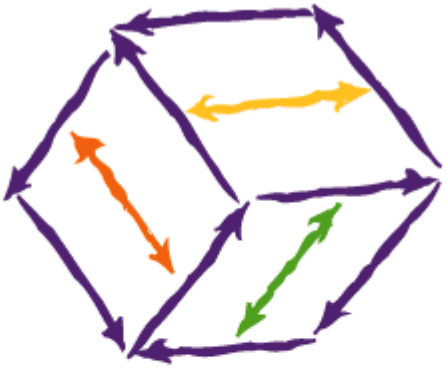

take off™

Tutorial

By:
People Logic Software Corporation
Victoria, BC
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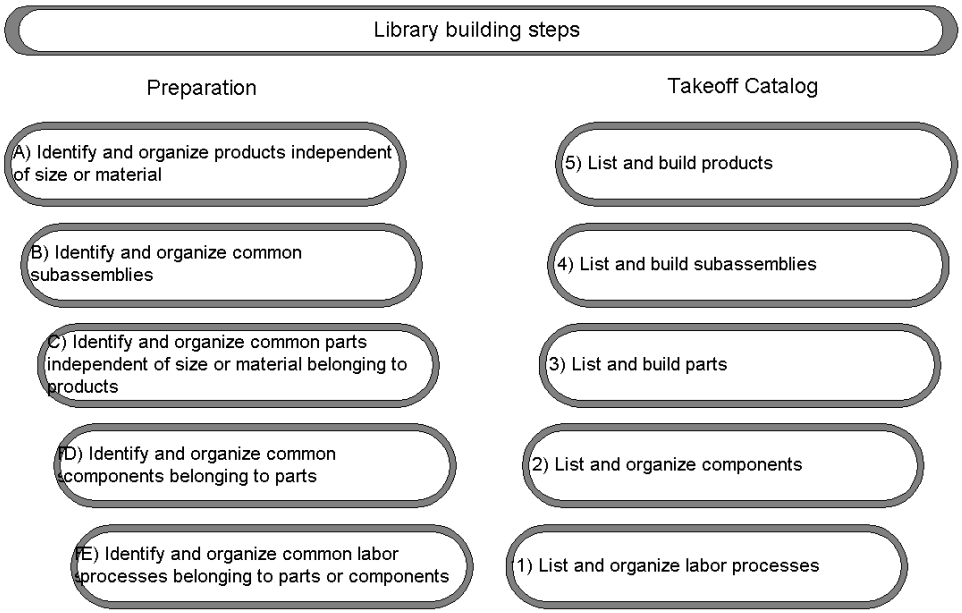
Contents

How do I Build a Library?



Introduction

Catalog construction is fundamental to achieving optimum use from take off. Proper customization of libraries is the primary mechanism for imparting your specific methods and terminology on the product. Many methods exist, some better than others, some purely philosophical but only you as the end user will know the which balance of flexibility and constraint works best. Our goal is to expose a few methods that make take off work better for you and then let you decide which tools to deploy.

Where to start?
How do we organize all this?
What is a product?
What differentiates one product from another?
Why make them parametric?
Top down/Bottom up

Where to start?

Like any large task, we will begin by gathering together what we already know and then organize this information into sections for entry into take off.

We need the following data:

- who is the target audience?
- labor activities with time studies
- raw materials used
- finishes
- hardware
- buyout materials
- product lists with construction details
- any known product unit costs
- any known conversion formulas

How do we organize all this?

Take off provides a few built in mechanisms for easy organization of a catalog into small libraries. The most powerful tool being the outline control which allows the following hierarchy of catalog organizing:

Project Catalog

- Product Library
  - Catalog
    - Product Item (see Product Model)
- Subassembly Library
  - Catalog
    - Subassembly Item
- Part Library
  - Catalog
    - Part Item
- Component Library
  - Catalog
    - Component Item
- Labor Library
  - Catalog
    - Labor Item

Even though the structure is clean and simple, a little thought is still required to ensure that items belong to the correct category and that a naming scheme is used that most of the organization can agree to. Worksheets for provided for this exercise.

TIP: *use libraries to contain similar categories and categories to contain similar items*

What is a product?

The most difficult decision is deciding what the products are. In fact this could almost be a philosophical question, so we will try to provide some guidelines because anything could be a product. Once again keep in mind who is using take off, so the concept of products should be clear to all.

Products are simply containers for mixing various combinations raw material and labor elements. These manufactured products can then be used to form the basis of different libraries. **take off**[tm] has no limit to the number of libraries or items within each library.

Ideally, products should be the types of items, which are used at, take off time. From a global enterprise point of view for traceability there should exist a simple relationship between:

- original takeoff transaction
- manufactured/buy out item
- shipped item
- installed item
- billed item

By maintaining a close one to one relationship between the above items, products are common to everyone. Whatever you sell are your products. In fact your raw goods may be someone products.

What differentiates one product from another?

A classic question, which needs to be addressed by all, is whether to construct a large inflexible catalog or a smaller one with more flexible items. One case requires wading through many products at take off time with little or no options to respond to or otherwise quick access to an item and possibly changing some defaults. Even though the answer to this question rests with the catalog designer, we will list three methods for making products flexible:

Dimensions

Each product can own up to three possible types of dimensions (Width, Height, Depth). Then each dimension is assigned a value from a user defined list or any override value

Materials

Each products' material composition is derived collectively from three user defined material groups per take off item. One for **construction** material, one for **finish** material and also for **hardware**.

Options

Finally, user defined set of options can be attached to every product. These options derive theirs values from pre defined lists or can also be overridden. Their values drive product customization at takeoff.

Using all these three methods together, one can quickly build a very flexible product with one design. For example, given a product with:

3 dimensions and 4 choices per dimensions	= 4*4*4	=64
3 material groups with 2 choices each	= 2*2*2	=8
4 options with 2 choices each	= 2*2*2*2	=16

Results in a product with 64*8*16=**8192** instances from a single design.

Why make them parametric?

A better question would be why not. Parametrics offers the flexibility of building items which have the ability to stretch as opposed to being of a fixed dimension. This concept extends to not only the current item but also to any items which it contains. Thus as the shell stretches, all of the contents can be told to grow with the parent shell. One can quickly see that item designs need not to be constrained to items of a fixed size. In fact they aren't even limited to discrete intervals because a parametric model is continuous.

Top down/Bottom up

Whenever items are designed, people generally follow one of two common approaches.

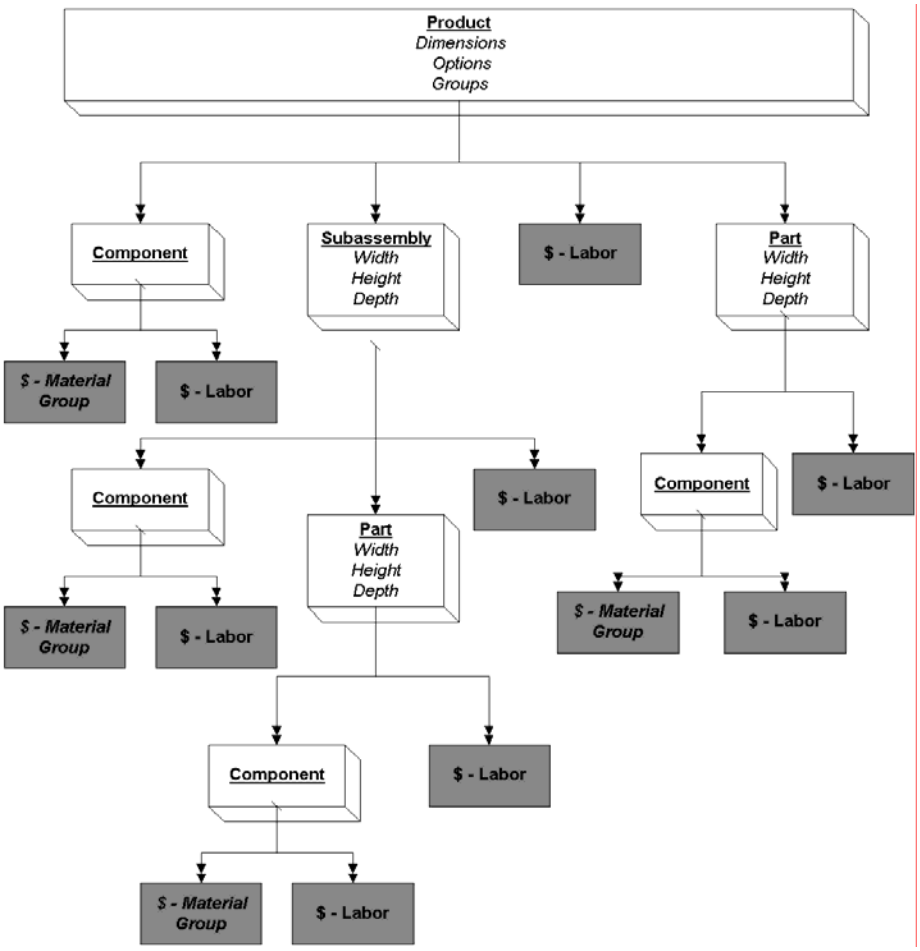
Top Down: A method by which one starts with finished product and slowly decomposes into sub items.

Bottom Up: The opposite approach whereby one starts with the smallest items and builds them up to the finished product.

When using takeoff with an empty library the bottom up approach is used. Thereafter top down gets used because parts and subassemblies already exist. so new product construction should be very quick.

Product Model

The take off product model is shown graphically below. Essential to any costing or manufacturing model is the concept that product items ultimately decompose to material and labor items. Thus to make anything, labor and material cost need to be incurred. The purpose of the product design is give the user a container to capture all the items not only for a single product but for as many permutations as your design allows. As can be read from the diagram, a product consists of one or more labor, component, part or subassembly items. Parts and subassemblies can be thought of as intermediate containers to make construction easier.



Common Catalog Activities

Adding and Editing a Unit of Measure

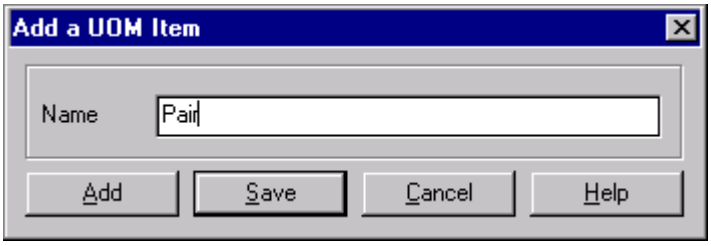
Anywhere a UOM drop down list appears you can add new UOM's or edit the description of existing items.

Right clicking in the UOM box will present you with the following menu.

To edit a UOM other then the one displayed first select it by opening the drop down list and clicking on the correct item. After it is selected use the right mouse to display the above menu and select edit.

Tip *– When the UOM box is highlighted pressing the first letter of the desired UOM will display the first UOM starting with that letter. Pressing the letter repeatedly will toggle through all the UOM's that start with that letter.*

Clicking on the Add menu item will display the following dialog.



Enter the unit of measure name.

Click the Add button if you want to add another UOM without returning or click Save when you have finished entering data.

To Edit a UOM, select the required UOM from the drop down list, right click to display the menu selection and click on Edit.

Note – When you edit a description for a UOM all items that use this UOM will also have their description changed.

Note – Because of the critical role UOM's have with linking materials and components they can not be deleted. You can however reuse a surplus UOM by editing it to a new name.

Selecting or Editing a Bitmap

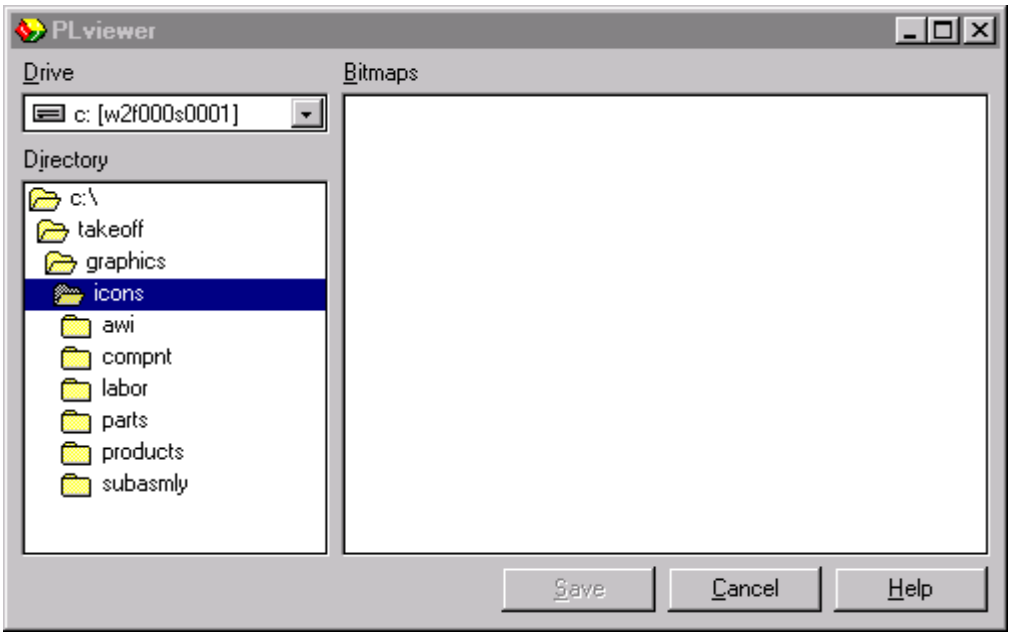
When products are first created a default bitmap (the **take off**^{tm} cube) is displayed. Because of

take off[tm]'s graphical nature you will normally want to use a bitmap image that is more intuitive. **take off**[tm] allows you to either select a bitmap from an existing library of bitmaps we supply, or to edit any existing bitmap to create a new bitmap image.

Bitmaps that can be edited will have a right mouse button menu associated with them that appears like the following.

Tip – If you double click on the bitmaps used on the pick bar, Pledit, the bitmap editor, will automatically be launched.

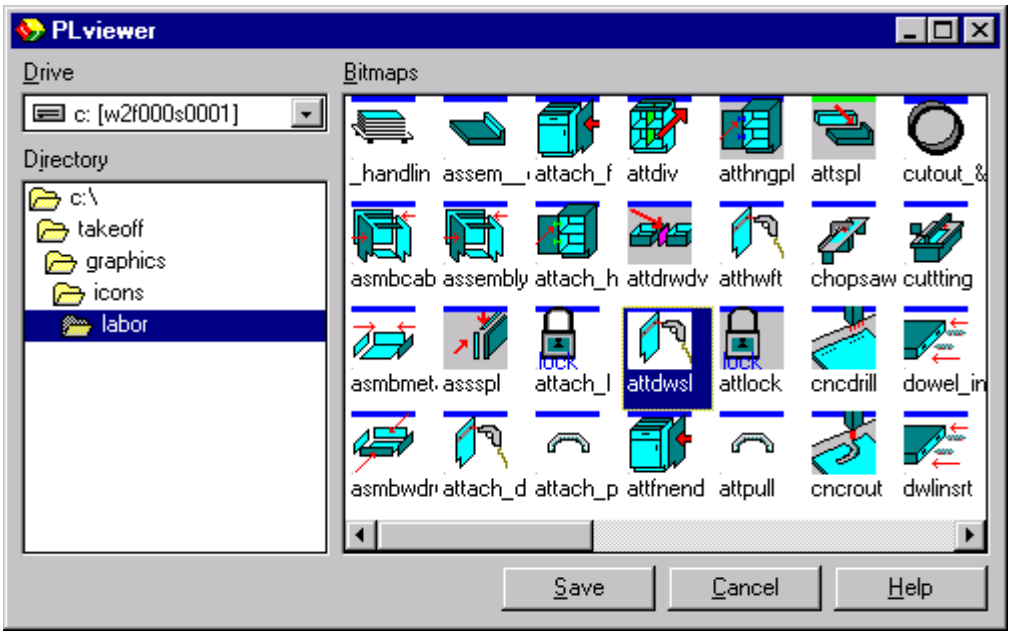
To replace the current bitmap with one of the supplied bitmaps, click on the Select Bitmap menu choice. This will launch Plviewer and position it's outline to the default icons directory of the shipped libraries.



