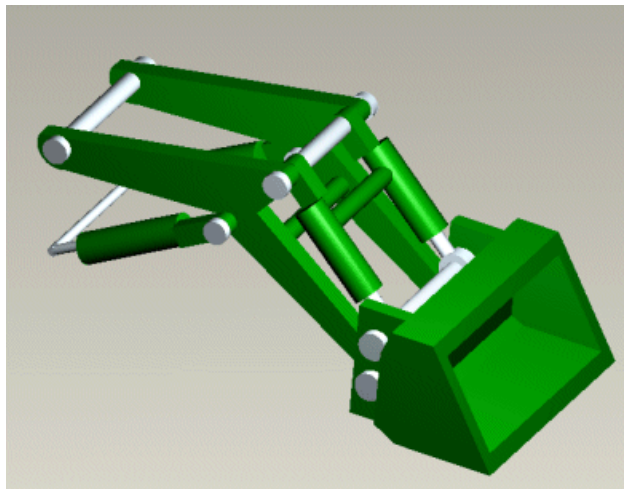


Technique for using Model Grids in Drawing Mode

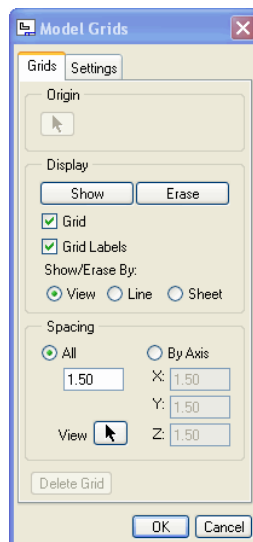
Three dimensional model grids are defined in the Part and Assembly modes and may be used to obtain X and Y coordinates on geometry. The model grid can then be displayed in a drawing of a model and custom balloons can be shown which detail the geometry on the model. This suggested technique will be using the bucket loader assembly pictured in Figure 1.

Procedure



The first step in using model grids is to reorient the assembly to an orthogonal position since the grid only displays X and Y values.

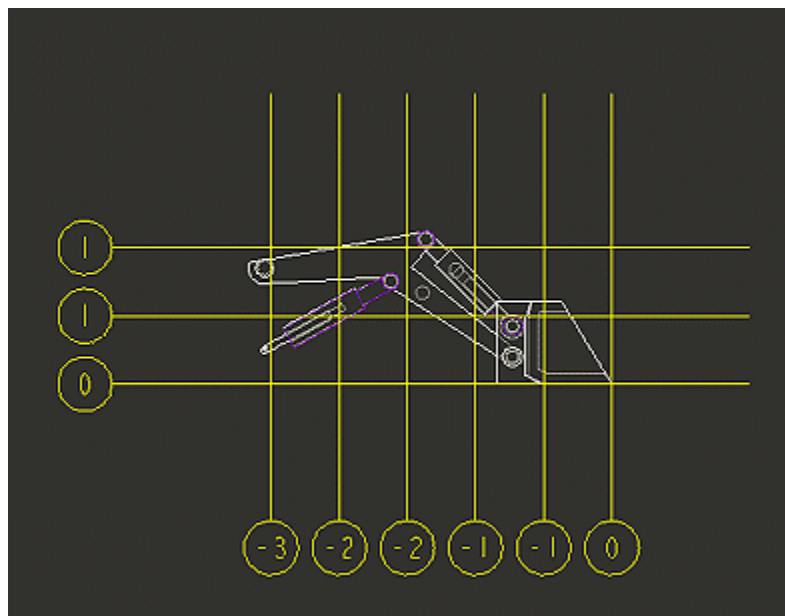
To begin defining the grid, select **View > Drawing Display > Model Grid**. The Model Grids dialog box appears as in Figure 2.



Select the assembly level coordinate system that will define the origin of the grid. For this example, the coordinate system located at the corner of the bucket was selected. The model grid will then appear on the view. If the spacing of the grid is too dense, modify the default value in the All Spacing field, and press Enter. The grid will then update with the new spacing. Note that if the assembly is reoriented, the model grid will be erased from display.

Create a drawing of the assembly and place a view of the assembly in the same orientation defined in Step 1.

