Open Inventor
Nodes Quick Reference

Release 2.0

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Open Inventor Nodes Quick Reference Release 2.0

Contents

This document provides reference information on Open Inventor nodes. It is especially useful as a quick reference for the Inventor file format. The following sections are included:

- A set of tables grouping node classes according to general usage
- A quick reference table for nodes

1 Node Classes by Category

The tables in this section group Inventor node classes according to usage. The categories are

- Shapes
- Properties
- Groups
- Lights
- Cameras
- Manipulators

SoCallback and **SoEventCallback**, general-purpose nodes, do not fall into any of these categories and are therefore not included in any table. **Boldface type** in the tables indicates an abstract base class.

SoCone	**SoNonIndexedShape**
SoCube	SoNurbsCurve
SoCylinder	SoNurbsSurface
SoFaceSet	SoPointSet
SoIndexedFaceSet	SoQuadMesh
SoIndexedLineSet	**SoShape**
SoIndexedNurbsCurve	SoSphere
SoIndexedNurbsSurface	SoText2
SoIndexedShape	SoText3
SoIndexedTriangleStripSet	SoTriangleStripSet
SoLineSet	**SoVertexShape**

Table 1-1 Shape Node Classes

SoAntiSquish	**SoProfile**
SoBaseColor	SoProfileCoordinate2
SoColorIndex	SoProfileCoordinate3
SoComplexity	SoResetTransform
SoCoordinate3	SoRotation
SoCoordinate4	SoRotationXYZ
SoDrawStyle	SoRotor
SoEnvironment	SoScale
SoFont	SoShapeHints
SoInfo	SoShuttle
SoLabel	SoSurroundScale
SoLightModel	SoTexture2
SoLinearProfile	SoTexture2Transform
SoMaterial	SoTextureCoordinate2
SoMaterialBinding	SoTextureCoordinatBinding
SoMaterialIndex	SoTextureCoordinateDefault
SoMatrixTransform	SoTextureCoordinateEnvironment
SoNormal	**SoTextureCoordinateFunction**
SoNormalBinding	SoTextureCoordinatePlane
SoNurbsProfile	SoTransform
SoPackedColor	**SoTransformation**
SoPendulum	SoTranslation
SoPickStyle	SoUnits

Table 1-2 Property Node Classes

SoAnnotation	SoMultipleCopy
SoArray	SoPathSwitch
SoBlinker	SoSelection
SoClipPlane	SoSeparator
SoFile	SoSwitch
SoGroup	SoTransformSeparator
SoLevelOfDetail	

Table 1-3 Group Node Classes

SoDirectionalLight
SoLight
SoPointLight
SoSpotLight

Table 1-4 Light Node Classes

SoCamera
SoOrthographicCamera
SoPerspectiveCamera

Table 1-5 Camera Node Classes

SoCenterballManip	SoTabBoxManip
SoDirectionalLightManip	SoTrackballManip
SoHandleBoxManip	SoTransformBoxManip
SoJackManip	SoTransformManip
SoSpotlightManip	

Table 1-6 Manipulator Classes

2 Inventor Nodes/File Format Quick Reference

Node	Field	Default Value	Value Type	Value Range
Annotation	*Group node that delays rendering its children until all other nodes have been traversed*			
	renderCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	boundingBoxCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	renderCulling	AUTO	SoSFEnum	ON, OFF, AUTO
	pickCulling	AUTO	SoSFEnum	ON, OFF, AUTO
AntiSquish	*Transformation node that undoes non-uniform 3D scaling*			
	sizing	AVERAGE_– DIMENSION	SoSFEnum	AVERAGE_DIMENSION BIGGEST_DIMENSION SMALLEST_DIMENSION LONGEST_DIAGONAL
Array	*Group node that creates a regular IxJxK array of copies of children, separated in space by arbitrary 3D vectors*			
	numElements1	1	SoSFShort	> 0
	numElements2	1	SoSFShort	> 0
	numElements3	1	SoSFShort	> 0
	separation1	1 0 0	SoSFVec3f	any
	separation2	0 1 0	SoSFVec3f	any
	separation3	0 0 1	SoSFVec3f	any
	origin	FIRST	SoSFEnum	FIRST CENTER LAST
BaseColor	*Defines an object's base/diffuse color*			
	rgb	[0.8 0.8 0.8]	SoMFColor	0 – 1
Blinker	*Animated cycling switch node*			
	whichChild	-1	SoSFLong	-1 (SO_SWITCH_NONE) -2 (SO_SWITCH_– INHERIT) -3 (SO_SWITCH_ALL) or 0
	speed	1	SoSFFloat	any
	on	TRUE	SoSFBool	TRUE, FALSE
Callback	*Provides custom behavior during action traversal*			

