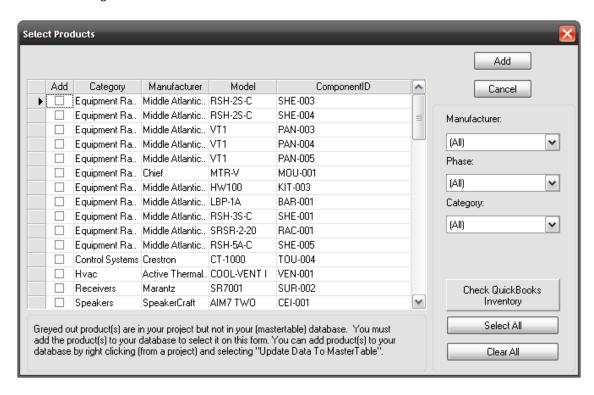
If the **Customer** already exists in QuickBooks but has not been linked to this Job, click the **[New Job]** button instead of the **[New Customer]** button. You will be prompted to select a **Customer**:



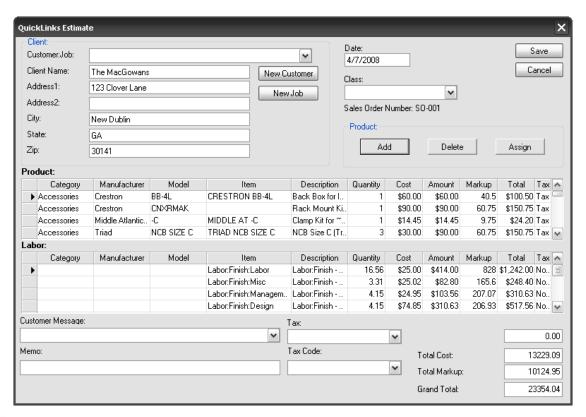
Once you select a Customer from the dropdown menu and click **[OK]**, the Customer form (as shown above) will open.

The **Customer Message**, **Tax**, and **Tax Code** fields have dropdown menus that populate from your settings in QuickBooks. The **Memo** field corresponds to the Memo field in QuickBooks.

The [Add] button opens up the Select Products form:



The [Check QuickBooks Inventory] button will check the inventory in QuickBooks for a selected Product and report how many you have on-hand and how many are on-order. Use the Manufacturer, Phase, and Category filters if desired. Check the Products that you want to add to the Estimate or use the [Select All] button. Once you have made your selections, click [Add]. The Products that you selected will display on the QuickLinks Estimate form:





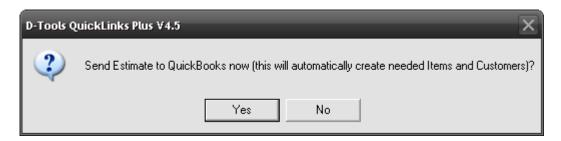
Once you have added a Product from the Sales Order that Product is "flagged" so that you cannot accidentally add it to another Estimate. You can add it to an Invoice or a Purchase Order in the QuickLinks interface but you cannot add it to another Estimate.

If all Products (including Labor) have been assigned Item numbers in QuickBooks, click **[Save]**. If there are any that have not been assigned, follow the procedure in the Setup and Maintenance section of this chapter that applies to you.

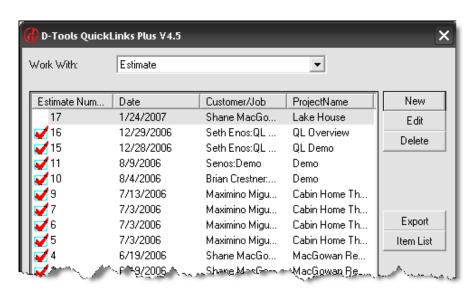


You cannot save an Estimate where all of the Products have not been assigned to an **Item** in QuickBooks.

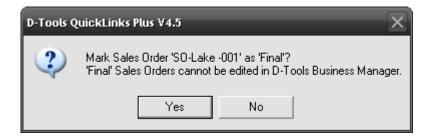
When you click [Save], you will be asked whether you want to export at this time:



Clicking **[Yes]** will export the Estimate to QuickBooks while clicking **[No]** will allow you to export the Estimate at a later time from the main QuickLinks form (Estimates that have not been exported will not have a checkmark next to them. Select the Estimate and click **[Export]** when ready):



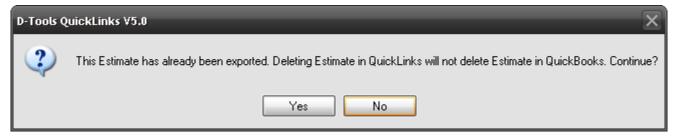
You will be asked if you want to mark the Sales Order's Status to "Final":



The QuickLinks interface is the only place in SI 5 that you will be prompted to mark a Sales Order's **Status** as "Final". Once a Sales Order has been marked as "Final" it locks the Sales Order i.e. all editing functionality for that Sales Order ceases. Having said that, use this option only once you are comfortable with SI 5 functionality.

If you have already exported the Estimate to QuickBooks and then attempt to **[Edit]** or **[Delete]** the Estimate, you will be notified that any changed made here will not be reflected in QuickBooks:





Invoices

QuickLinks can create an Invoice to export to QuickBooks. This function is convenient if you want to create an Invoice for an entire Project as opposed to an Invoice for a percentage of the entire Project. This is because Invoices in QuickLinks are created by adding Products to the form as whole quantities only.