Because of the number of icons supplied, we have broken them down into directories that match the five areas of the catalog button. An additional directory was created to hold bitmaps for the AWI trim libraries.

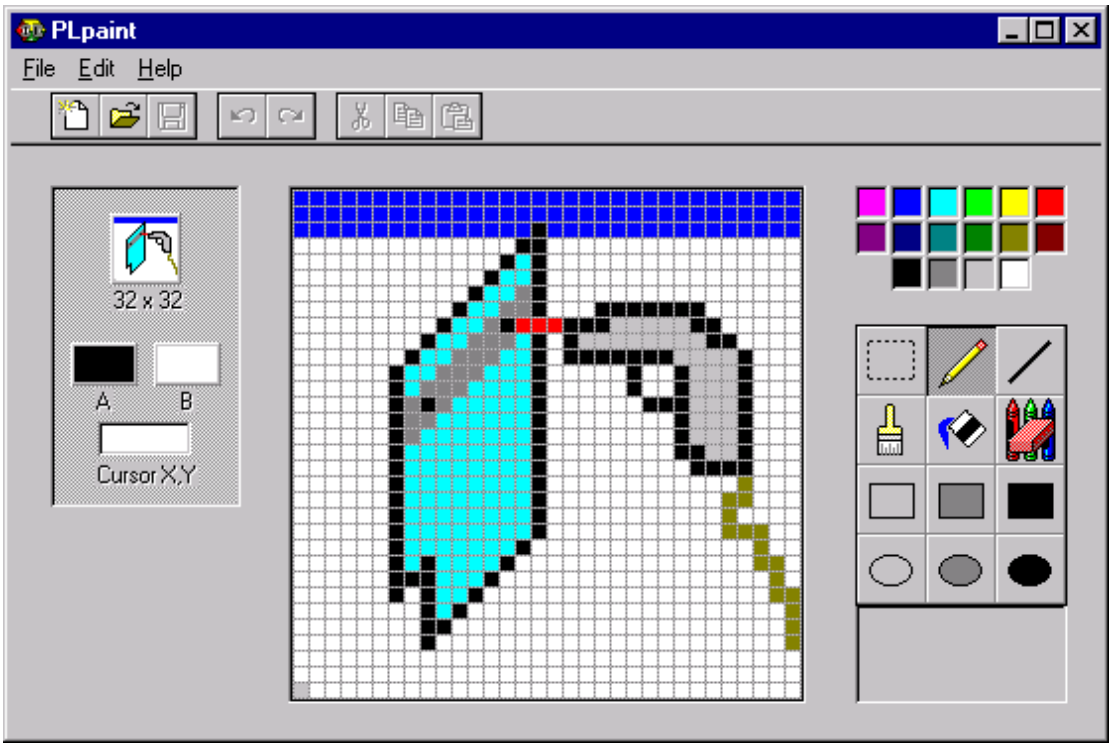
Note – Bitmaps can be accessed from other directories then this. The only limitation is that the bitmap must be 32 pixels by 32 pixels wide so that it will fit on the pick bar and of 256 colors.

To select a bitmap, double click on the desired folder icon.



You will now be presented with all the bitmaps within that directory. To select a bitmap to use either double click on the desired image or single click on it and then press Save.

If no existing bitmap suites your needs, you should select the bitmap that is closest to your desired result as described above. Then either select the Edit Bitmap menu choice or double click on the returned image to be presented with Pledit.



Pledit is a bitmap editor geared exclusively towards creating pick bar images. It functions like a

regular paint program and contains on-line help to explain its full functionality.

1) List and organize labor processes

Labor Categories and Labor Items

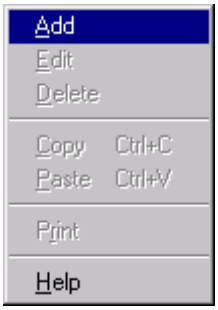
Before any labor items can be entered into the takeoff databases the user has to determine what labor categories are necessary. Labor is generally categorized by process. For example, all of the cutting processes; panel saw, table saw, radial arm saw would fall under a *Cutting* category; all of the different edging processes for thin, medium and thick edges would fall under an *Edging* category.

- Click on the Catalog button. The Catalog Screen appears with five tabs:
- Product
- Sub-Assemblies
- Parts
- Component
- Labor

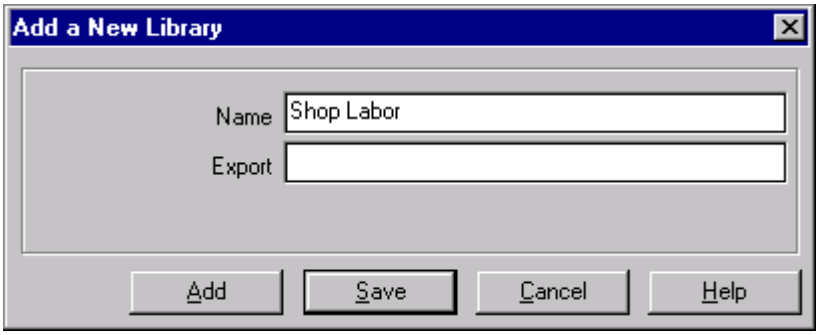
Click on the Labor tab and you will see the following screen

Before Labor categories can be entered, a Labor library name must be created.
Libraries always appear on the outline as direct descendants of the project. Right mouse click on the highlighted project name at the top of the outline (in the example Build Libraries).

The following menu appears.

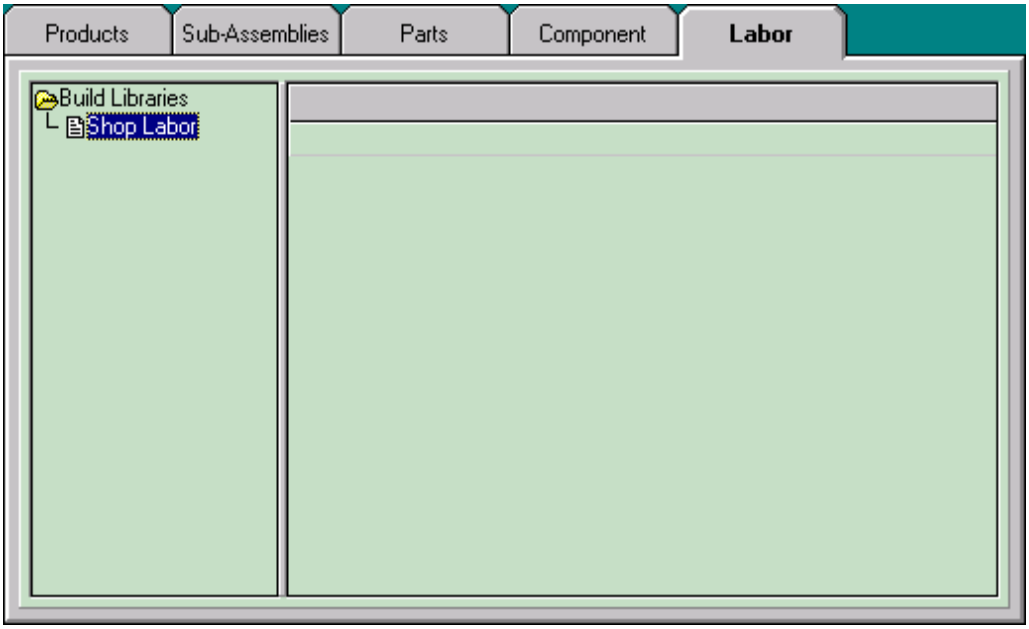


Click on Add and the following dialog box appears.

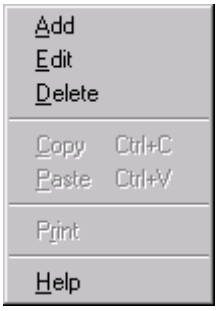


Enter the name of the Labor library and click save (in our example "Shop Labor" has been used

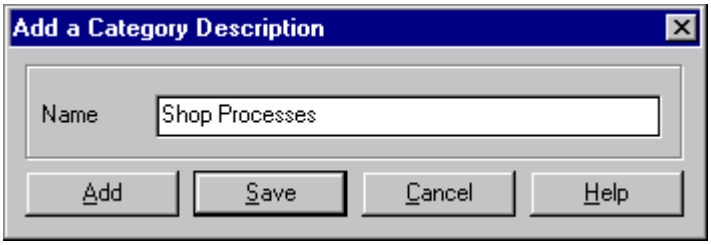
for the Library name.)



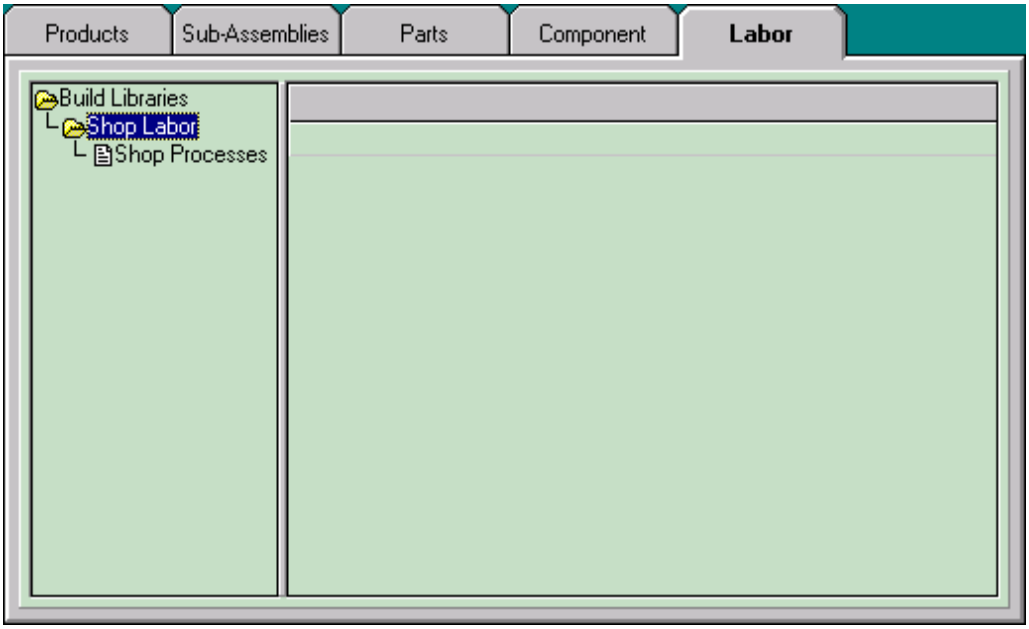
Notice how the folder icon for the project name (Build Libraries) is now an open folder. The open folder means there is another folder or file inside or at a lower level. Notice how at the moment the Labor library icon is only a document. The document icon means there are no other folders inside. To create a Labor category right click on the library name (Shop Labor) and the following menu appears.



Click Add and the "Add a Category" dialog box appears.



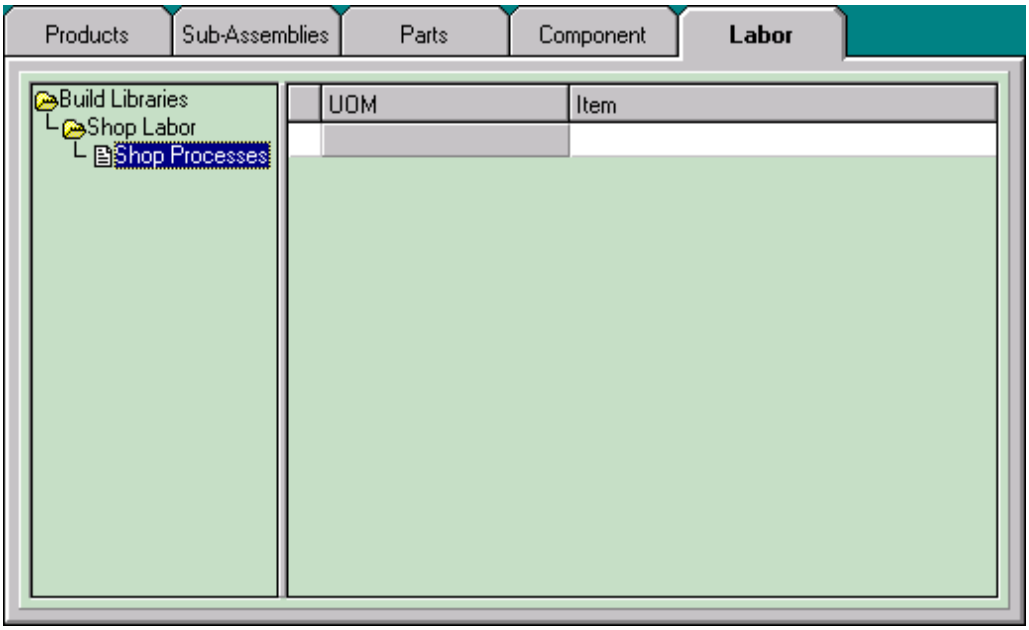
Enter the name of the Labor category and click save. (In our example "Shop Processes")



Now you can see the "Shop Processes" category in the Labor library. Next you will enter a Labor item in the "Shop Processes" category.

Note - Categories represent the components of Labor according to their process

Highlight the new category name ("Shop Processes").

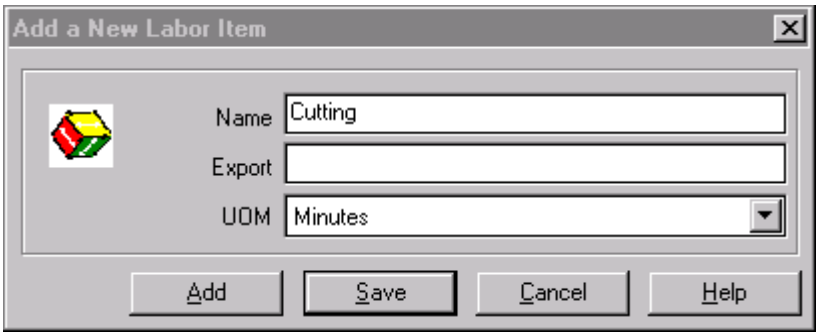


Notice that the Grid Headers are now displayed at the top of the grid. This occurs when a category is highlighted on the outline.

