

# How To Use Layers

- ◆ *Reasons for Using Layers*
- ◆ *Creating Layers*
- ◆ *Associating Items to Layers*
- ◆ *Default Layers*
- ◆ *Display Status*
- ◆ *Tips and Tricks*

# Reasons For Using Layers



Layers provide a means of organizing items such as features, components, draft items, and other layers, so you can perform operations on them collectively.

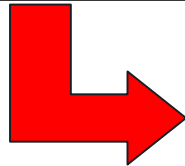
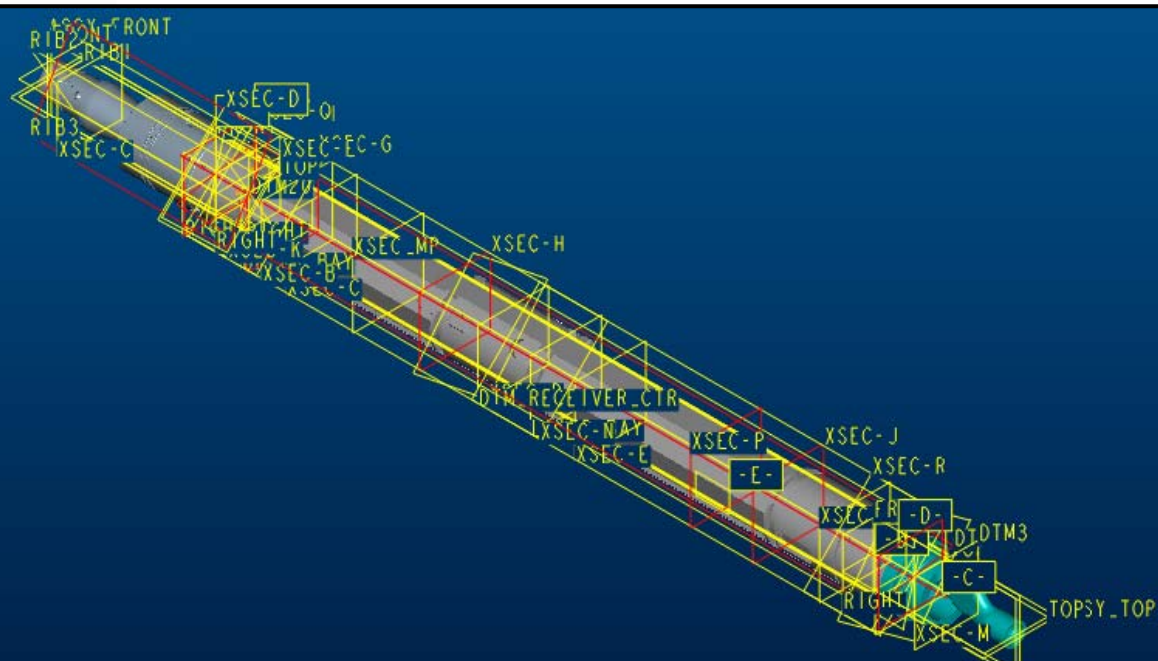
***Reduce Display Clutter!***