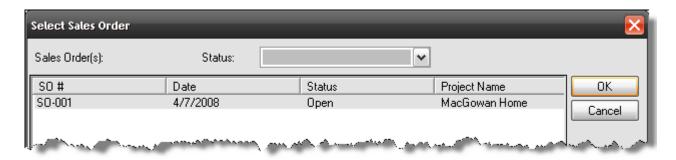
If you want to create an Invoice for a percentage of a Project, create an Estimate in QuickLinks and export it to QuickBooks. In QuickBooks you can convert an Estimate to an Invoice based on a percentage of the Estimate.

To create an Invoice, select "Invoice" from the View dropdown on the **D-Tools QuickLinks** form:

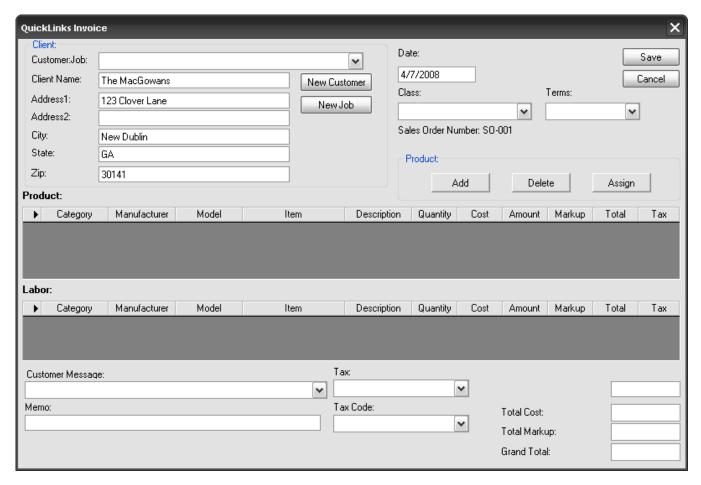


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Click **[New]**. The Select Sales Order form opens. Select the Sales Order you want to use and click **[OK]**.



The QuickLinks Invoice form will open:



This form is almost identical to the QuickLinks Estimate form except for the added Class and Terms field. This dropdown populates with Terms as they are setup in your QuickBooks company file. The procedure for creating an Invoice is identical to that of creating an Estimate. Please see the **Estimates** section of this guide (see page 593) for specifics on adding Products to the Invoice...replace the word "Estimate" with "Invoice" in your head while reading.

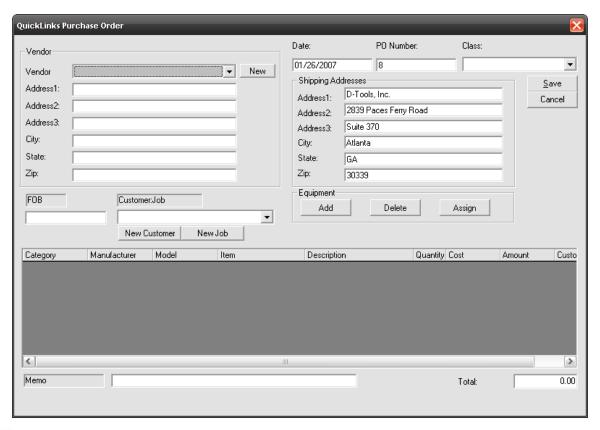
Purchase Orders

QuickLinks can also create Purchase Orders to export to QuickBooks.

To create a Purchase Order, select "Purchase Order" from the View dropdown on the D-Tools QuickLinks form:



Click [New]. The QuickLinks Purchase Order form will open:





Notice that you are not prompted for a Sales Order when creating a Purchase Order. You will be prompted to choose a Sales Order when you begin adding Products to the Purchase Order.

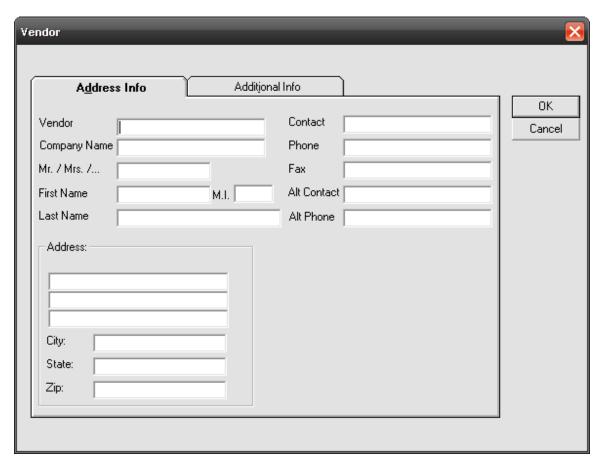
The **Shipping Address** populates with the address information you have setup in QuickBooks.

The **Vendor Name**, **Class**, and **Customer:Job** fields all have dropdowns that populate based on

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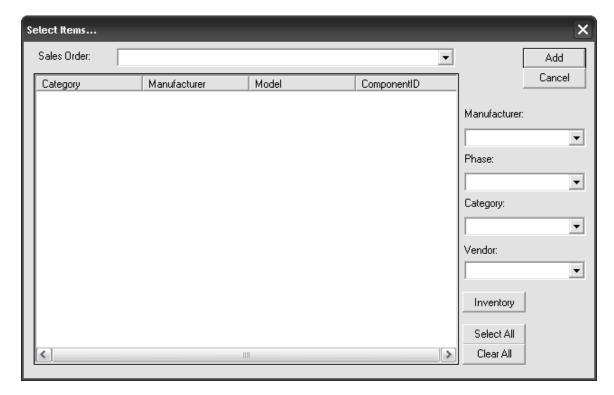
lists that you have setup for these fields in QuickBooks. The **FOB** and **Memo** fields will transfer the contents that you enter to the corresponding field in QuickBooks.