***Tip** - When the headers are displayed on the grid you are at the level where you can enter Labor items.*

To add items, right click anywhere on the grid.

Click Add and the "Add a new Labor" dialog box is displayed.



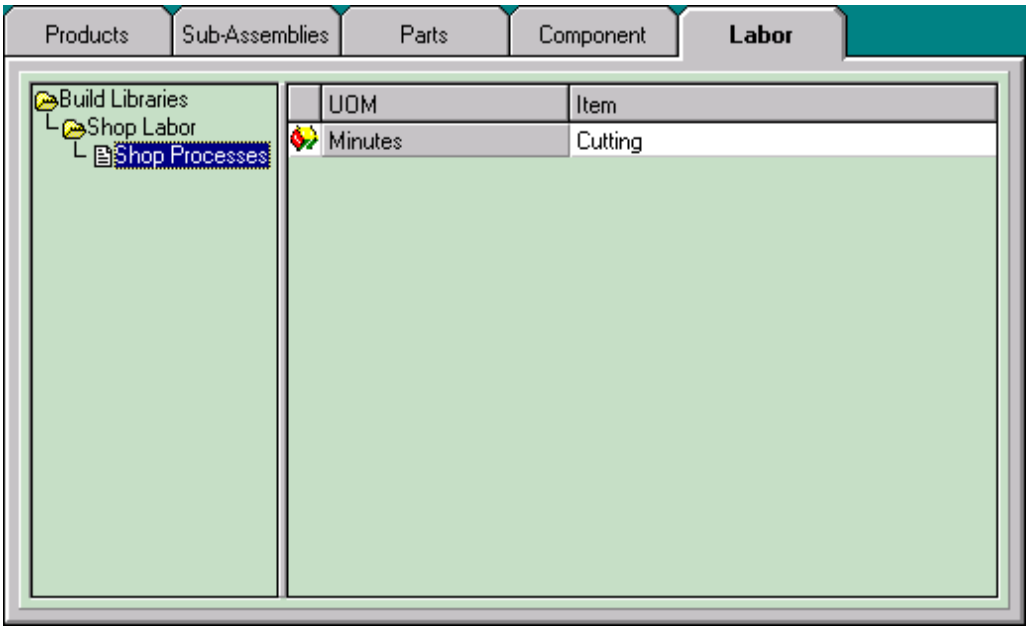
Enter your data into the fields
Name: The name of the Labor Component. In the example "Cutting"
Export: The export code for this labor process if one is required by your manufacturing software.
UOM: The Unit of Measure for this category.
(In our example click on the arrow in the UOM field then select Minutes)
take off[tm] uses the UOM to calculate how much labor is used in a project.
Bitmap: The bitmap to represent this Labor process.

Note – See the "Adding and Editing a UOM" section for information other than selecting an existing UOM.

Note – See the "Selecting or Editing a Bitmap" section for information on how to alter the displayed bitmap.

***Tip** - Click Add if you want to add another item without returning to the Labor tab or click Save when you have finished entering data.*

You will see the grid display being updated as you add items.



***Tip** - Note that in the previous menu the user can also edit and delete any item on the screen. To do this highlight the item, click the right mouse button and click edit or delete.*

When a category is highlighted on the outline the corresponding material items are displayed on the grid.

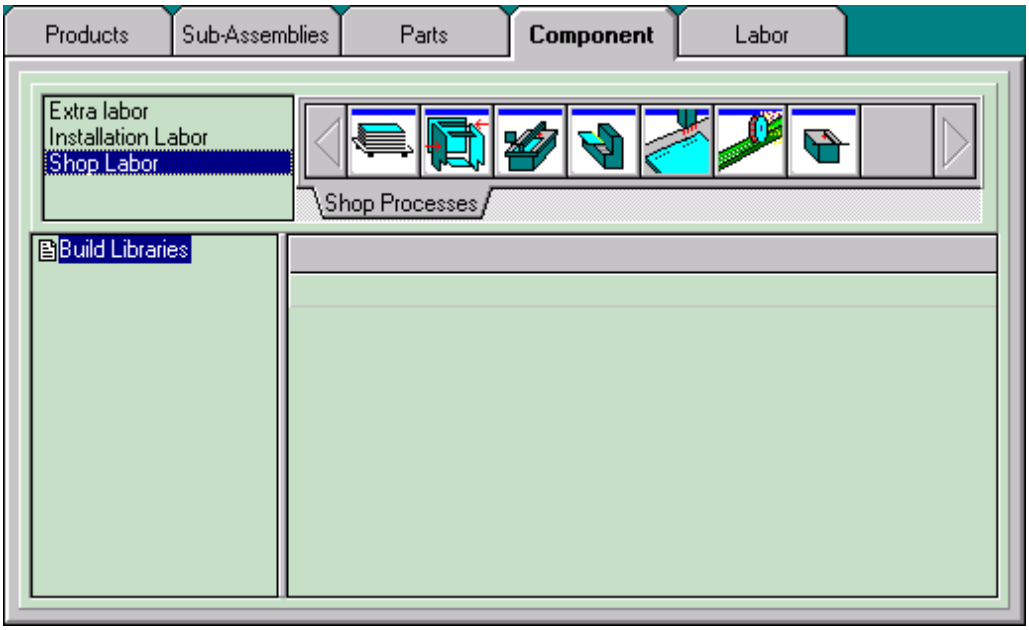
2) List and organize components

Component Categories and Component Items

Before any materials can be entered into the **take off**[tm] databases the user has to determine what Categories the materials fall under. Materials can be categorized any number of different ways but are generally classified by what they are *used* for in the end product. For example; all of the materials that would be used to make the exposed parts of a cabinet would fall under an E*xposed* material category; all of the different edgings would fall under an *Edging* category; all of the different hinges would fall under a *Hinge* category. In the tutorial, materials have been categorized by use.

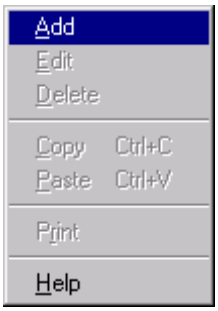
- Click on the Catalog button.
- The Catalog Screen appears with five tabs:
- Product
- Sub-Assemblies
- Parts
- Component
- Labor

Click on the Component tab and you will see the following screen.

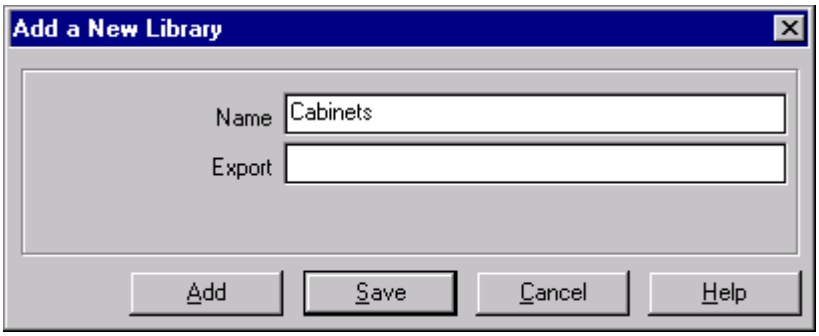


The pick bar at the top shows the lower level libraries. In this case the labor libraries we just built. Components have the ability to have labor costs associated with them, however unlike the higher levels this is not required. A component will have costs associated with it from the actual material it is linked to on the Admin-Groups tab.

Before the material Categories are entered a Material component library name must be created. Libraries always appear on the outline as direct descendants of the project. Right mouse click on the highlighted project name (Build Libraries) at the top of the outline. The following menu appears.

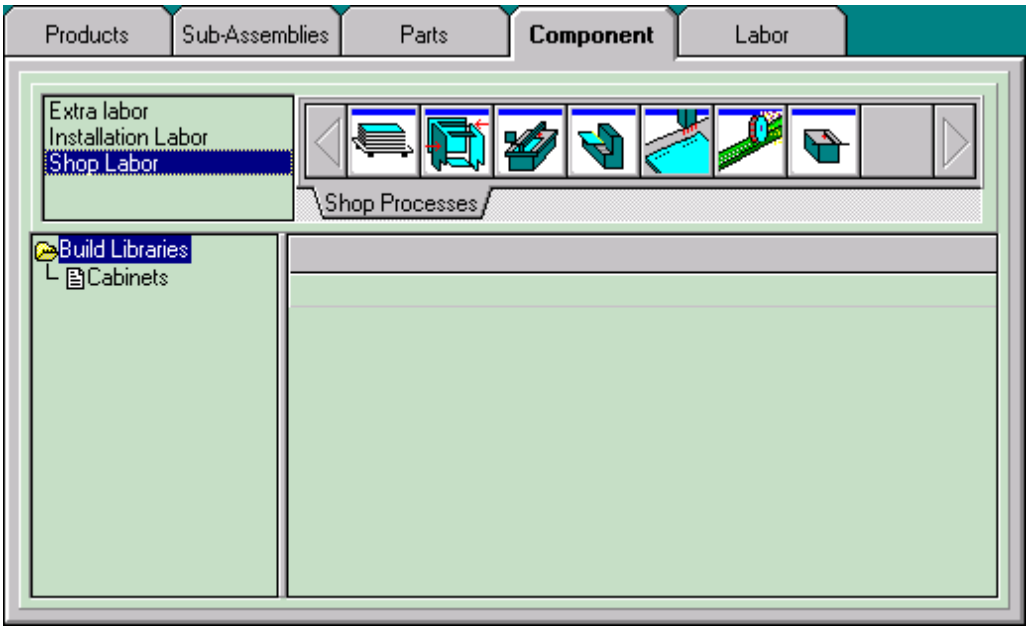


Click on Add and the following dialog box appears.

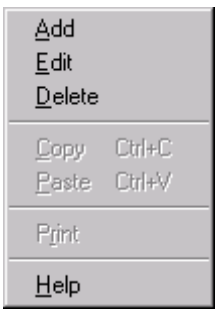


Enter the name of the Component library and click Save. In our example "Cabinets" has been used for the library name.

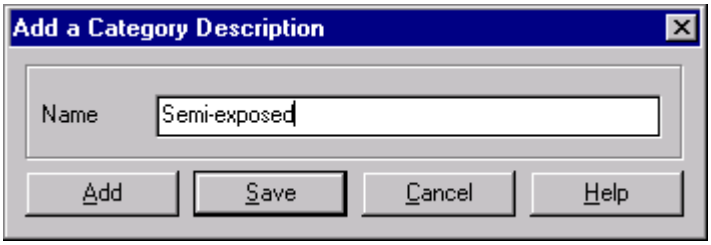
Notice how the folder icon for the project name (Build Libraries) is now an open folder. The open folder means there is another folder inside or at a lower level. At the moment the Cabinets library icon is only a document. The document icon means there are no other folders inside.



To create a component category right click on the Library name (Cabinets) and the following menu appears.

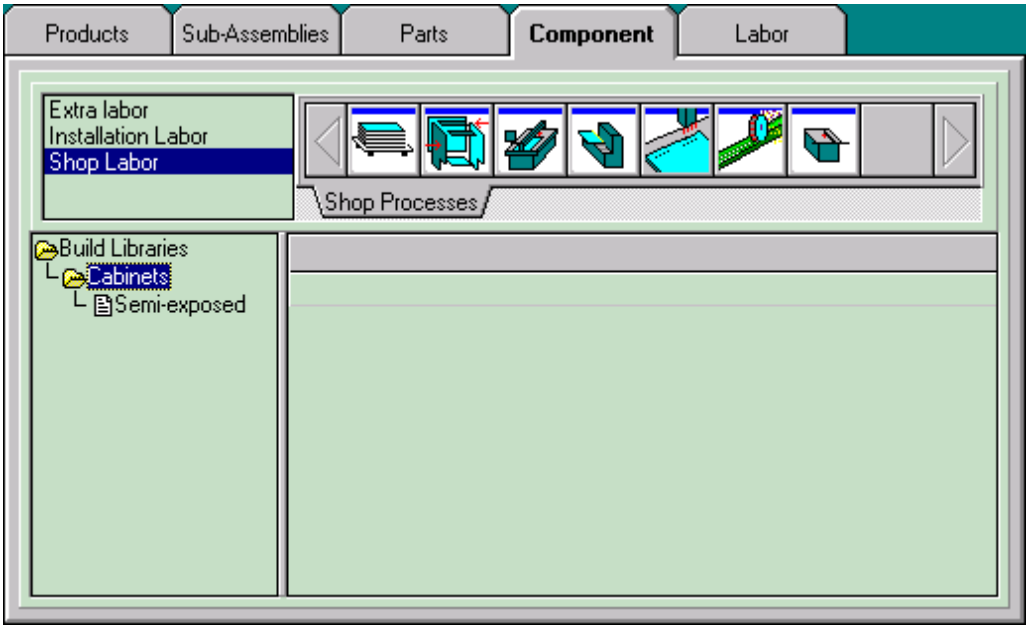


Click Add and the "Add a Category" dialog box appears.



Enter the name of the Material category and click the Save button.
In our example "Semi-exposed" has been used as a Category description

Tip *– It's easier to find components in Categories when the Categories represent the classifications of materials according to their use.*

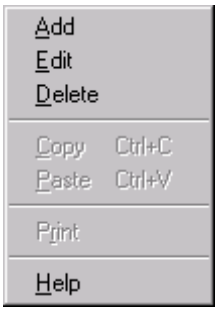


Now you can see the "Semi-exposed" Category in the Cabinets library.

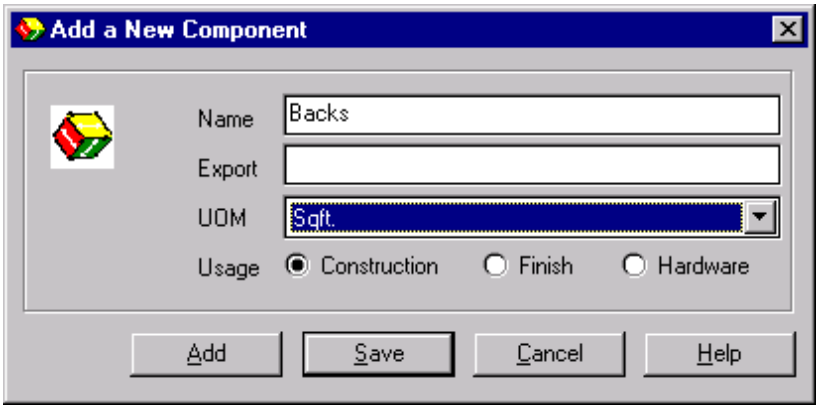
Next you will enter a component in the Semi-Exposed category.
Highlight the new Category name ("Semi-exposed").

Notice that unlike Labor, the grid headers did not display at the top of the grid. These headers will only appear after a component is created because in this case the grid holds the labor items for the component and not the actual components themselves.

To add a component right click on the category in the outline and the following menu will appear.



Click Add and the "Add a New Component" dialog box is displayed.



In our example the new category was "Semi-exposed" so in this dialog you would enter the material components that would be used to make a semi-exposed cabinet. For example Ends, Shelves, Backs, Bottoms, Rails, Edges. We've shown the backs being added above.