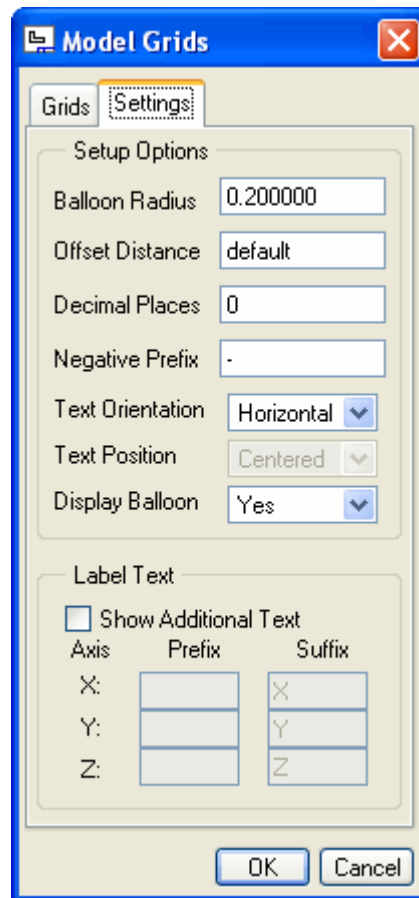
To display the model grid in this view, click **View > Drawing Display > Model Grid**. The Model Grids dialog box will appear. Click **Show** and then select the view to show the model grid in. If the spacing is too dense, modify the value in the All Spacing field, and press Enter. Select the View arrow, and then select the view to change the spacing for. The view will update with the new spacing. Figure 3 displays the bucket loader model grid with a spacing of 0.5.



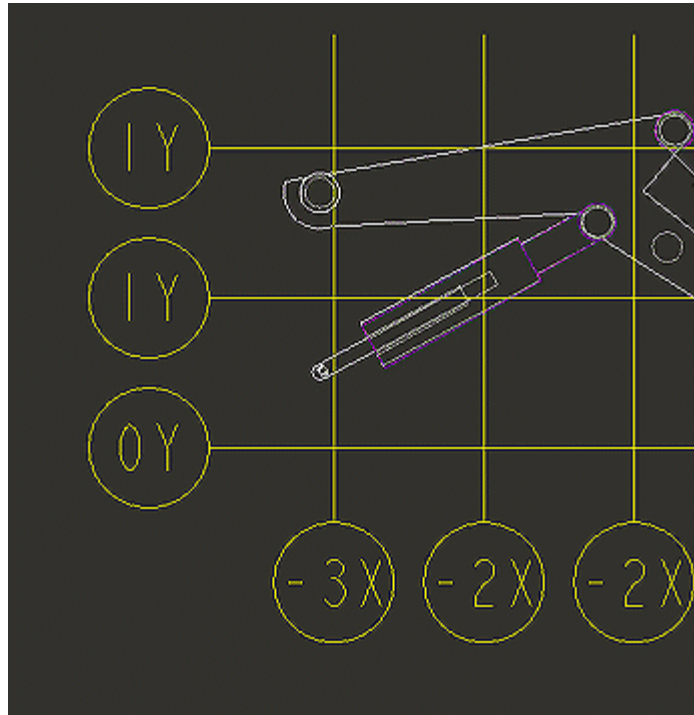
Pro/ENGINEER also allows for the spacing to be defined for each axis. This allows for the spacing of the grid in the X direction to be different than the spacing of the grid in the Y direction. Click **By Axis** in the Spacing section and enter in the spacing per axis. To update the view, select the View arrow and select the view. The view will update with the new spacing.

To erase certain balloons, select **Erase, Line**, select the balloons to erase, and then click **Ok**.

To customize the model grid, select the Settings tab from the Model Grids dialog box. From the Setup Options portion, the user has the ability to control the balloon radius, the distance between the view border and the balloon, the number of decimal places, the prefix for negative coordinate values, the orientation of the text, and whether or not the balloons display. See Figure 4.



To modify the label text, click the **Show Additional Text** checkbox and type the desired Prefix and Suffix for each axis. Figure 5 displays a close-up of the view after the model grid has been setup and the desired modifications have been made.



The following drawing setup file options control model grids:

Drawing Setup File Option	Description
model_grid_balloon_size	Specifies default radius of balloons shown with the model grid in a drawing.
model_grid_balloon_display	Determines whether a circle will be drawn around the model grid text.
model_grid_neg_prefix	Controls prefix of negative values shown in model grid balloons.
model_grid_num_dig_display	Controls number of digits displayed in grid coordinates that appear in grid balloons.
model_grid_offset	Controls offset of new model grid balloons from the drawing view.
model_grid_text_orientation	Determines whether the model grid text orientation will be parallel to the grid lines or always horizontal.
model_grid_text_position	Determines whether the model grid text will appear above, below, or centered about the grid line.