***Reduce Graphics Display Time***

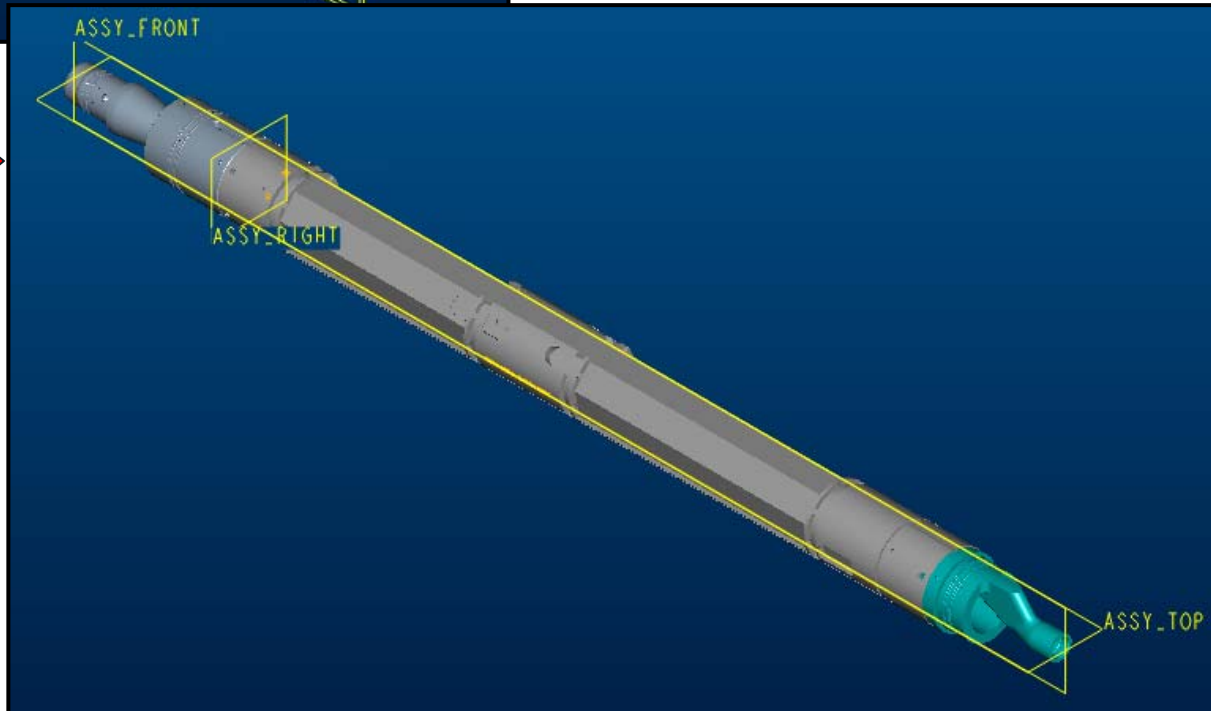
***Suppress by Layer to Quickly Simplify Geometry***

***Delete & Plot Items by Layer***

Is this what most  
of your models  
look like?

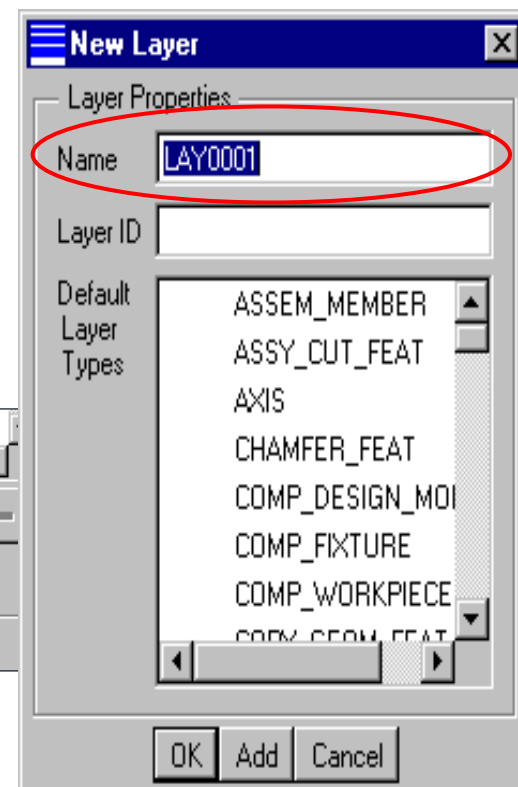
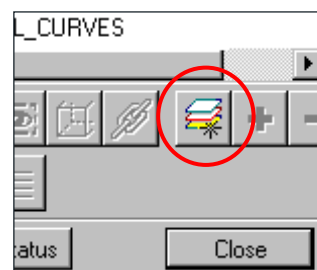


Would this be easier  
to work with?



# Creating Layers

- ◆ *Use the “Layer Display” icon.*
- ◆ *Use the “Create Layer” icon.*
- ◆ *Default Layer: optional, choose if you’d like to set.*

