



The SceneGraph class creates an OSG scenegraph containing seven iris::MatrixTransform nodes (MTN) and an iris::LightNode.

The root of the scenegraph is called **scene**

With the exception of the **pivot** node, models loaded under the **scene** node do not move with navigation, and are in normalized units.

Directly under the **scene** node are five more MTN nodes:

- a node named **ether**, which always contains the same transformation as the **world** node. Models loaded under the **ether** node do not move with navigation, and are in model units.
- a node named **nav**. Objects of the iris::Nav class change this node's transformation. Models loaded under the **nav** node move with navigation, and are in normalized units.
- a node named **pivot**. Objects of the iris::Nav class change this node's transformation. Models loaded under the **pivot** node move with navigation, and are in normalized units, and reflect the position and orientation of the iris::Nav class' pivot point.
- a node named **head**. This is the position of the head in the virtual world. The setheadWand DSO updates the node's matrix to reflect changes to the dtk shared memory file "head", which in immersive systems is the tracked head. Models loaded under the **head** node do not move with navigation, do move with head motions, and are in normalized units.
- a node named **wand**. This is the position of the wand in the virtual world. The setheadWand DSO updates the node's matrix to reflect changes to the dtk shared memory file "wand", which in immersive systems is the tracked wand. Models loaded under the **wand** node do not move with navigation, do move with wand motions, and are in normalized units.
- a light node, **light**, turned on by default, placed above and behind the viewer.

Under the **nav** node is a node named **world**. Models loaded under the **world** node move with navigation, and are in model units.

Most applications set the transformation of the world node to accommodate their model files and load their model files under the world node.