Enter your data into the fields.

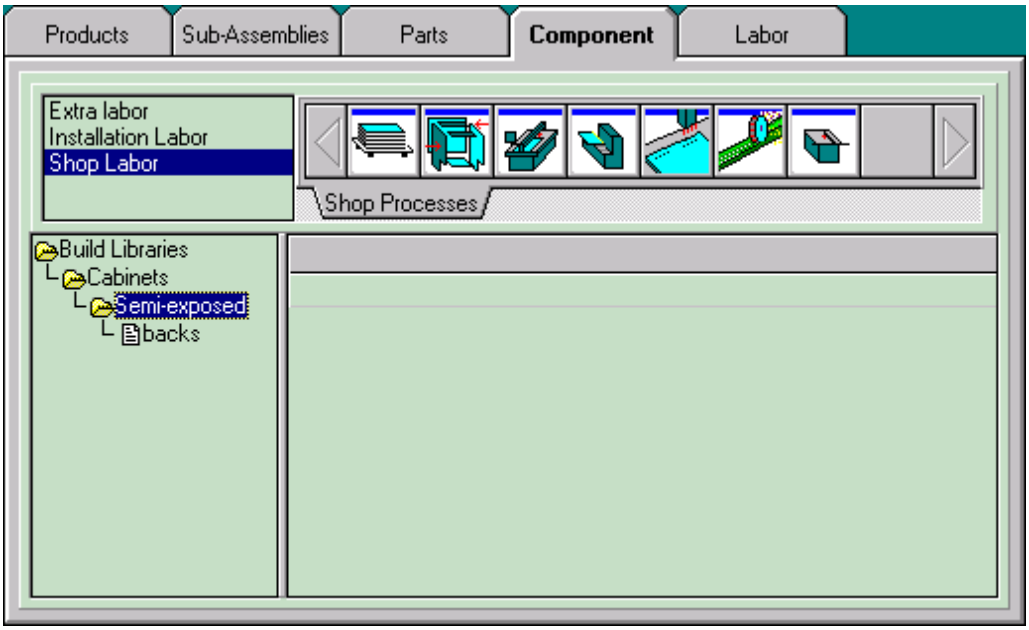
Name: The name of the Material component.
Export: The export code to be exported to your manufacturing package if one is required.
UOM: The Unit of Measure for this component. (See "Adding or Editing an Unit of Measure")
Radio Buttons: The Radio Buttons Construction, Finish, and Hardware are used to group the materials that are used for the respective aspects of construction.
C*onstruction* materials are used to build the carcass.
Finish materials are used to build the finished parts of the cabinet; namely doors; finished end panels, finished back panels etc.
Hardware is a group for all the hardware categories.

Note – See the "Adding and Editing a UOM" section for information other then selecting an existing UOM.

Note – See the "Selecting or Editing a Bitmap" section for information on how to alter the displayed bitmap.

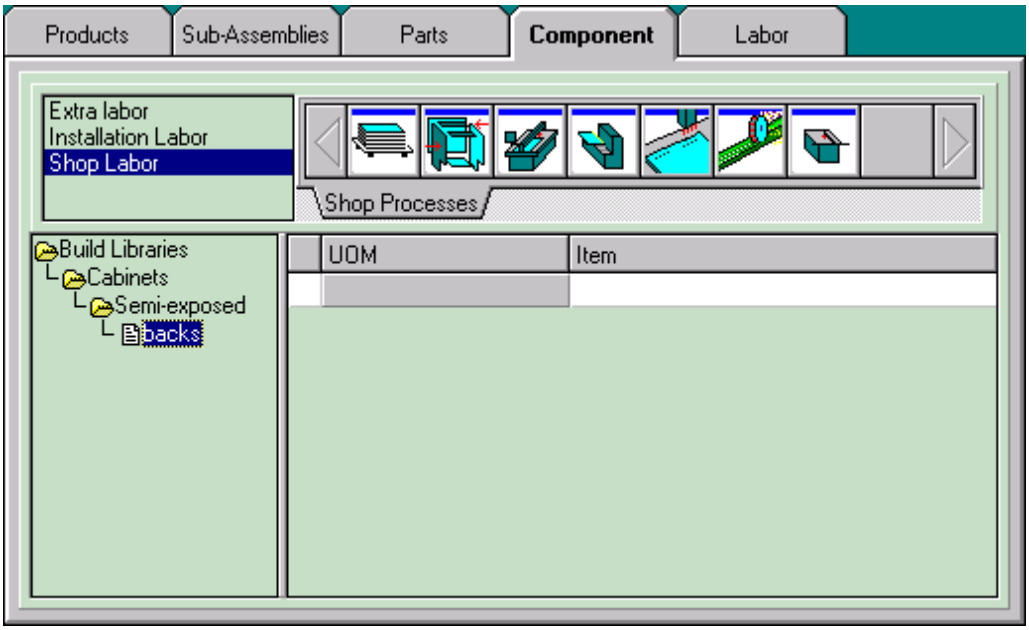
Tip *- Click the Add button if you want to add another Category without returning to the Category tab or click Save when you have finished entering data. The outline will be refreshed after each press of the Add button.*

Tip *- Note that in the previous menu the user can also edit and delete any component on the screen. To do this, highlight the component, click the right mouse button and click edit or delete*



As each component is added you will see the outline being updated.

To add labor to a component, highlight the desired component. Notice that the grid headers are displayed indicating the grid is active.

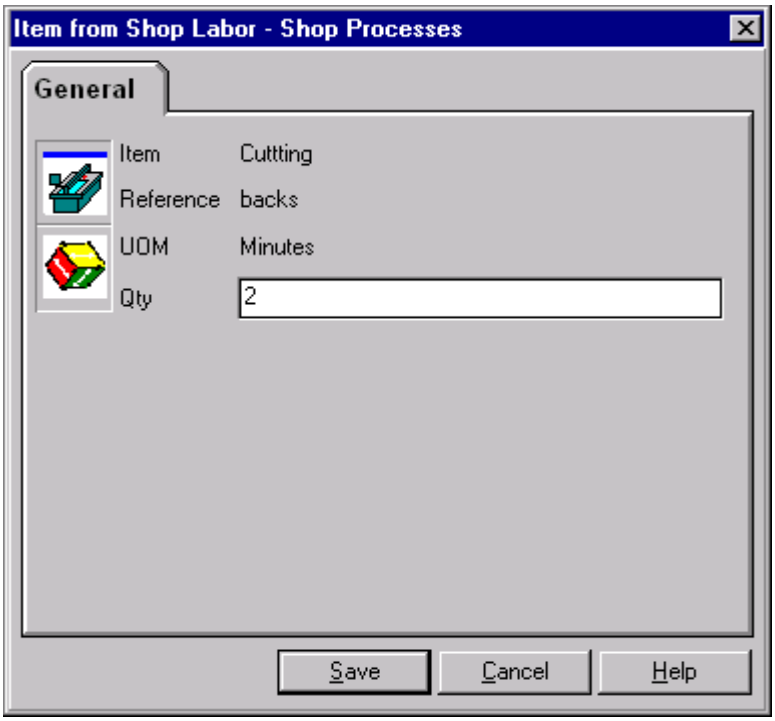


On the pick bar ensure the correct labor library (in the Library Selector list box on the left) is selected. Also ensure the correct labor category is selected on the tabs at the bottom of the pick bar. Finally click the left mouse on the desired icon and while leaving the mouse button down drag the mouse to the grid before releasing the mouse (drag and drop).

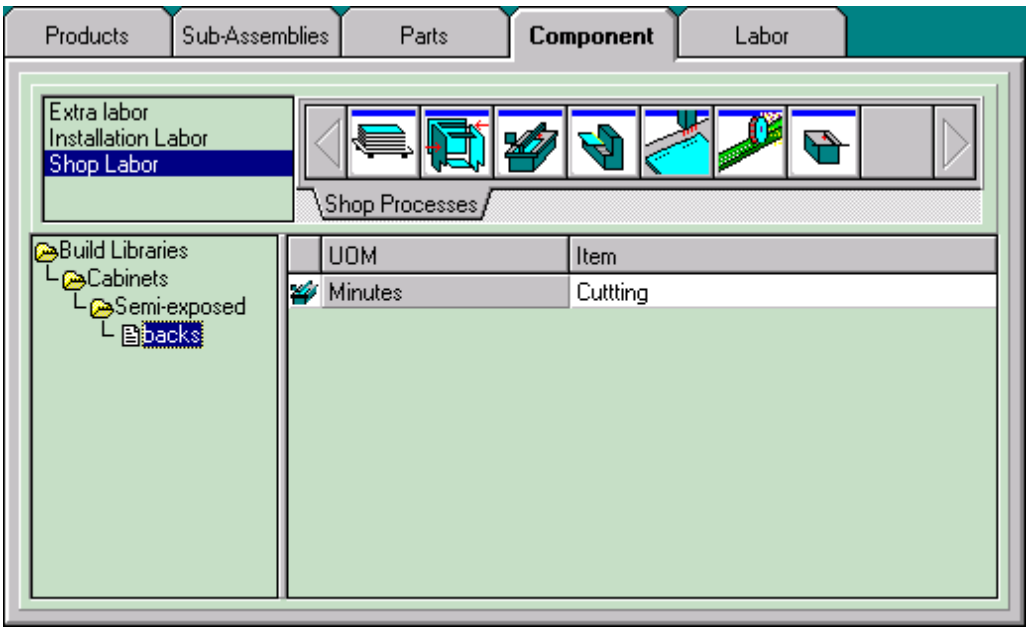
***Tip** – Leaving the mouse over each icon for a few minutes will display the name of the item associated with the bitmap if tool tips are turned on in User Preferences.*

***Tip** – After highlighting the correct component you could double click on the correct icon.*

The following dialog box will be displayed allowing you to enter information about the labor process.



The quantity will be based on the unit of measure for this labor process. After pressing Save the grid will be updated with the entered labor process.



Once again it is totally optional whether you add labor to components or not. As long as all labor is accounted for at some level of the product the correct labor costs will be reached.

Where labor costs within a component are extremely useful is when a change in a group type will toggle whether a component is included in the product or not. When a component is included or excluded the labor contained within it is also included and excluded.

3) List and build parts

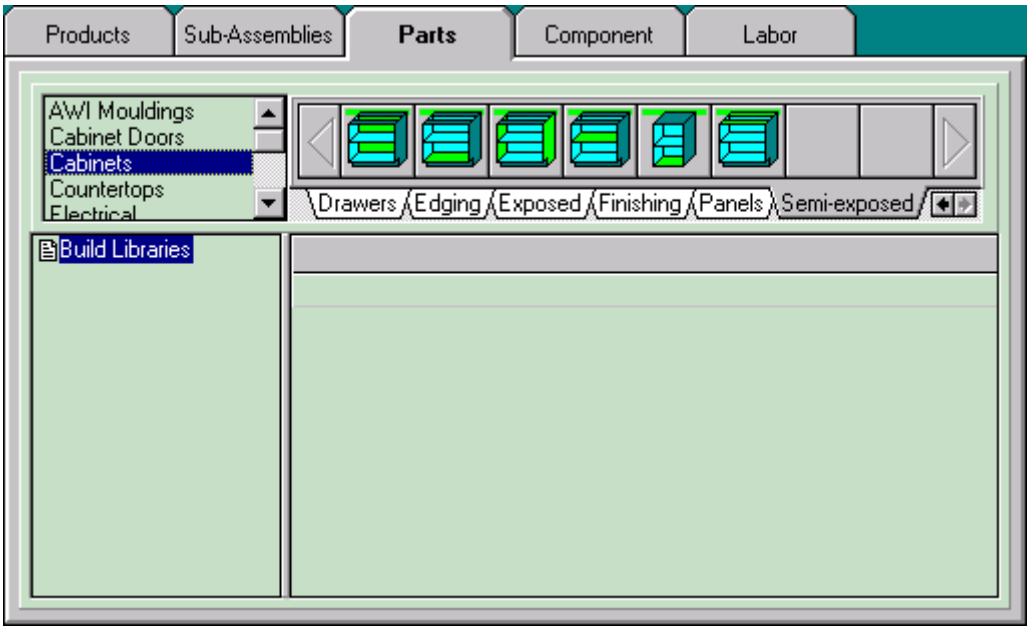
Parts are built from a combination of components and labor items. Therefore in order to build a parts library the component and labor libraries must be built first. If you haven't yet built these libraries, then see related sections in this manual.

Creating a parts library.

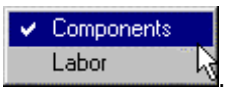
Click on the Catalog button. The Catalog screen appears with five tabs:

Product
Sub-Assemblies
Parts
Component
Labor

Click on the Parts tab and you will see a screen similar to the following.



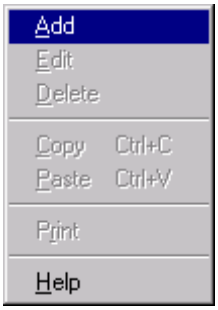
The Parts tab differs from the labor tab. There are two sections at the top of the screen. At the top left is an area that displays the libraries that can be selected. To the right of the library area is the pick bar. The tabs on the bottom of the pick bar indicate the categories within the library that has been selected. The icons that are displayed for each pick bar tab, are the components that are within the selected category. In order to select a different type of library, place the cursor over the library selector area and right click. The following menu is then displayed.



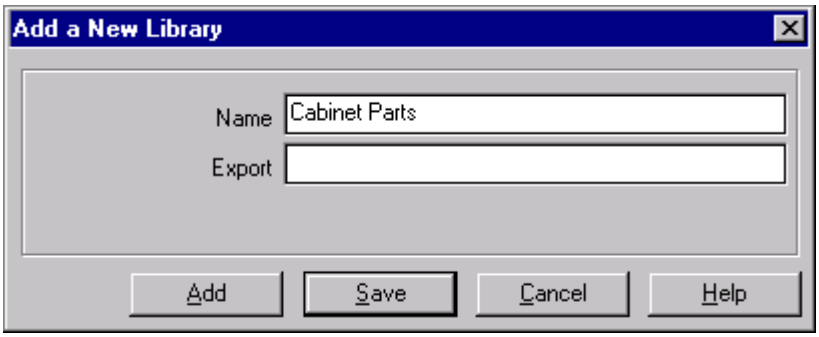
Notice that you have a choice of components or labor. In the above example component libraries are being displayed. The Cabinets library is selected and the Semi-Exposed category (created in How to Build a Component Library section) is displayed as a tab on the pick bar. As you can see in the example above we again need to build the library structure.