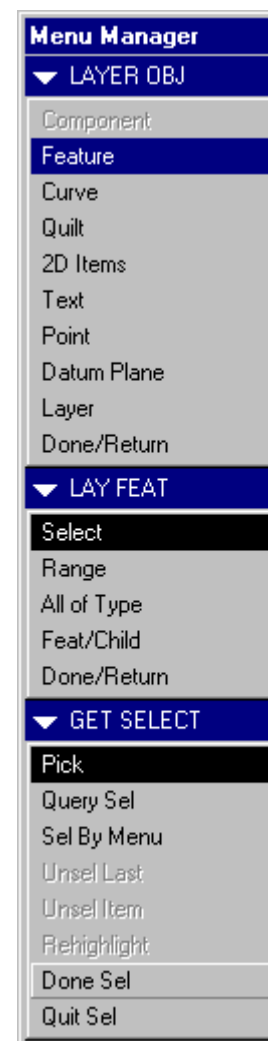
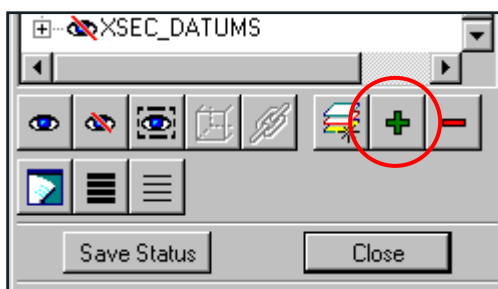


# Adding Items to a Layer

- ◆ *Use the “Add Item” icon.*
- ◆ *Choose the items to add.*
- ◆ *Select the items.*

## Notes:

- ◆ *Items can be associated to more than one layer.*
- ◆ *Pro/E does not automatically place items on layers.*



# Wouldn't you rather have it automatic?



Specifying default layers in your *config.pro* is an effective way to automate layering schemes. With it you can:

- ◆ ***Automatically add items to layers as you build your model (i.e. datum planes, datum curves, coordinate systems, etc.)***
- ◆ ***Establish common naming conventions***
- ◆ ***Allow other users to understand what your layers represent***

# Editing your config.pro



To create a default layer, edit your config.pro file. Specify the value of the “def\_layer” option as **type-option layername**. The **type-option** is the type of item that you want to place on that layer. The **layername** is the name of the layer.

Config Option	<b>type-option</b> <b>layername</b>
DEF_LAYER	LAYER_DATUM 1_ALL_PLANES
DEF_LAYER	LAYER_CSYS 2_ALL_CSYS
DEF_LAYER	LAYER_AXIS 3_ALL_AXIS
DEF_LAYER	LAYER_POINT 4_ALL_POINTS
DEF_LAYER	LAYER_CURVE 5_ALL_CURVES
DEF_LAYER	LAYER_SURFACE 6_ALL_SURFS
DEF_LAYER	LAYER_DETAIL_ITEM 8_ALL_NOTES_BALLOONS_SYMB
DEF_LAYER	LAYER_COSM_SKETCH 9_ALL_COSM_SKETCHES
DEF_LAYER	LAYER_QUILT 10_ALL_QUILTS

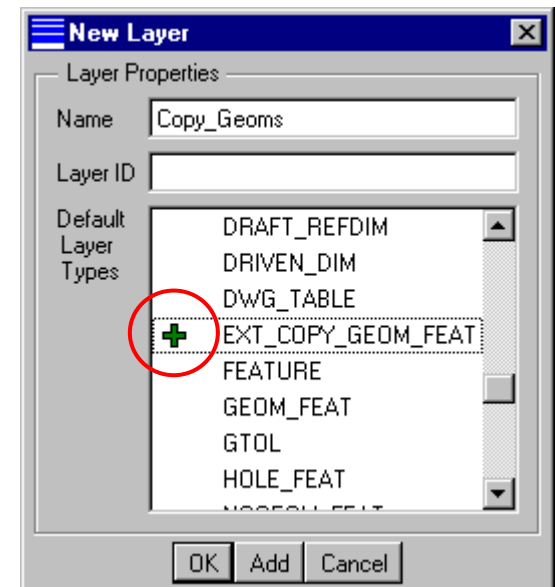
For the first line, Pro/E automatically assigns all new datum planes to the 1\_ALL\_PLANES layer automatically as the they are created.