If the vendor you need does not exist, click **[New Vendor]**. The Vendor form will open:



Fill in the fields and click **[OK]**. The Vendor will be created in QuickBooks.

To add Products to the Purchase Order, click [Add]. The Select Products form will open:

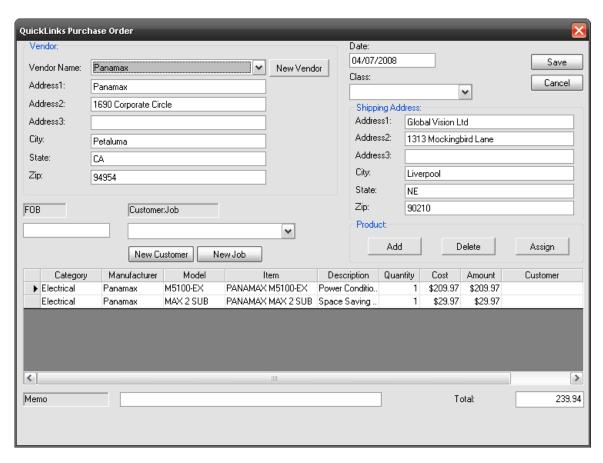


Use the Sales Order dropdown menu to select the Sales Order that you want to use.



You can create a Purchase Order for a Vendor that spans multiple Projects. Simply choose the Sales Order from the dropdown that contains Products that you want order from a particular vendor, add the Products, then choose another Sales Order...

The [Check QuickBooks Inventory] button will check the inventory in QuickBooks for a selected Product and report how many you have on-hand and how many are on-order. Use the Manufacturer, Phase, and Category filters if desired. Check the Products that you want to add to the Purchase Order or use the [Select All] button. Once you have made your selections, click [Add]. The Products that you selected will display on the QuickLinks Purchase Order form:



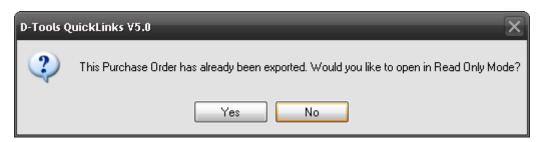
If all Products have been assigned Item numbers in QuickBooks, click **[Save]**. If there are any that have not been assigned, follow the procedure in the **Setup and Maintenance** section of this chapter that applies to you.



You cannot save a Purchase Order where all of the Products have not been assigned to an **Item** in QuickBooks. If you attempt, you will be notified.

When you click [Save], you will be asked whether you want to export at this time.

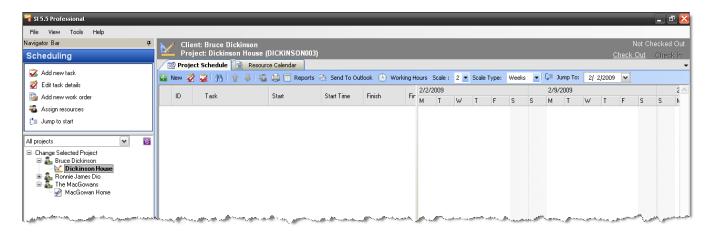
You can also **[Edit]** and **[Delete]** Purchase Orders from the main QuickLinks form. If you have already exported the Purchase Order to QuickBooks, you will be notified that any changed made here will not be reflected in QuickBooks:





Scheduling

The Scheduling tab consists of a Project Schedule and Resources Calendar to manage your projects.



Before proceeding, definitions are needed:

Project Schedule - where users can create, schedule, and assign Tasks and Work Orders. The Project Schedule displays as a Gantt chart

Task – the basic unit of work to be performed for a project. They have a start date, finish date, estimated time, actual time, associated equipment and/or labor items, and assigned resources. Tasks are also a communication tool since they allow a project manager to tell a resource that they need to do something. This communication either happens inside of SI 5 (the resource looks up all tasks assigned to him), or via Outlook (tasks are pushed to Outlook, where they appear on the users calendar or task list).

Summary Task – a grouping of individual Tasks and Work Orders that can be used to help organize and plan your Gantt chart

Work Orders - a collection of one or more Tasks, which can be tied to a Sales Order for the purpose of using actual labor for billing. The primary purpose of a Work Order is to group a number of related Tasks for communication and reporting purposes. See **Work Orders**, on pg **547** for more details.

Service Orders – are billable objects that contain labor and equipment items. They are very similar to tasks in that they can be scheduled and appear on the resource schedule; however, they are different in these important ways:

Service orders are associated to clients, not projects

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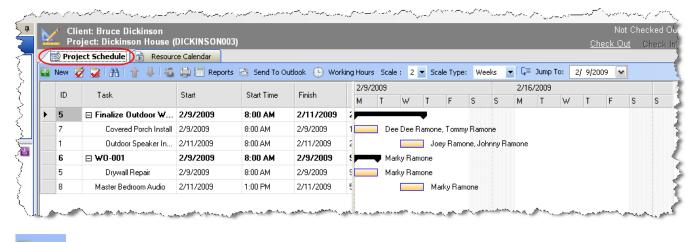
- They can be associated to a project but do not have to be
- Service orders do not appear on the project schedule
- They appear on the resource schedule only
- Items on service orders can be entered manually or pulled from the catalog. Items on tasks must come from a project
- Items on a service order can either be warranty (included free) or non-warranty (billable)
- Service orders can be exported to QuickBooks as an invoice and/or purchase order, just like sales orders

Resource – something that can only be doing one thing at a time. Generally a resource is a person that is assigned a specific thing to do. You can manage resources either via the Resource Calendar tab or via the Work Orders tab.

Resource Calendar – this is where it all scheduling data comes together. It allows project managers to see when Tasks and Service Orders can be scheduled based on the availability of resources.