To add a library name, right click on the project name in the outline and then click add from the

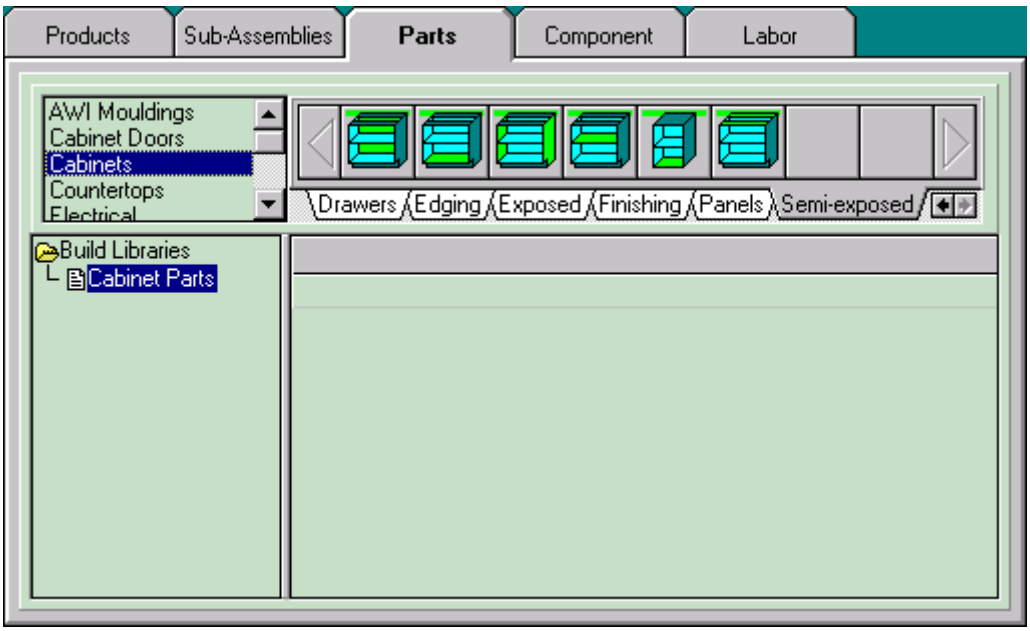
following menu.



After selecting Add the following dialog will then appear.

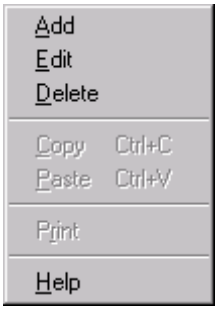


Creating a library is the same for all of the **take off**[tm] screens. By right clicking on the project name a dialog will appear prompting you for a new library name. After entering the new library (Cabinet Parts) it will be displayed on the outline as being a direct descendent from the project.

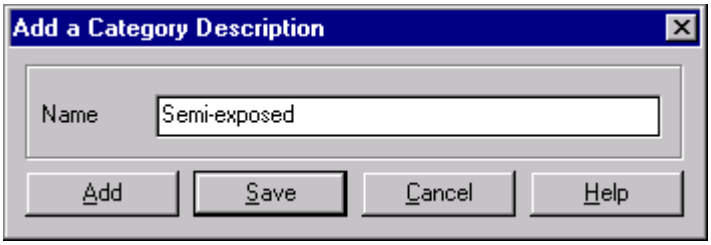


Next, the categories need to be created within each library.

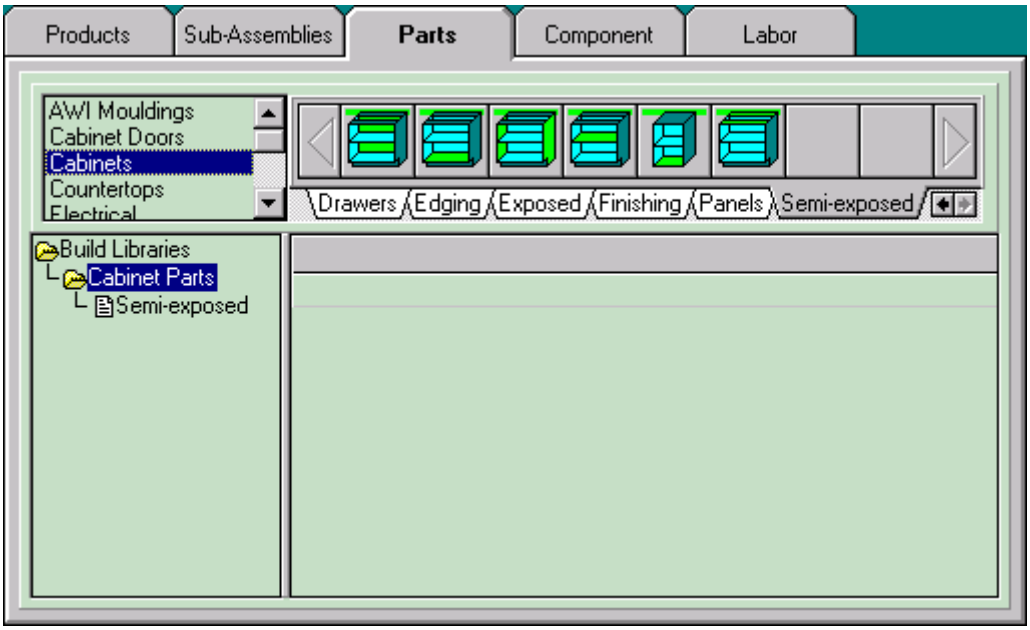
Right mouse click on the library for which you want to create categories and the following menu appears.



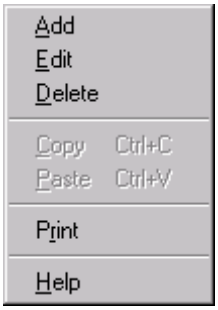
Click on Add and the "Add a Category Description" dialog box is displayed.



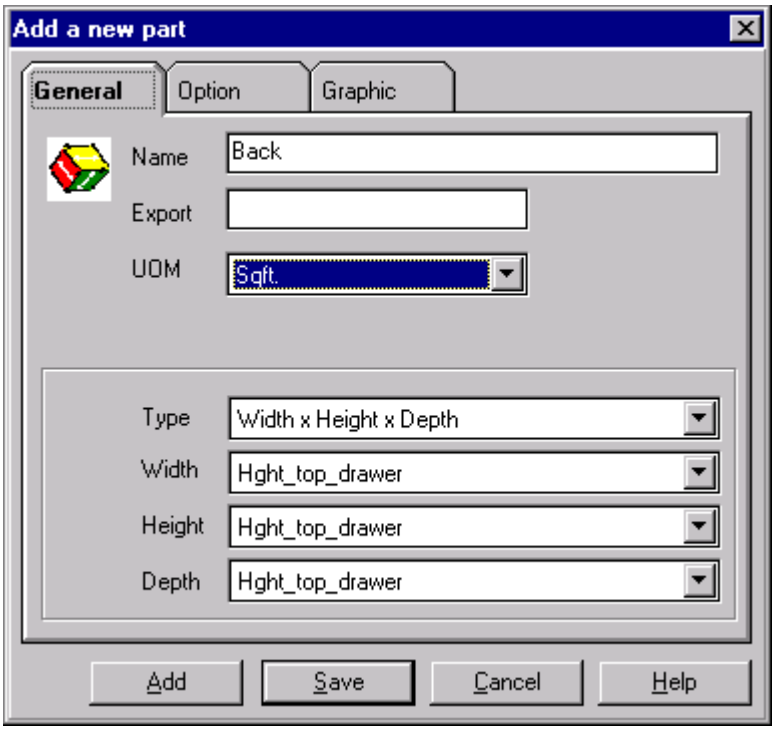
As mentioned earlier, Parts are built from a combination of components and labor. The most efficient way to categorize Parts is by use; in fact the Parts categories are very similar to Component categories. For example in a Semi-exposed parts category you would build the parts that are used to make a Semi-exposed cabinet. In an Exposed parts category you would build the parts required to make an Exposed cabinet. In a concealed category you would build the parts that are concealed and thus common to both exposed and semi-exposed cabinets.



Notice how the folder icons for the library (in the example Build Libraries) and the parts library are now open folders. The open folder means there is another folder or item inside or at a lower level. Notice how at the moment the Semi-exposed category icon is only a document. The document icon means there are no other folders inside. To create a part, right click on the desired part name (In the example Semi-exposed) and the following menu appears



Click Add and the "Add a new part" dialog box is displayed.



The first noticeable difference between parts and components is that this dialog box has multiple tabs.

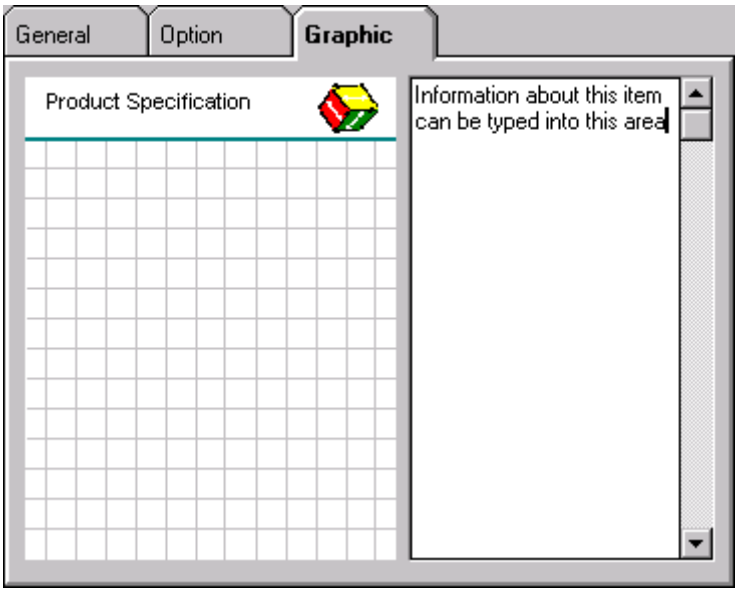
Enter the required information.

Name: Enter the name of the part to be built.(In the example "Back")
Export: The export field is only for users requiring integration with manufacturing.
Comment: If desired you can add a specific comment about this part.
Type: You can select from this pull down list choices for which combination of Height, Width, and depth this part requires. For example this allows you to disable depth for parts that don't require it.
Height:
Width: The three dimension fields can contain actual number or you can use the expression builder to create more complex dimensional values.
Depth:

Click on the Save button.

The Options tab allows you to change the choice set assigned to the Height, Width, and Depth.

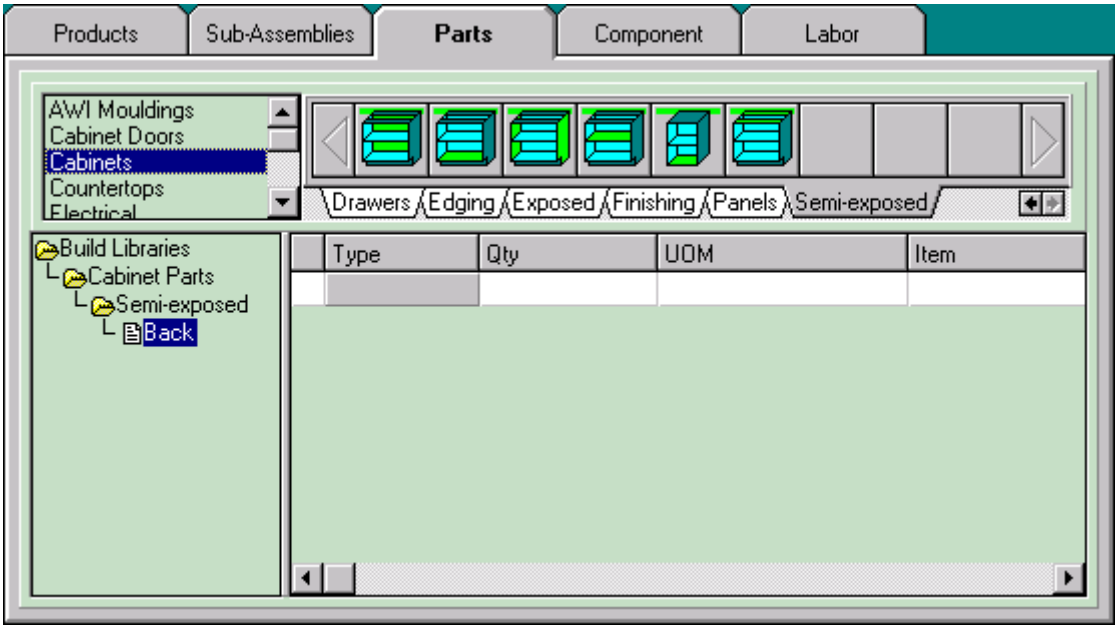
The Graphics Tab



On this tab you can select a bitmap image that better displays what this product is. This image will then be viewable at take off time. The description on the right can be edited here, however at take off time this description will be readable only.

You will see that the new part name has been added to the outline within the new category.

In the example you will see "back" has been added.

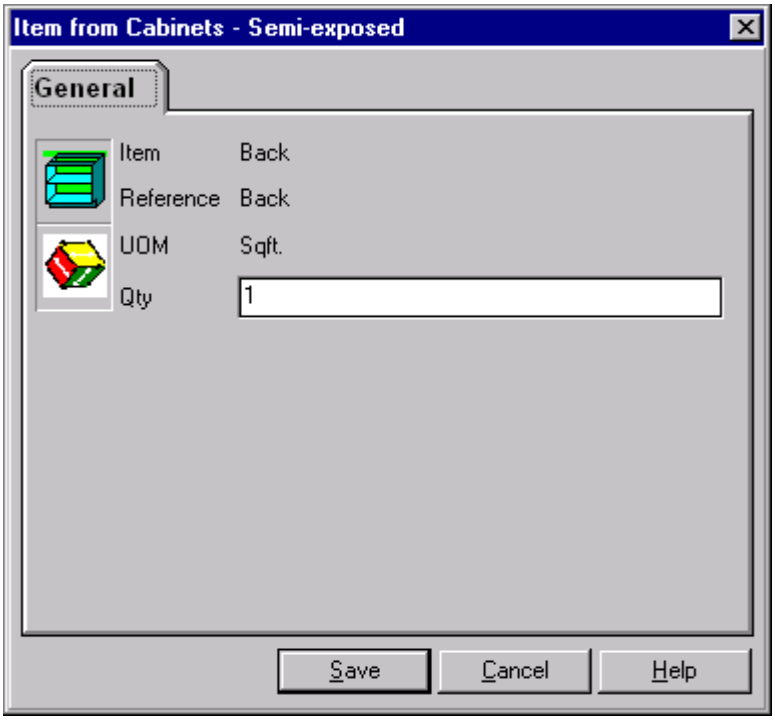


The next step is to add the desired components and labor items to this Part. Ensure the correct library type is selected in the Library selector and that the correct tab is selected. Also ensure that the correct part is highlighted on the outline.

In the previous example we are positioned to see the component we built in the previous section. To add this component either double click on the correct icon or drag and drop the item onto the

grid.