# Manually setting Default Layers

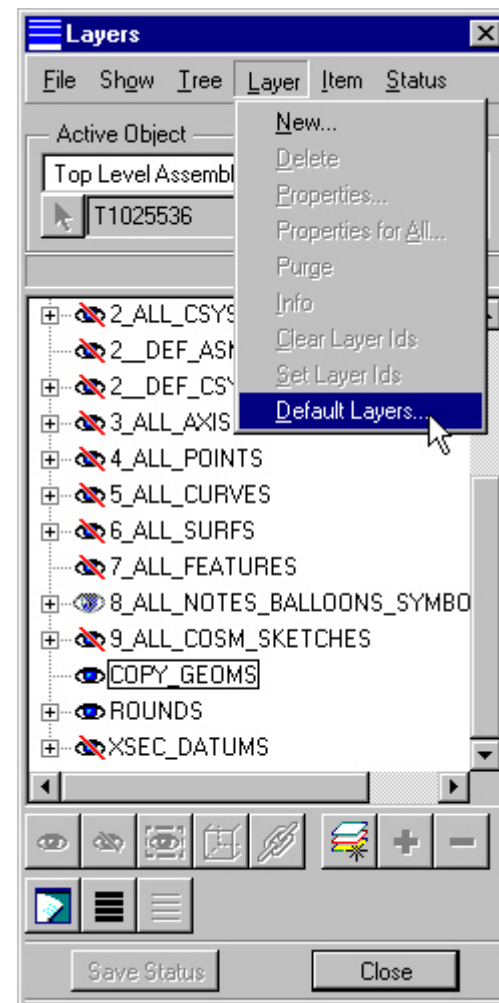
Alternately, you can assign default layers during the creation of a new layer by using the “Default Layer Types” option in the New Layer dialog box.

The drawback to this is that once you exit and bring the model into a new session, the Default Layer Type is not retained. The reason is because when you specify default layer types in this manner, it does not write it to the config.pro file. To permanently keep the default layering scheme, update your config.pro file.



# Default Layers in Session

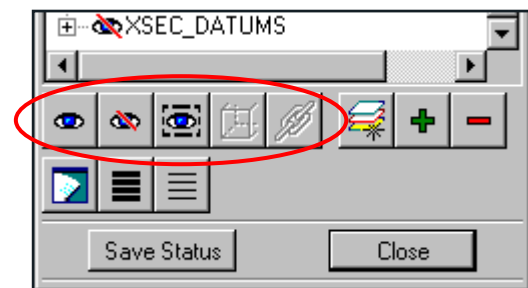
To see the default layers in the current session, click on the Default Layers command in the Layer Pull Down Menu



# Setting the Display Status

One of the primary reasons to use layers is to control what information is displayed on the screen. From the Layers dialog box, you can perform the following on layers:

<b>Show</b>	Displays items on screen.
<b>Blank</b>	Removes items from screen.
<b>Isolate</b>	Displays items on screen while removing all non-isolated layers from screen
<b>Hide</b>	Removes items from screen when working in No Hidden mode. In Hidden Line mode, it displays the component entirely in hidden lines. No effect when in Wireframe and Shade mode.
<b>Link</b>	Makes an independent drawing view dependent.



Note: Blanking or Isolating a layer does not increase regeneration time. Pro/E still regenerates blanked items.

# Display Status Tips



***Display status only affects non-solid geometry. For example, if you associate a hole to a layer and set the display status to Blank, only the non-solid geometry, or axis of the hole, is removed from the screen. Only exception is blanking components in an assembly removes the components from the screen.***

***Isolate has priority over Blank status. If an item is associated to two layers, one Isolate and one Blank, then the item will be displayed on the screen.***

***Display has priority over Blank. If an item is associated to two layers, one Display and one Blank, then the item will be displayed on the screen.***