Project Schedule

This tab allows you to create Tasks, Summary Tasks to add to the project schedule which then displays as a Gantt chart. You can also associate an existing Work Order to the Project Schedule as long as that Work Order has at least one Task associated with it.

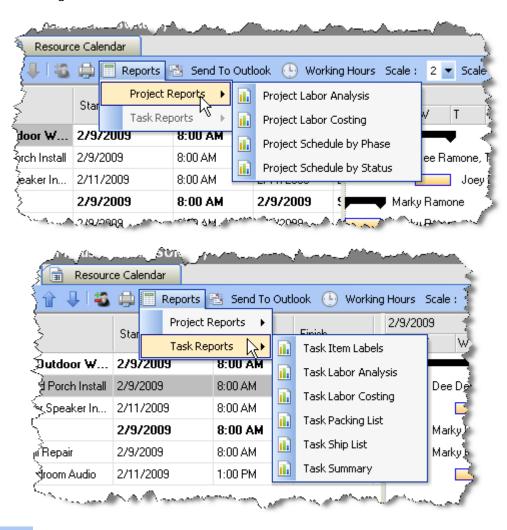


New – allows you add a Task, Summary Task, or Work Order to the schedule.

— edit the selected Task or Work Order

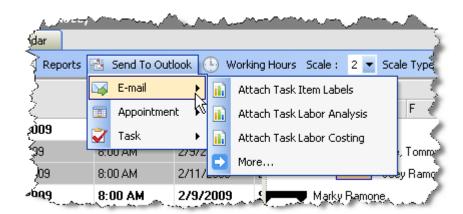
- delete the selected Task, Summary Task, or Work Order
- find Tasks by searching
- Move up/down selected Tasks, Summary Tasks, and Work Orders
- Add/Delete Resources to selected Tasks
- prints the data in the Gantt chart

- two main options: Project Reports and Task Reports. The Task Reports option becomes active when a Task is selected in the Project Schedule. These reports will display in a tab within the Scheduling interface.

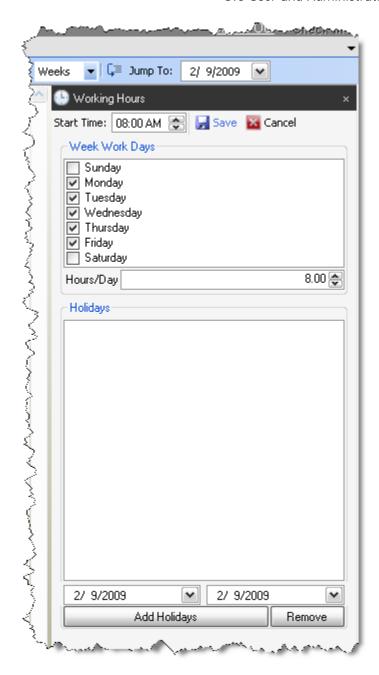


- Send to Outlook allows you email Task Reports when a Task is selected in the Project Schedule.

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Working Hours – Working Hours opens a window on the right hand side of the interface that allows you to change the Working Hours for the project:



Here you set the days and hours that your Resources work. Choose your Start Time, Week Work Days, Hours/Day, and Add Holidays as needed. There are two calendar fields for adding a holiday range.

Scale: 2 ▼ – Scale allows you to choose how much of the Gantt chart displays and is related to the Scale Type setting. This accuracy of this setting is affected by how much of the display you have dedicated to the Gantt chart.

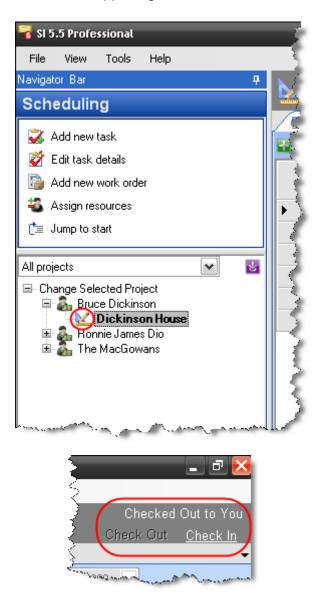
Scale Type: Weeks

− Scale Type allows you to choose between Weeks, Months, Quarters, or Years.

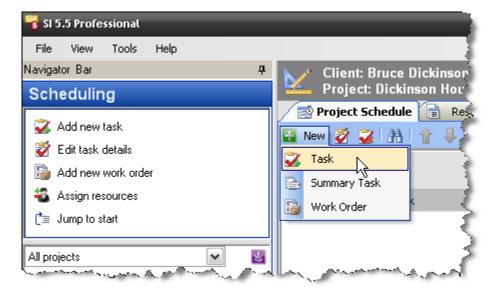
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— Jump To: 2/ 9/2009 — Jump To displays a calendar that allows you to navigate the Gantt chart.