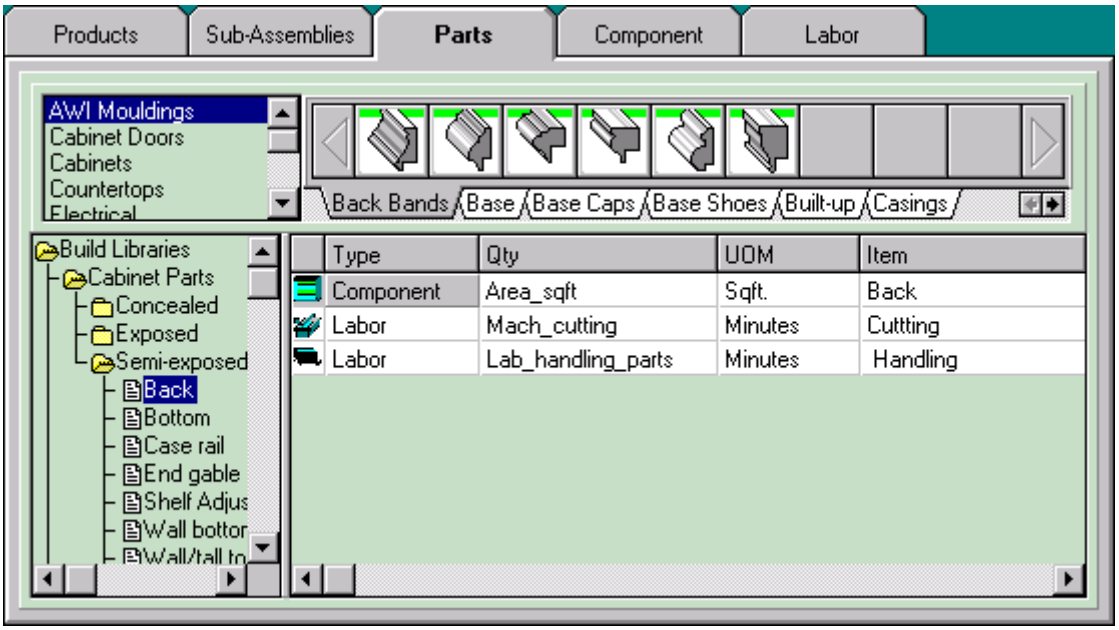
A dialog similar to the following will then be displayed.



As we discussed in the Component section enter the correct quantity. This can either be a simple numeric value or a more complex expression built in the expression builder.

To launch the Expression Builder double click in the "Qty" field.

Pressing the Save button will save this item. In the following example all required components and labor items to make our Part named Back have been added.



The Qty column shows the use of more complicated values.

Area_sqft is a formula that is based on the Width and Height of the Part. As these dimensions change parametrically the quantity of this back will also change.

Mach_cutting is a constant value that can be changed in the Math Stuff section.

Lab_handling_parts is a project option and so it can be maintained on the Admin-Option tab.

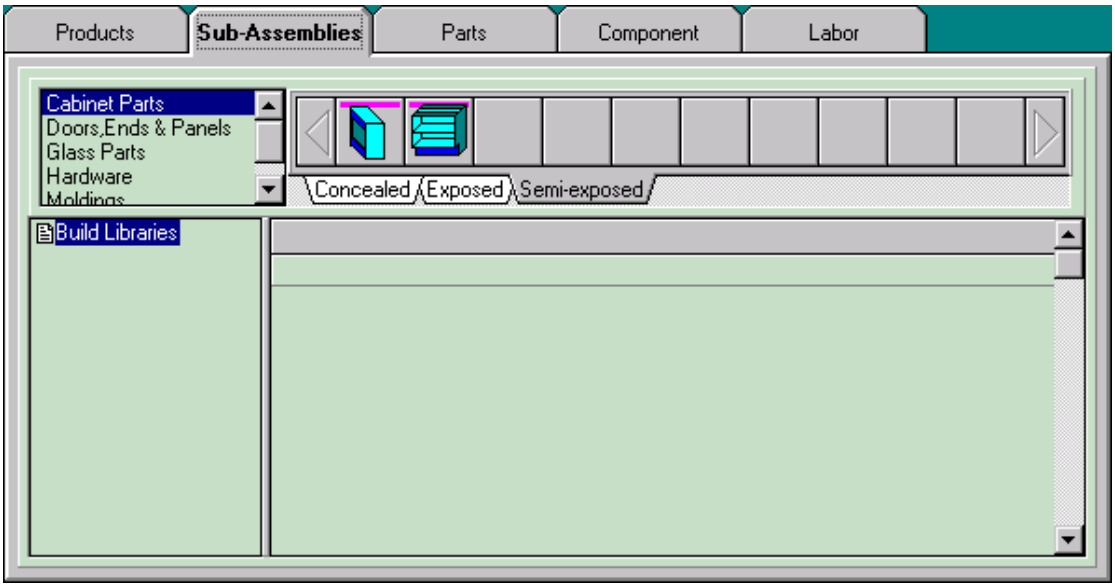
Note - Remember, in all the tabs within the category screen you are only building "Virtual" cabinets. No actual materials or labor rates have been assigned to any of the components. That happens in the Admin screen.

4) List and build subassemblies

Sub Assemblies are a combination of parts, components and labor items, therefore the parts library and the material and labor component libraries must be in place. If you haven't built these libraries.

See:
How to build a Material Components Library,
How to build a Labor Components Library,
How to build Parts.

Click on the Catalog button then click on the Sub -Assemblies tab. You should see something similar to the following screen.

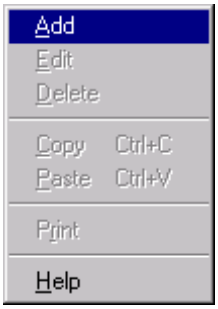


Notice that the root folder name is also the project name that you are currently working on. If you change projects then the new project name would appear as the root folder name.

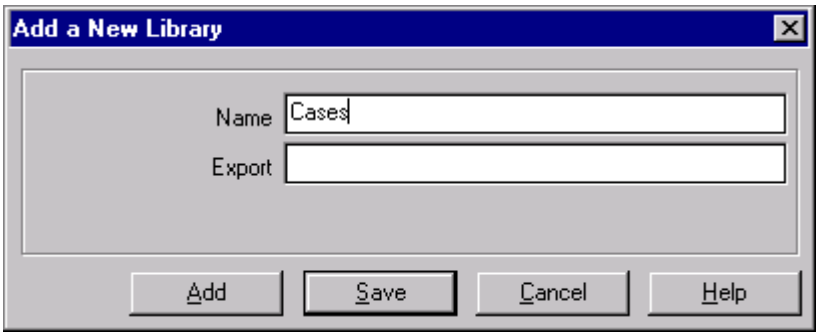
Locate the Root Folder Icon. Currently the Project icon is a document and the libraries have yet to be built.

Note - The document icon means that there are *no* other folders inside. A closed yellow folder icon means that there *are* other folders inside.

To create a library right click on the Project icon and the following menu is displayed.

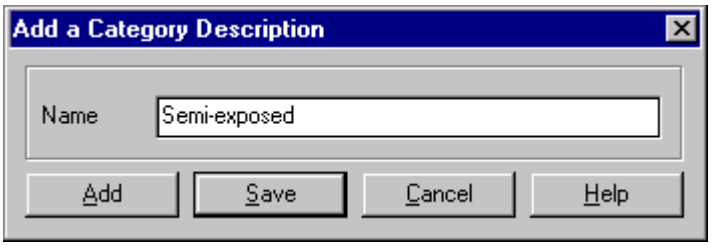


Click on add and the "Add a New Library" dialog is displayed.



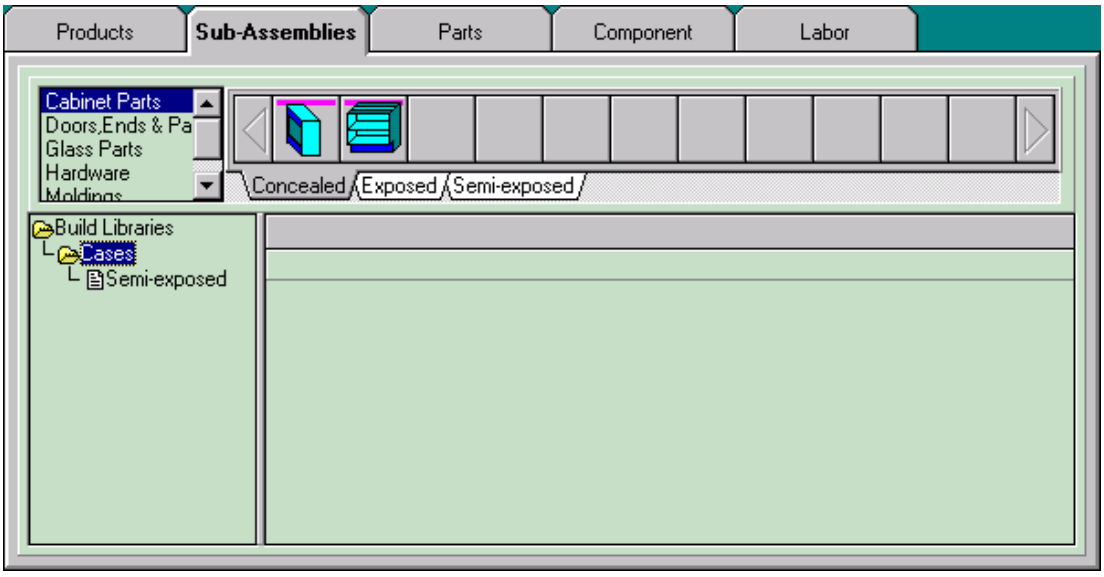
Enter the Library name. In the example the library is named "Cases".

Now that a Sub-Assembly library has been created, the Sub-Assembly categories within the library must also be created. Right click on the correct library, click Add on the menu that is displayed and the Add a Category dialog is presented.

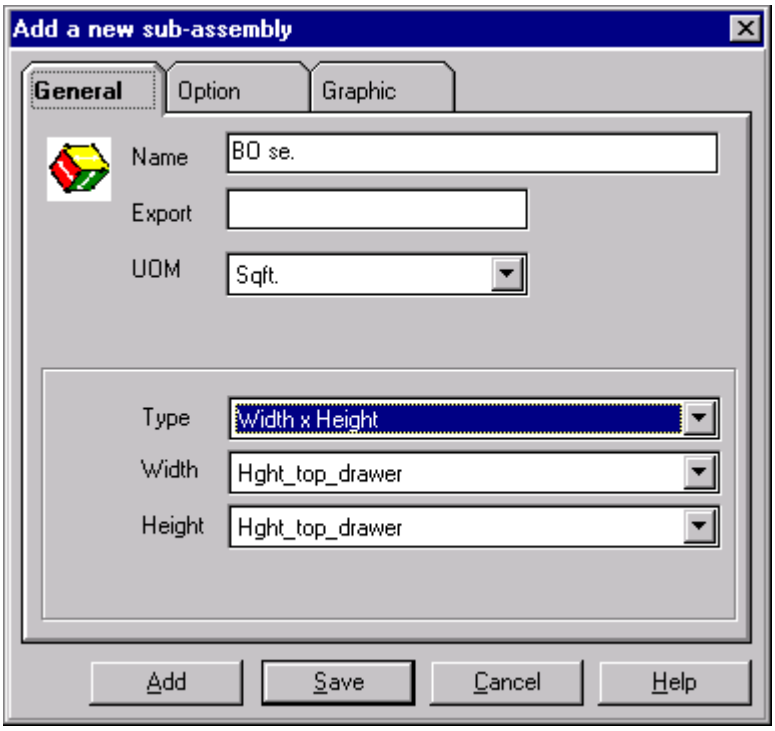


Enter the category name. (In the example the category is "Semi-exposed.")

Tip *- Click Add to add another category without returning to the Sub-Assemblies tab.*



Now that the Sub-Assembly library and categories are in place, the Sub-Assemblies can be built. Right mouse click on the category, click Add on the menu that is displayed and the following dialog box is presented.



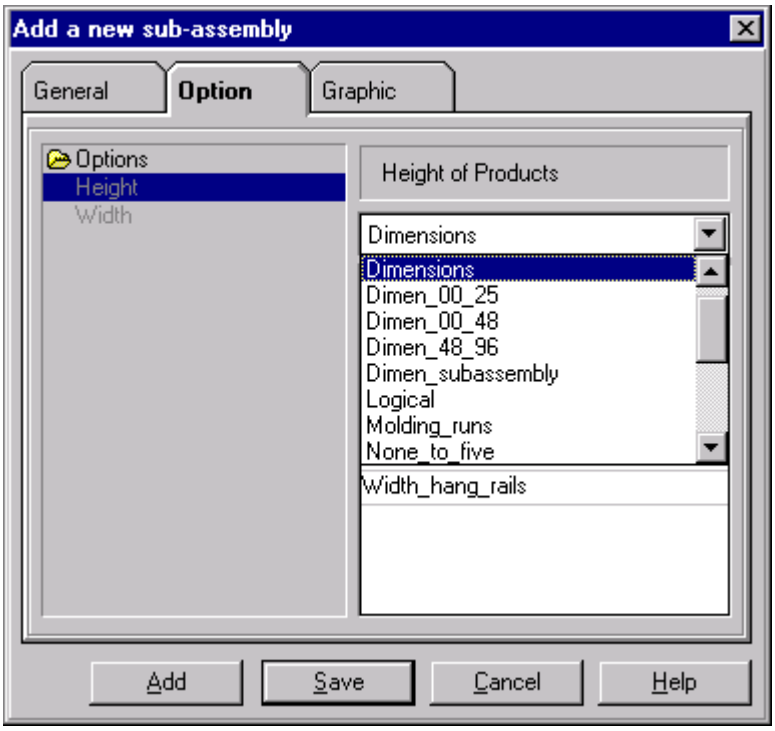
Enter the Sub-Assembly name in the corresponding field. (In the example "BO se." for Base Open Semi-exposed)

The export field is only for users requiring integration with their manufacturing software.

In the above example we have already set the type to Width x Height and as such only see these two dimension fields. Enter the Height Width in the corresponding fields, or select from the drop down list. This entry will set the defaults for this product. During takeoff these values can be easily changed.

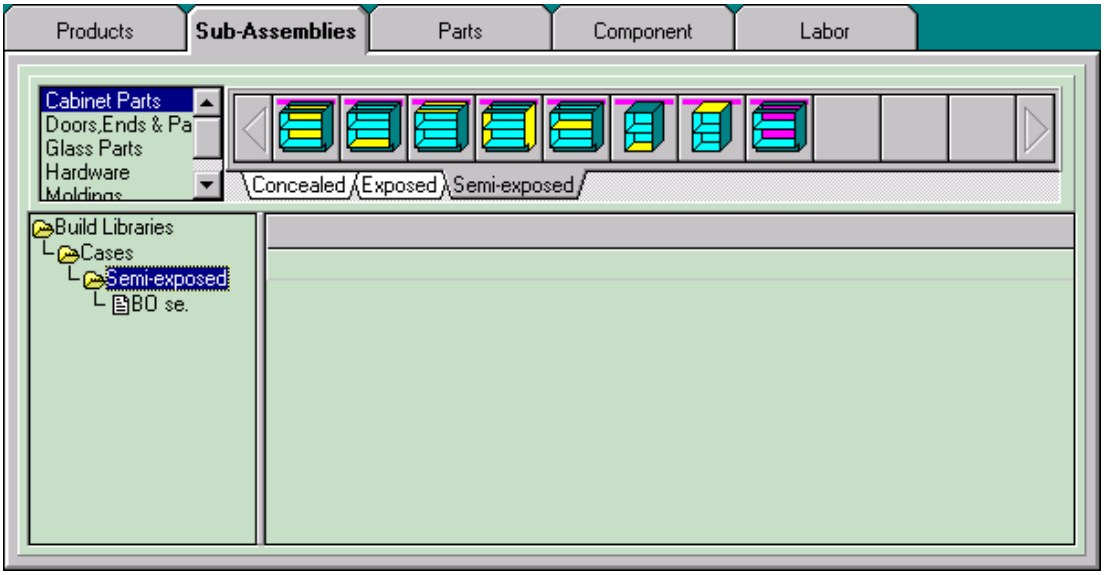
The Graphic Tab is useful if you want to show sections or details of the Sub-Assembly.