# Display Status Tips

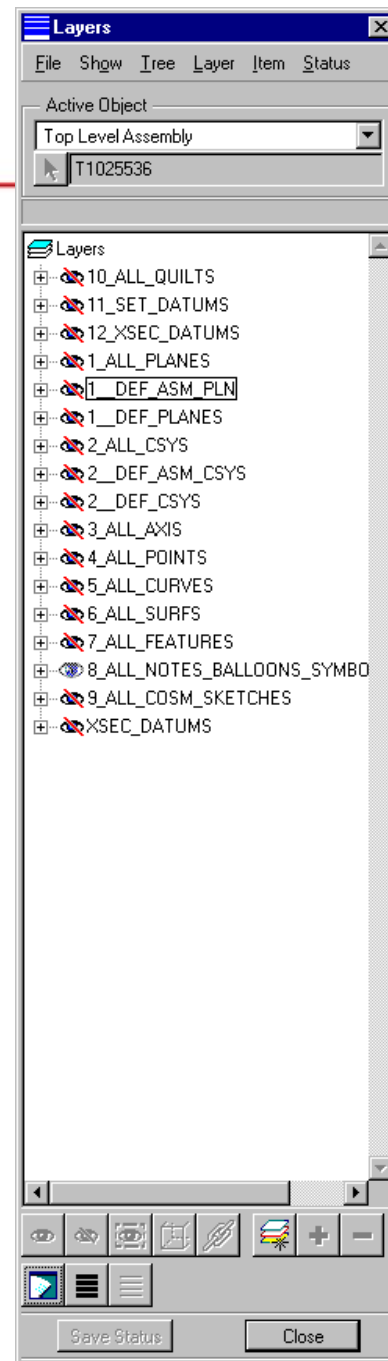
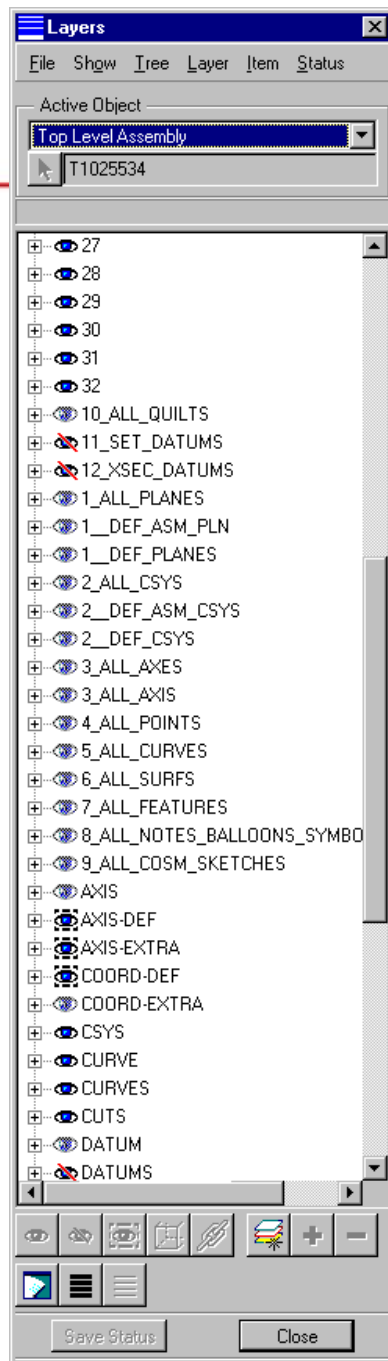


The following tips apply when in Assembly mode:

***If a layer is set to Isolate, Pro/E blanks all other layers and all other items not associated to any layer.***

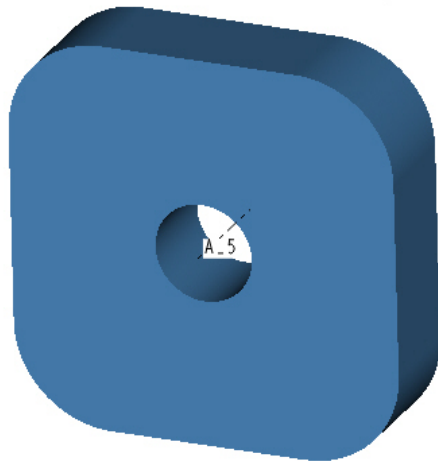
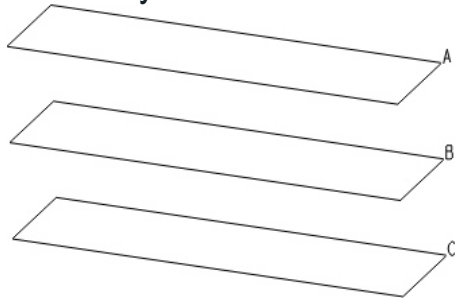
***Isolate affects the level of the object and all levels above it. Blank affects the level of the object and all levels below it.***

***By assigning common names to the layers throughout the levels of the assembly, you can control the display status on layers in lower-level models. When you change the display status of an upper-layer level, the change will propagate down through to all layers with the same name.***

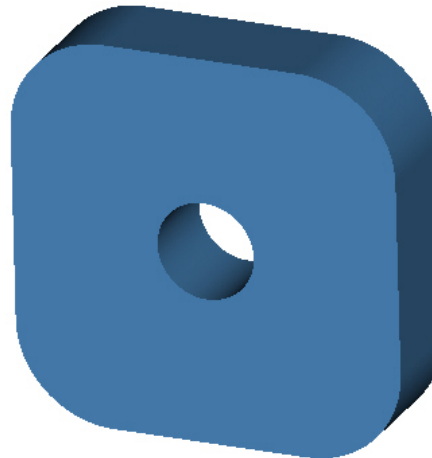
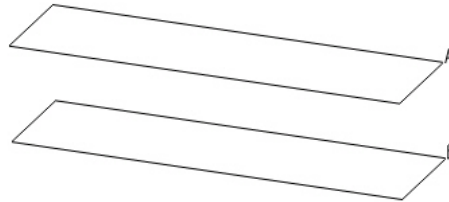