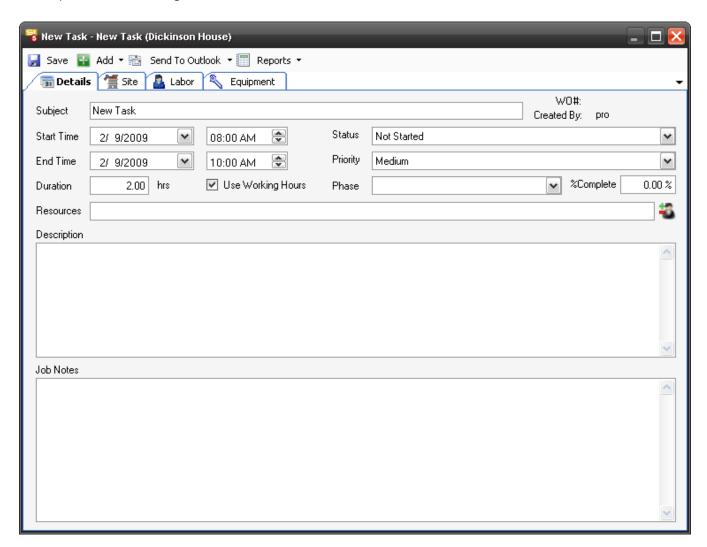
To begin scheduling a project you must first select a project from the list on the left hand side of the interface. You will be warned if the project you select has not been checked in. To check in the project you can use the links in the upper right hand corner of the interface



New->Task

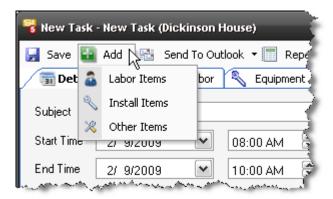


This opens the following form:

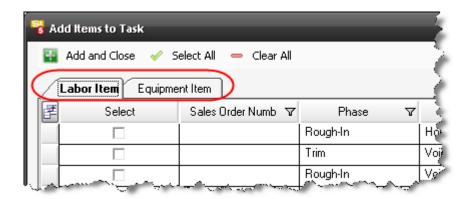


Save - Saves the Task

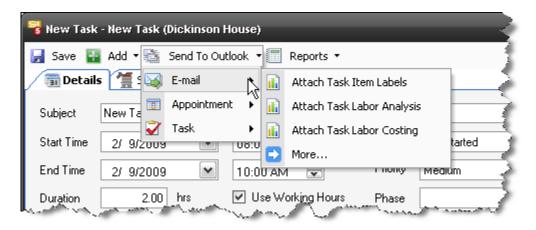
Add – allows you to add Labor Items, Install Items, or Other Items to the Task.



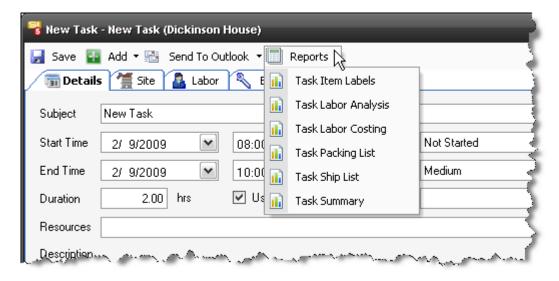
Regardless of which you select, the Add Items to Task form will open. The order of the tabs will reflect your selection:



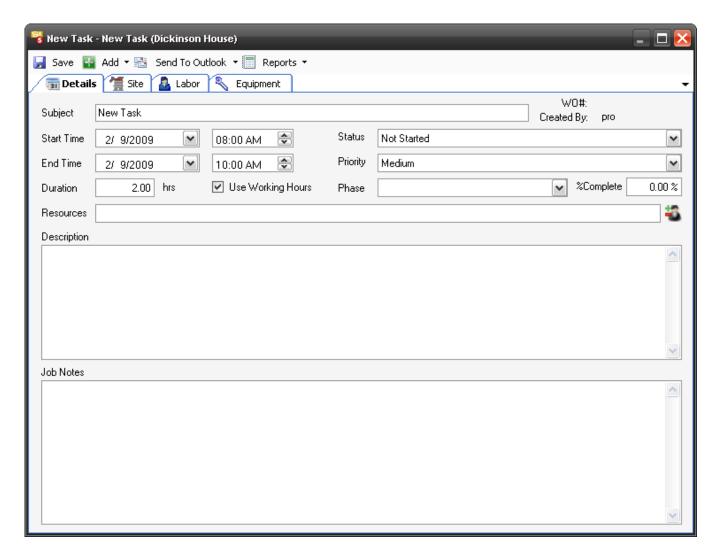
Send to Outlook - allows you to send any of the Task reports (see below) to Outlook as either an Email, Appointment, or Task:



Reports - will generate any of the following reports for the Task: Task Item Labels, Task Labor Analysis, Task Labor Costing, Task Packing List, Task Ship List, and Task Summary. The Reports will display on a tab within the Task form.



Details Tab



Subject – name the Task

Start/End Time – assign duration of time to the Task

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Duration – Displays the value determined by the Start/End Time fields

Use Working Hours – this will limit the time available for the Task to those hours set in the Working Hours interface.

Status - Choose between Not Started, In Progress, Completed, Waiting, or Deferred

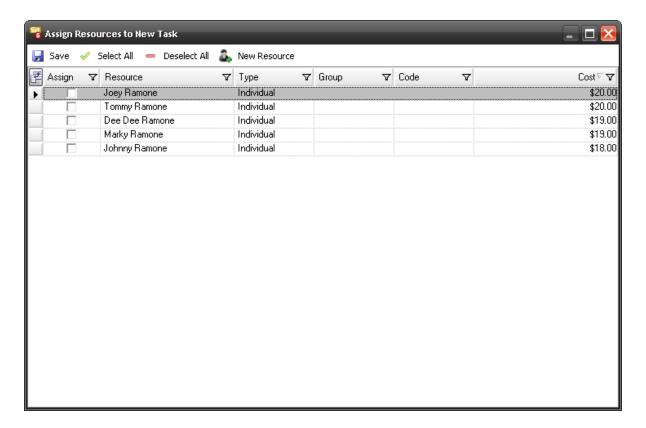
Priority - Choose between Low, Medium, or High

Phase – assign the Task a Phase if you desire. This dropdown only displays the Phases that exist within the Project selected.