As we talked about in the "How to build a Part" section, the Options tab is useful if you want to change the default choice set for Height, Width or Depth. The following example shows the Options tab with the choice set list for Height open.



Select the new choice set and the values allowed on the General tab for this dimension will also be changed.

After entering the desired information press the Save button.



Create as many categories and products as necessary.

Now everything is in place to actually build a Sub-Assembly.

***Tip** - When a product name is highlighted on the outline the headers are visible on the grid. When headers are visible on the grid you are ready to build a Sub-Assembly.*

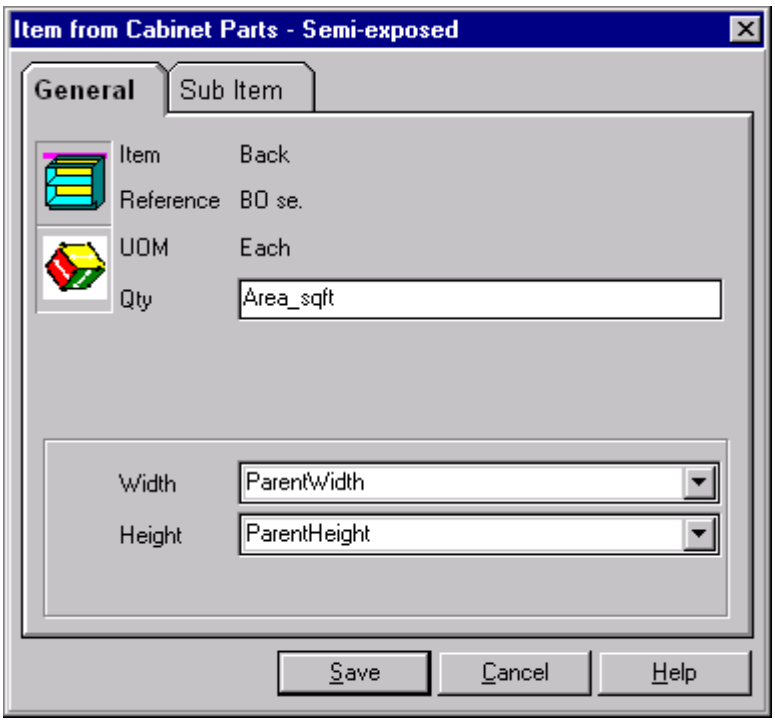
Sub -Assemblies are built by dragging the required Part, Components or Labor items onto the grid. One of the reasons for creating the structure of Parts, Components or Labor items is to make finding the required items a lot easier.

Right click on the library selector and you will see the menu now also contains a choice for Parts.

Each section of Products, Sub-Assemblies, Parts and Components will contain all the lower level types on its menu. Select which library you want to use from the menu that is displayed. (In the example "Parts")

The corresponding categories are displayed as tabs on the pick bar. Selecting a category tab on the pick bar will display the components of that category as icons on the pick bar. It is these icons that are dragged onto the grid in order to build a product.

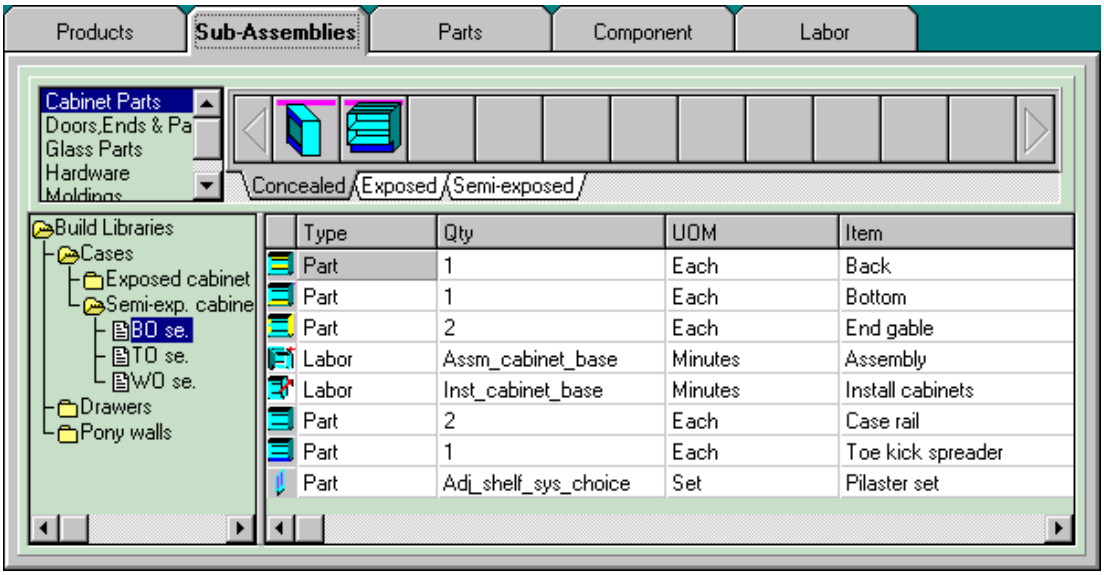
Drag the required item onto the grid. To drag an item onto the grid, Click on required icon, hold the left mouse button down and drag the cursor anywhere onto the grid. Notice that a small rectangle appears on the bottom of the cursor. This is how you will know that you have selected an item. Release the mouse button and the following dialog box appears,



Enter the required quantity in the corresponding field. Double click on the Qty field if you wish to build a more complicated expression with Math Stuff.

Height, Width and Depth fields will be displayed depending on the value set in the "Type" field when the part was created. When we created the above Sub-Assembly we set it to be Width x Height. When this Sub-Assembly is used in a product its dimension fields will look like the above Parts. Notice that only Width and Height are displayed.

We can now add the remaining items required to build this Sub-Assembly.



Remember Right click on the Library Selector to select the correct library.

Remember

To build a Sub-Assembly
1 Select a library.
2 Select a category from the pick bar tabs.
Drag the icon of the required component onto the grid.

5) List and build products

Before a product library can be built any required lower level libraries must be built.

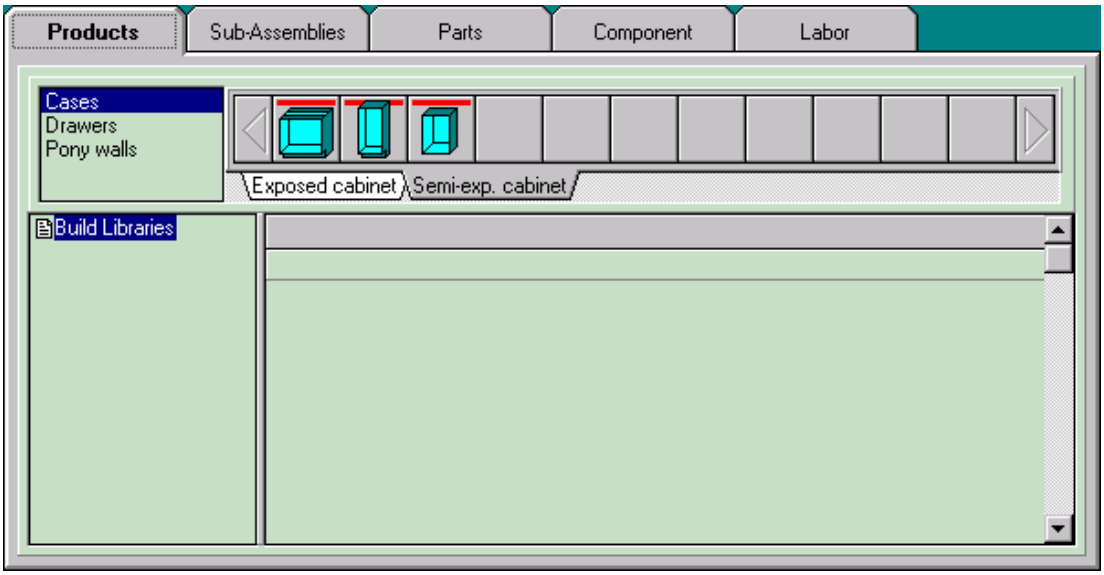
See:
How to build a component library
How to build a labor library
How to build Parts
How to build Sub-Assemblies

In order to build product libraries easily, it is important to understand how **take off**[tm] libraries work.

A library consists of products. These products can be purchased or manufactured items. If your company manufactures the products they will be made from individual Parts and Sub-assemblies. The Sub-assemblies are generally made from parts which are made from *components* of raw material and labor.

Therefore when the products tab is selected all the lower level tabs are also accessible.
It is important to understand the structure of the manufacturing levels on **take off**[tm]'s product window tree, so before we continue we will examine that structure more closely.

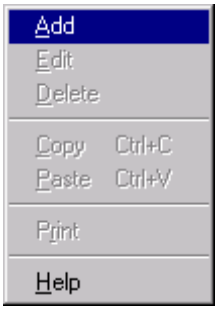
Click on the Catalog button then click on the Products Tab. You should see something similar to the following.



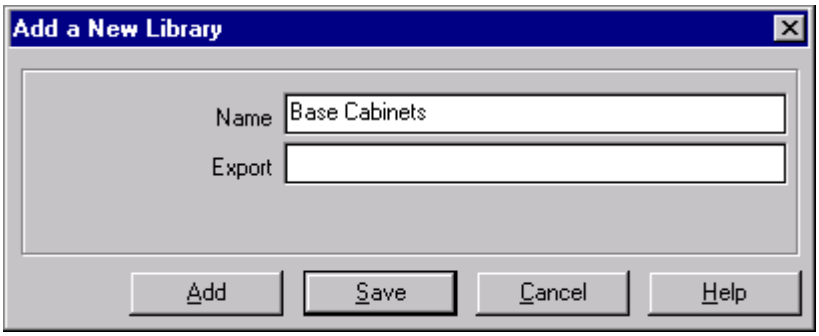
Notice that the root folder name is also the project name that you are currently working on. If you change projects then the new project name would appear as the root folder name.

Note - The document icon means that there are *no* other folders inside. A closed yellow folder icon means that there *are* other folders inside.

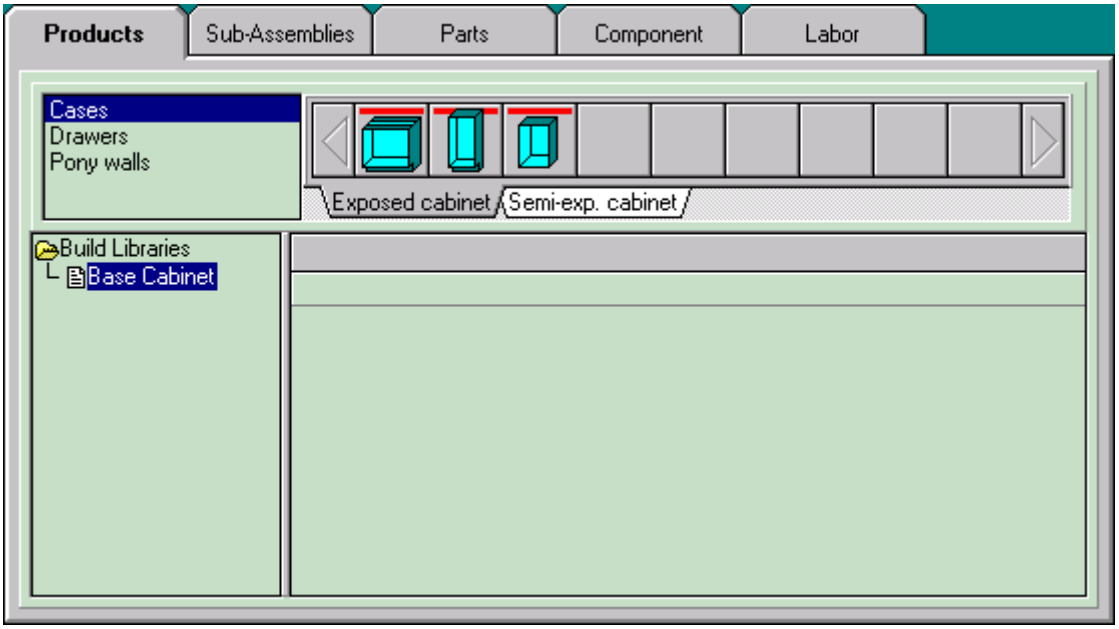
To create a library right click on the Project icon and the following menu is displayed.



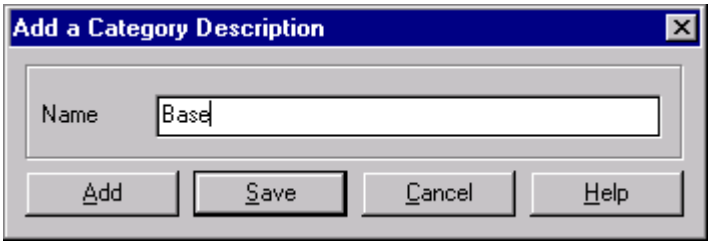
Click Add and the "Add a New Library" dialog is displayed.



Enter the Library name. In the example the library is named "Base Cabinets". Press Save when done.

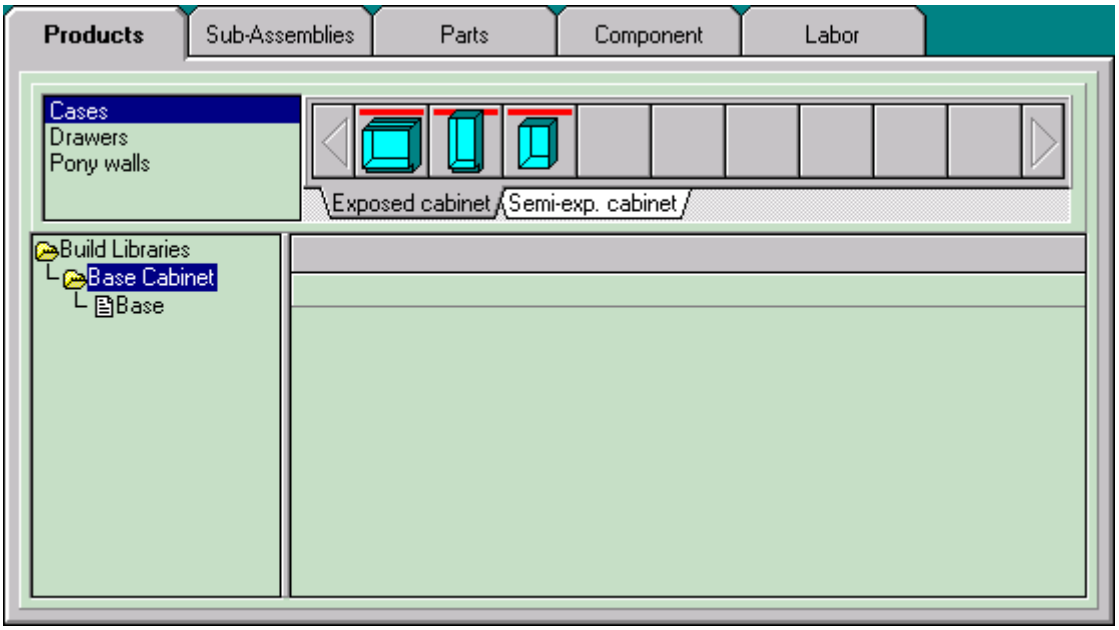


Now that the product library has been created, the product categories within the library must also be created. Right click on the library icon, click Add on the menu that is displayed and the "Add a Category" dialog is presented.

