Set Global Viewing Parameters

Introduction

EnSight provides various modes that control global viewing behavior. Three of these modes are discussed here: perspective/orthographic projection, bounding box display modes, and static lighting.

EnSight can display viewports in either *perspective* or *orthographic* projection. A perspective projection is how we normally view the world: objects that are farther away appear smaller. An orthographic projection removes this effect: objects appear the same size regardless of distance. The projection setting can be specified on a per-viewport basis.

By default EnSight draws every point, line, and polygon for every visible part *each* time the Graphics Window updates. For very large models (or slow graphics hardware), this behavior leads to unresponsive manipulations since the update lags behind the corresponding mouse motion. Fortunately, EnSight provides other display modes that improve responsiveness. *Fast Display* mode displays a bounding box around, a point cloud for, or if using immediate mode - a percentage only of all visible parts to be displayed during interactive manipulations. The point cloud and sparse model options are only available in EnSight Gold. When the mouse button is released, parts are drawn normally. The Fast Display mode can also be set such that the bounding display is used until the mode is changed - even when the mouse is released. (Edit->Preferences... Performance - Static Fast Display)

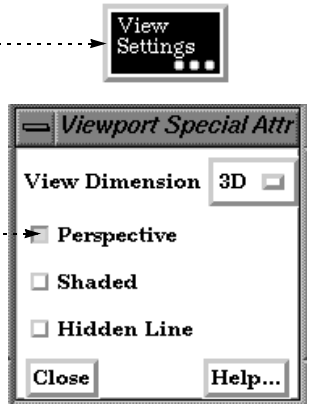
Surface shading operations are expensive for very large models. Since the shading is dependent on the orientation of the model with respect to the light sources, the surface colors must be recalculated each time the model moves. Static lighting mode precalculates surface colors for a given orientation and then uses these colors during subsequent transformations, resulting in improved interactive response.

Basic Operation

Perspective/Orthographic Projection

The projection mode can be toggled either from a menu (View > Perspective) or in the VPort icon bar. To set the projection from the icon bar:

1. **Select VPort in the Mode Selection area.**
2. **Select (click in) the desired viewport in the Graphics Window.**
3. **Click View Settings... to open the Viewport Special Attributes dialog.**
4. **Click the Perspective button to toggle the projection type in the current viewport.**



Note that a viewport will only display a perspective projection if the global toggle (as set with View > Perspective) is on as well.

Fast Display Mode

The Fast Display Mode can be set either from a menu (View > Fast Display >) or by the Fast Display toggle on the desktop. To change between the Dynamic or Static operation of this mode, go to Edit->Preferences... Performance. To change the part representation for Fast Display Mode:

1. **Click the Fast Display Representation pull-down icon.**
2. **Select Dynamic Box.**

   or

3. **Select Points (EnSight Gold only).**

Note, if using immediate mode (and EnSight Gold) a `Sparse Model` option will also be available here.

Select Off to return to standard display mode.

Static Lighting

The Static Lighting setting is only available from the View menu. Select View > Static Lighting to enable or disable static lighting. Although interaction speed is improved in static lighting mode, note that the light source appears to rotate *with* the object. This is often an acceptable trade-off.

Advanced Usage

If using immediate mode (and EnSight Gold), and you desire to use the Sparse Model option for Fast Display, you can control the percentage of the model that is displayed. **See "Performance Preferences"** . This mode is intended for large models. It generally will not be pleasing (nor should it be needed) for small models.

See Also

User Manual: **See "Part Mode"** and **Static Lighting**