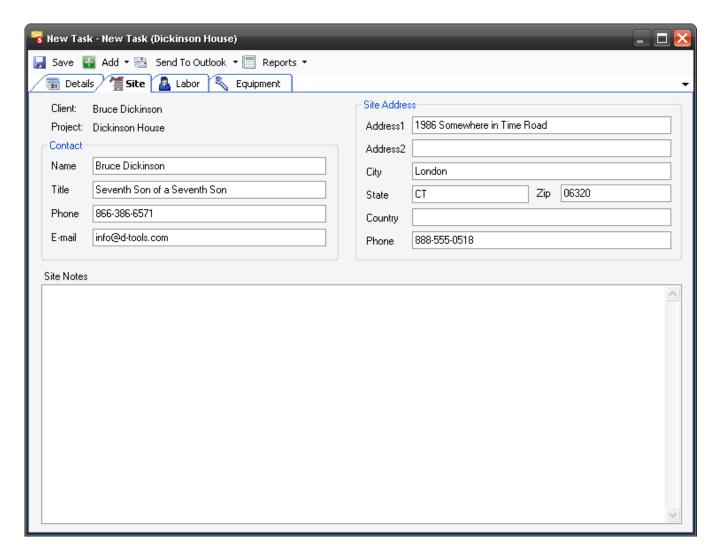
%Complete – this field allows you to manually enter how complete the Task is. If the Status is set to "Completed" this will display 100%. This field is completely independent of any Actual Work that you add to Equipment or Labor Items within the Task.

Description/Job Notes - editable fields for instructions/notes/whatever

Resources – Clicking the button opens the following form and allows you to select resources to add to the Task

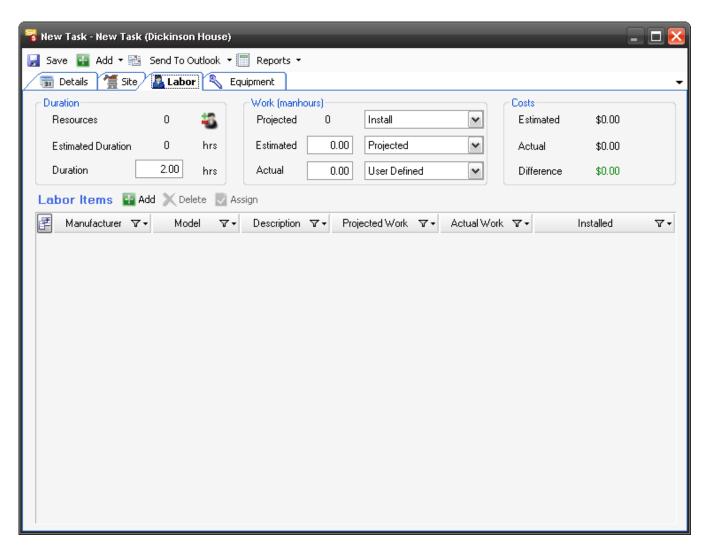


Site Tab



This tab contains the Contact information and site address for the project selected. The Site Notes field is another place to add any comments you desire.

Labor Tab

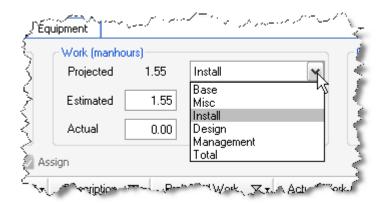


Resources – lists the number of Resources assigned to the Task. Use the button to add or remove Resources.

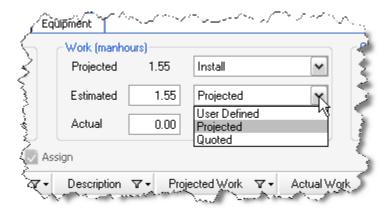
Estimated Duration – populates with the total hours for the Task based on the Equipment and Labor Products that you have added to the Task divided by the number of Resources assigned to the Task. The value that displays here is determined by what value you select for the "Projected" field's dropdown menu, see below.

Duration – editable field that displays the value determined by the Start/End Time fields

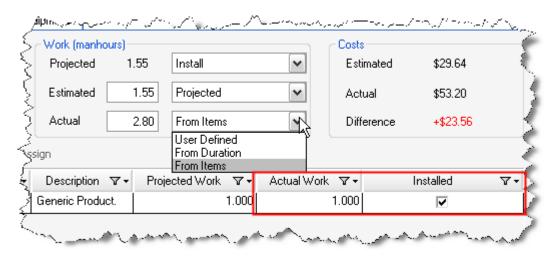
Projected – populates with the total hours for the Task based on the Equipment and Labor Products that you have added to the Task. The value that displays here is determined by what value you select for the "Projected" filed, see below. The dropdown menu allows you to choose between: Base, Misc, Design, Management, Install, and Total. Install = Base + Misc. Total = Base + Misc + Design + Management.



Estimated – populates based on the selection from the dropdown menu. You can use the Projected, Quoted, or User Defined. "Projected" pulls from the Projected field described above. "User Defined" allows you to manually modify this value. "Quoted" does not pull from anywhere and is intended for use to "lock down" a User Defined entry.



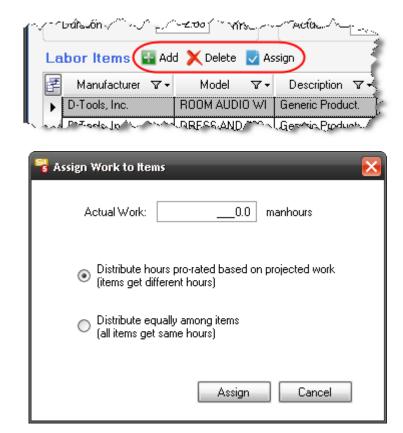
Actual – populates based on the selection from the dropdown menu. You can select: From Duration, From Items, or User Defined. User Defined allows you manually modify this field. From Duration will pull from the Duration field. The From Items field populates based on the Actual Work that you have entered for the Equipment and Labor Products in the Task.