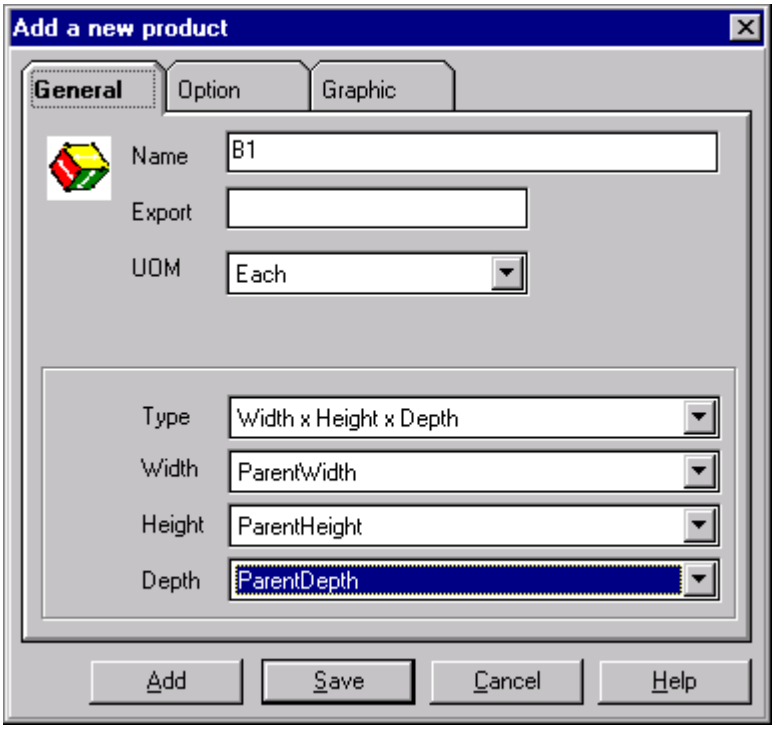


Enter the category name. In the example the category is "Base." This category will house all the base cabinet types.

Tip - Click Add to add another category without returning to the Products tab.



Now that the product library and categories are in place, the products can be built. Right mouse click on the category, click Add on the menu that is displayed and the following dialog box is presented.



Enter the product name in the corresponding field. (In the example B1. This is a Base Full height cabinet with 1 door.)

The export field is only for users requiring integration with their manufacturing package.

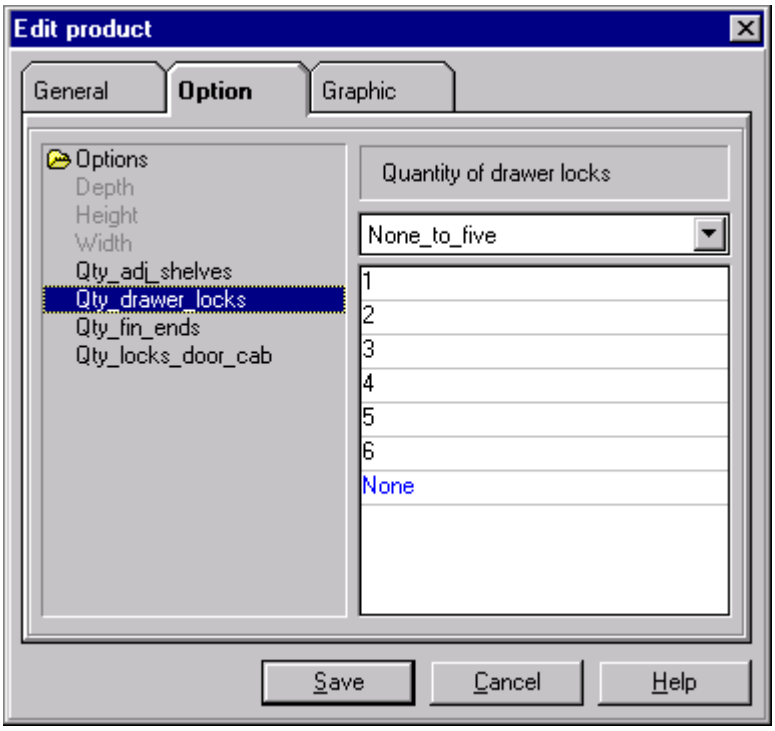
Enter the Height, Width and Depth in the corresponding fields, or select from the drop down list. This entry will set the defaults for this product. During takeoff these values can be easily changed.

Products are unique from the lower level in that they can options other Height, Width and Depth assigned to them. Press the Option tab and while the mouse is over the Options list press the right mouse menu. The following menu appears.

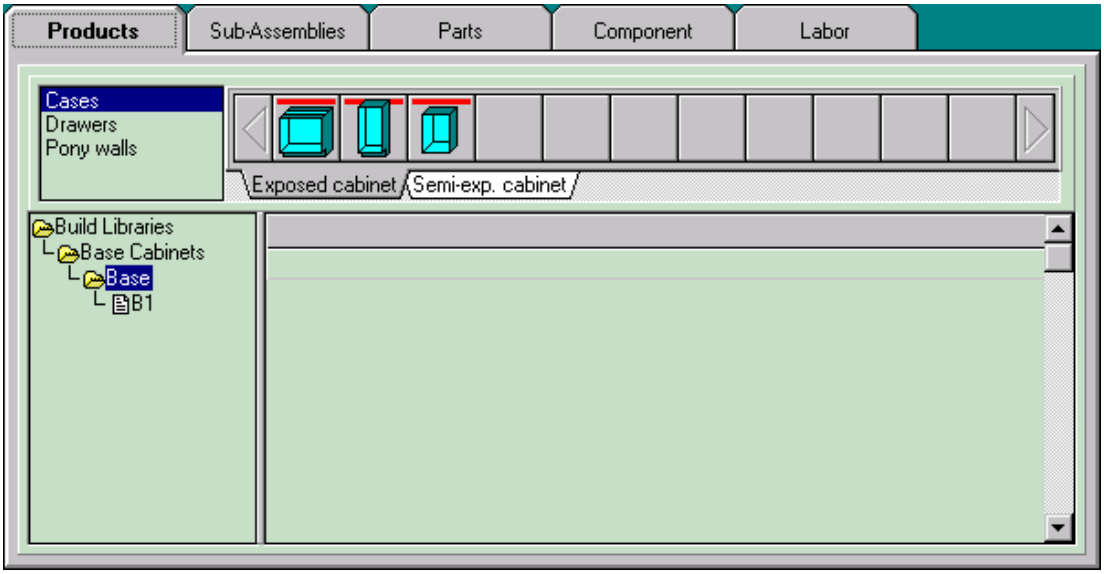
Selecting this menu will take you to the following dialog that will allow you to add previously created options to this product.

You can enable or disable options for this product simply by moving the options between the two columns. Any items in the left column are valid for this product. Either double click on an option or single click and press the red arrow, to move an option from one column to the other. These Options are defined in the Math Stuff section of the **take off**[tm].

When you have assigned the correct option to this product press Save.



Notice how all the defined options are now listed. You can now set or change the default choice set for each of these options. When you are done press Save.



Now everything is in place to actually build a product.

Tip *- When a product name us highlighted on the outline the headers are visible on the grid. When headers are visible on the grid you are ready to build a product.*

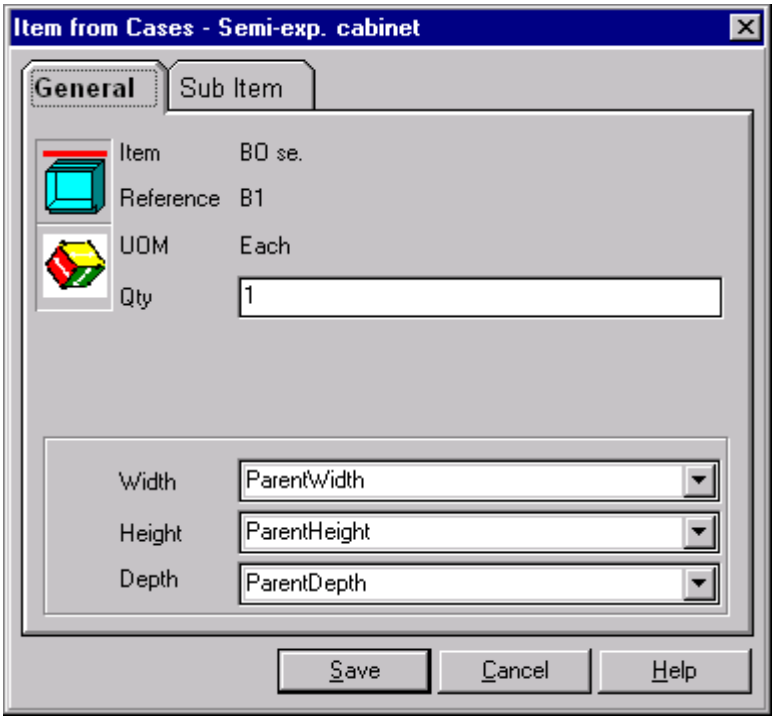
Products are built by dragging the required Sub-Assembly, Part, Component or Labor items on to the grid. One of the reasons for creating the structure Sub-Assembly, Part, Component or Labor

items is to make finding the required items a lot easier.

Right click on the library selector and select which library you want to use from the menu that is displayed.

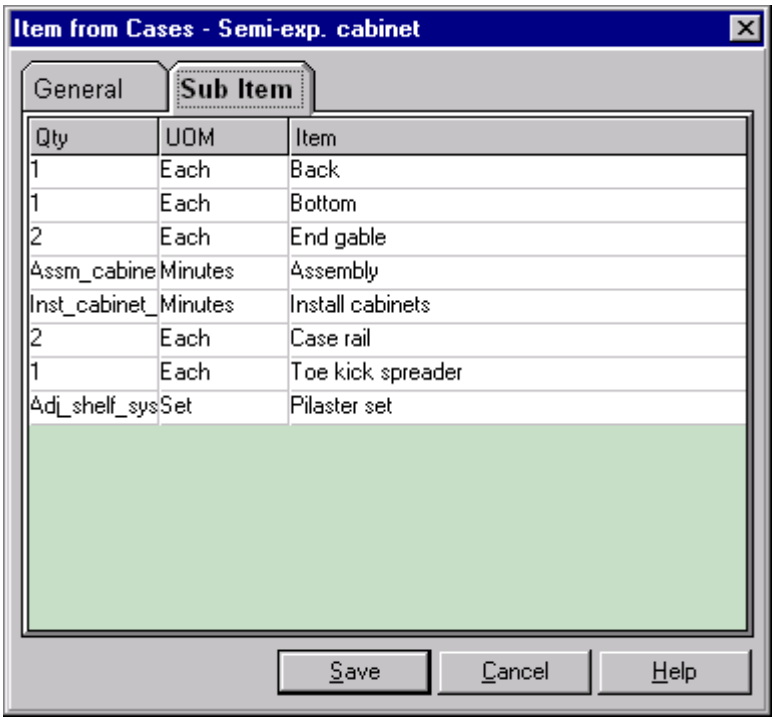
The corresponding categories are displayed as tabs on the pick bar. Selecting a category tab on the pick bar will display the components of that category as icons on the pick bar. It is these icons that are dragged onto the grid in order to build a product.

Drag the required item onto the grid. (In the example the "BO se." icon.) To drag an item onto the grid, Click on required icon, hold the left mouse button down and drag the cursor anywhere onto the grid. Notice that a small rectangle appears on the bottom of the cursor. This is how you'll know that you have selected an item. Release the mouse button and the following dialog box appears



Enter the number of items required. (In the example only 1 case is required.)
Enter the Width Height and Depth in the corresponding fields. These will become the default sizes for this item.

Tip *- The Sub-Parts tab in this dialog box display all the components that make up the part that has just been dragged down. Click on the Sub Parts tab of the previous dialog box.*

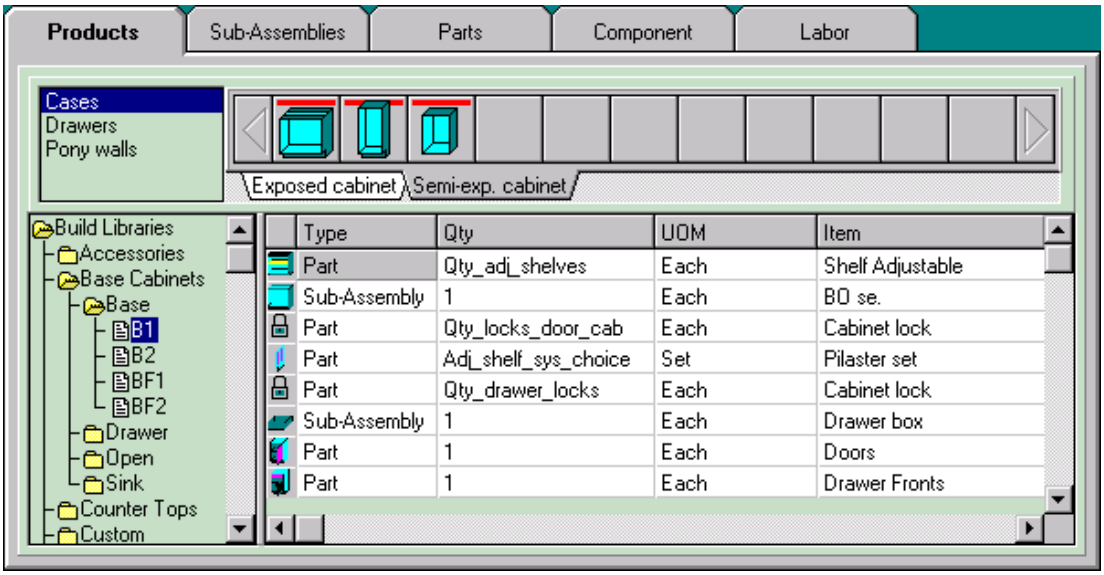


Click Save when done.

Drag down any additional items required building the product

Remember

To build a product:
1: Create Product name. Choose the library and category for the new product.
2 Select a library.
3 Select a category from the pick bar tabs.
4 Drag the icon of the required component onto the grid.



Congratulations! You've just built your first cabinet. Now if you have a library of six hundred cabinets you'll only have to do this 599 more times.

Relax you'll be able to do this very quickly. As with any computer program the quality of the output is directly related to the quality of the input.