# Example: Part Mode

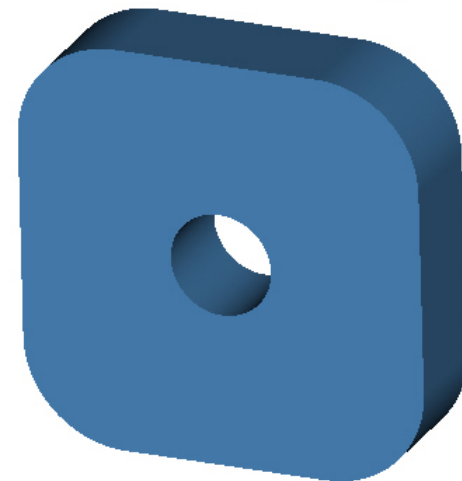
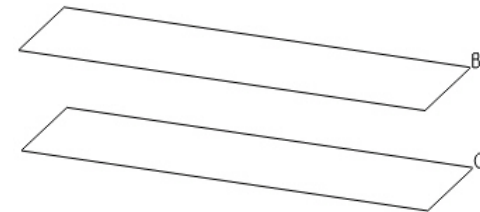
Only three items have been applied to three separate layers: Datum A, Datum C, Hole.



<u>Layer</u>	<u>Status</u>
Hole	Show
Datum A	Show
Datum C	Show



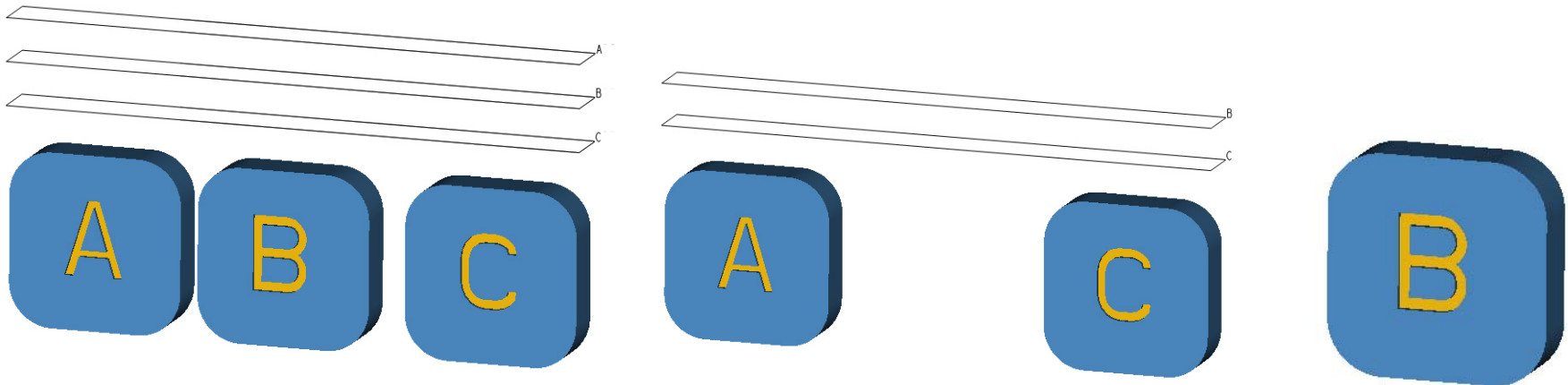
<u>Layer</u>	<u>Status</u>
Hole	Blank
Datum A	Show
Datum C	Blank



<u>Layer</u>	<u>Status</u>
Hole	Show
Datum A	Show
Datum C	Isolate

# Example: Assembly Mode

Only three items have been applied to three separate layers: Comp B, Comp C, ADTM A.



<u>Layer</u>	<u>Status</u>
Comp B	Show
Comp C	Show
ADTM A	Show

<u>Layer</u>	<u>Status</u>
Comp B	Blank
Comp C	Show
ADTM A	Blank

<u>Layer</u>	<u>Status</u>
Comp B	Isolate
Comp C	Show
ADTM A	Show