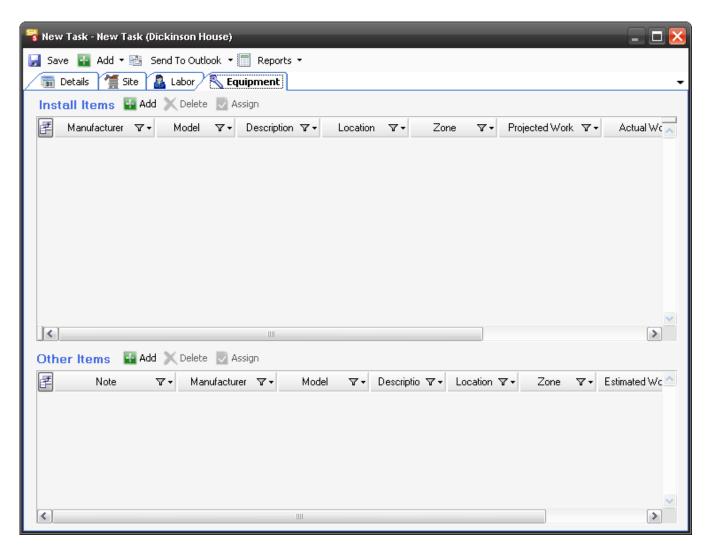
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The **Costs** section of the form shows the dollar values of your costs based on your selections on this form.

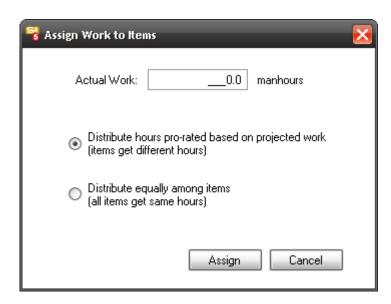
In the Labor Items section you can **[Add]** or **[Delete]** Labor items. You can also use the **[Assign]** button to assign Actual Work to one or more items:



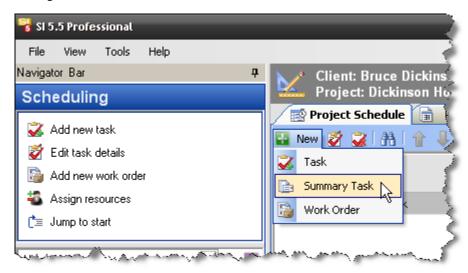
Equipment Tab



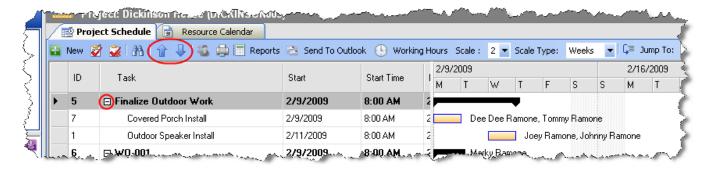
This tab allows you to **[Add]** or **[Delete]** Install or Other items. You can also use the **[Assign]** button to assign Actual Work to one or more items:



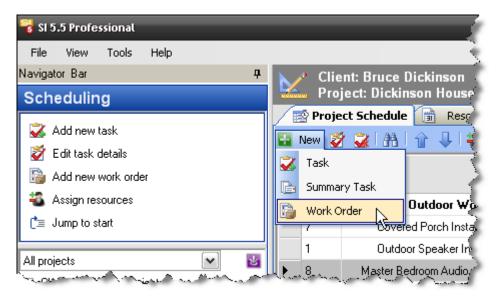
New->Summary Task



This adds a Summary Task line to the Project Schedule. A Summary Task really contains no other data than the Tasks assigned to it. A Summary Task can contain one or more Tasks. They can also contain Work Orders that in turn have Tasks associated with them. You can move Tasks in or out of a Summary task by using the Move Up/Down arrows in the interface. You can move Summary Tasks along with all associated Tasks up or down in the list using the Move Up/Down arrows. All that is editable on a Summary Task is the name. Summary Tasks display with a [+] or a [-] depending on whether it is expanded or not.



New->Work Order

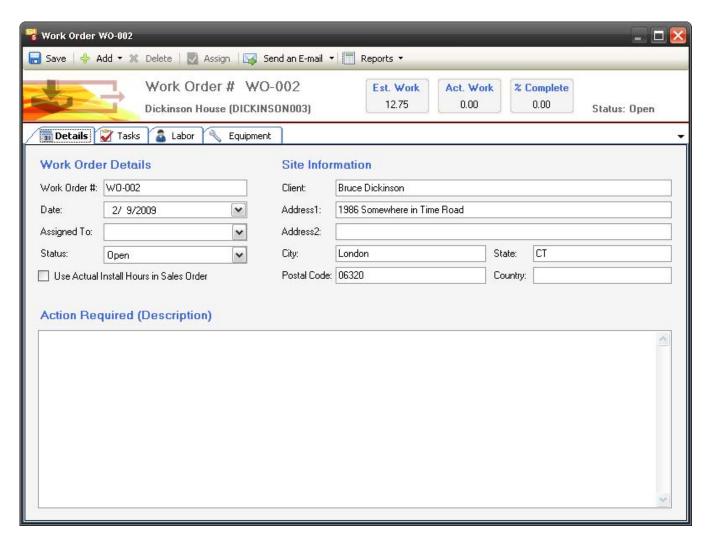


This option becomes available when:

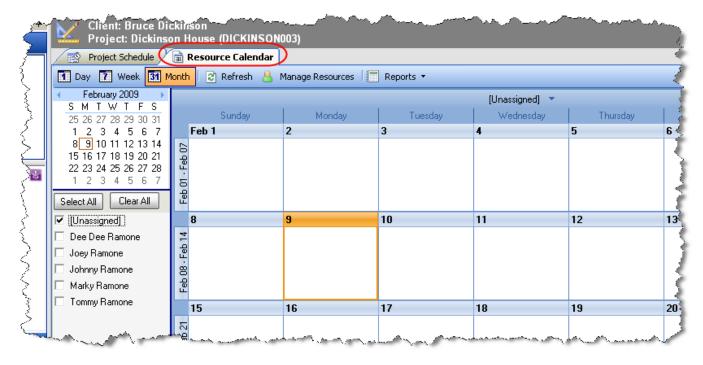
- 1) A Work Order with at least one Task exists for the Project.
- 2) You have selected one or more Tasks or Summary tasks in the Project Schedule.

The Work Order form will open. See Work Orders pg. 547 for details.

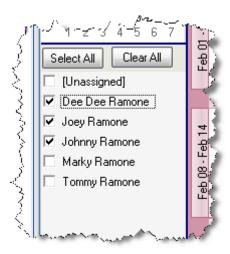
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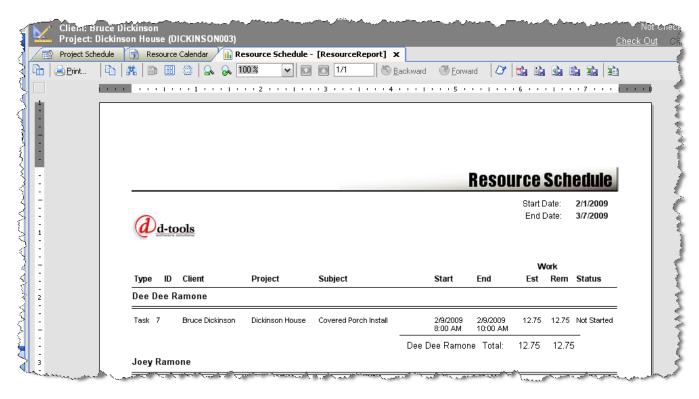


Resource Calendar

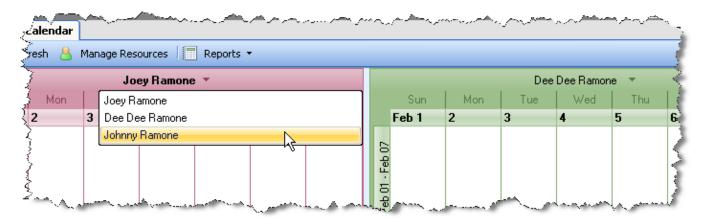


This interface allows you to view and manage your Resources that have been assigned Tasks or Service Orders. The menu bar allows you to choose set your view to Day, Week, or Month. You can also Manage Resources. The Reports button will generate the Resource Schedule report based on what Resources you have selected:

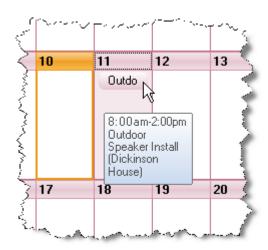




Once you have selected the Resources you wish to view, a calendar will open for each Resource. Only two calendars display at a time but you can toggle between Resources using the dropdown option at the top of each calendar:



You can hover over a Task or Service Order on the calendar to see a summary or you can doubleclick to open the Task or Service Order:



Appendix A: Data Considerations

The following tables define the data attributes associated with the SI 5 product family.

Product Data

Each Product in SI 5 each must be unique. Uniqueness is determined by combining Category, Manufacturer and Model (CMM). How you choose to set up your data will be determined by what is most important to your particular business model. There are tradeoffs for each of the choices. All have their particular strengths and weaknesses.

- 1) You wish to rely on D-Tools web data (MVP etc.): In this case you will need to use the CMM provided by D-Tools. This will allow you to receive updates as product information changes. However, the Categories provided may not be the ones that you would choose. This may be particularly true if you elect to show Categories on you client reports. Also, the Model#s provided by the Manufacturers are not always the ones you will use for order processing. Models may come in several colors (wall plates etc.) and as a result, a SKU or Part# is used for order entry. You will need to study the data to see if this approach works best for you.
- 2) You wish to use the identifier that is preferred by order processing in the Model field. In many cases this is Part # not Model# (Crestron, AMX, Extron, Shure, etc.). Using the Part# will help cut down on order processing errors, but you will not be able to update these Products using the D-Tools online data. You may start by downloading the D-Tools data and images and then modifying the Model and/or Category to suit your needs.
- 3) You wish to define your own Categories to make it easier to locate Products or group them on client reports. This is basically the same as (2) above.

Since Category is used to determine uniqueness, it is possible for the same Manu/Model may show up in multiple Categories. This should be avoided if at all possible. Also, a Category will be required for any Product that is imported via the CSV process.

Appendix B: Software License Agreements

End-User License Agreement for D-Tools System Integrator 5

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The installation of this program will install files necessary to operate the program onto your computer. Other system files, such as DLLs may be installed or updated and Windows registry entries will be made. Uninstalling the program will not remove all of the installed files or registry entries. As with all installations, it is recommended that you back up your hard drive before you install this program.

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Consulting:

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Web: http://www.d-tools.com/site/support/contact.html

Forum: http://www.d-tools.us

Manufacturer Vantage Point (MVP) Program:

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