Table 2-1 Inventor Nodes/File Format Quick Reference

Node	Field	Default Value	Value Type	Value Range
CenterballManip	*Transform node with 3D interface for editing* rotation *and* center			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any
ClipPlane	*Specifies a plane against which all geometry is clipped*			
	plane	1 0 0 0	SoSFPlane	any
	on	TRUE	SoSFBool	TRUE, FALSE
ColorIndex	*Surface color index node*			
	index	[1]	SoMFLong	any valid color map index
Complexity	*Controls shape complexity*			
	type	OBJECT_SPACE	SoSFEnum	OBJECT_SPACE SCREEN_SPACE BOUNDING_BOX
	value	0.5	SoSFFloat	0 – 1
	textureQuality	0.5	SoSFFloat	0 – 1
Cone	*Represents a cone shape*			
	parts	ALL	SoSFBitMask	SIDES BOTTOM ALL
	bottomRadius	1	SoSFFloat	> 0
	height	2	SoSFFloat	> 0
Coordinate3	*Defines coordinates, vertices, or control points for shapes*			
	point	[0 0 0]	SoMFVec3f	any
Coordinate4	*Defines rational coordinates, vertices, or control points for shapes*			
	point	[0 0 0 1]	SoMFVec4f	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
Cube	*Represents a cube shape*			
	width	2	SoSFFloat	> 0
	height	2	SoSFFloat	> 0
	depth	2	SoSFFloat	> 0
Cylinder	*Represents a cylinder shape*			
	parts	ALL	SoSFBitMask	SIDES TOP BOTTOM ALL
	radius	1	SoSFFloat	> 0
	height	2	SoSFFloat	> 0
DirectionalLight	*Represents a directional light source*			
	on	TRUE	SoSFBool	TRUE, FALSE
	intensity	1	SoSFFloat	0 – 1
	color	1 1 1	SoSFColor	0 – 1
	direction	0 0 -1	SoSFVec3f	any unit vector
DirectionalLight-Manip	*Directional light node with 3D interface for editing direction*			
	on	TRUE	SoSFBool	TRUE, FALSE
	intensity	1	SoSFFloat	0 – 1
	color	1 1 1	SoSFColor	0 – 1
	direction	0 0 -1	SoSFVec3f	any unit vector
DrawStyle	*Defines a drawing style*			
	style	FILLED	SoSFEnum	FILLED LINES POINTS INVISIBLE
	pointSize	0	SoSFFloat	≥ 0
	lineWidth	0	SoSFFloat	≥ 0
	linePattern	0xffff	SoSFUShort	any

Table 2-1 **Inventor Nodes/File Format Quick Reference (continued)**

Node	Field	Default Value	Value Type	Value Range
Environment	*Defines the global environment, including attributes for fog and ambient lighting*			
	ambientIntensity	0.2	SoSFFloat	0 – 1
	ambientColor	1 1 1	SoSFColor	0 – 1
	attenuation	0 0 1	SoSFVec3f	≥ 0
	fogType	NONE	SoSFEnum	NONE HAZE FOG SMOKE
	fogColor	1 1 1	SoSFColor	0 – 1
	fogVisibility	0	SoSFFloat	≥ 0
EventCallback	*Invokes callbacks for events*			
FaceSet	*Constructs faces from the current coordinates*			
	startIndex	0	SoSFLong	≥ 0
	numVertices	[-1]	SoMFLong	-1 (SO_FACE_SET_–USE_REST_OF_–VERTICES) or ≥ 0
File	*Group node that reads children from a named file*			
	name	"<Undefined File>"	SoSFString	any
Font	*Defines the font type and size for all subsequent text shapes*			
	name	"defaultFont"	SoSFName	any
	size	10	SoSFFloat	> 0
Group	*Group node base class*			
HandleBoxManip	*Transform node with 3D interface for editing* translation *and* scaleFactor			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
IndexedFaceSet	*Constructs a 3D shape by drawing its faces from an indexed list of vertices*			
	coordIndex	[0]	SoMFLong	-1 (SO_END_FACE_–INDEX) or ≥ 0
	materialIndex	[-1]	SoMFLong	(see above)
	normalIndex	[-1]	SoMFLong	(see above)
	textureCoordIndex	[-1]	SoMFLong	(see above)
IndexedLineSet	*Constructs a 3D polyline shape from an indexed list of vertices*			
	coordIndex	[0]	SoMFLong	-1 (SO_END_LINE_–INDEX) or ≥ 0
	materialIndex	[-1]	SoMFLong	(see above)
	normalIndex	[-1]	SoMFLong	(see above)
	textureCoordIndex	[-1]	SoMFLong	(see above)
IndexedNurbs-Curve	*NURBS curve shape node whose control points are indexed coordinates*			
	numControlPoints	0	SoSFLong	≥ 0
	coordIndex	[0]	SoMFLong	≥ 0
	knotVector	[0]	SoMFFloat	Refer to *The Inventor Mentor*, Ch. 8, for information on restrictions to knot vectors.
IndexedNurbs-Surface	*NURBS surface shape node whose control points are indexed coordinates*			
	numUControlPoints	0	SoSFLong	≥ 0
	numVControlPoints	0	SoSFLong	≥ 0
	numSControlPoints	0	SoSFLong	≥ 0
	numTControlPoints	0	SoSFLong	≥ 0
	coordIndex	[0]	SoMFLong	≥ 0
	uKnotVector	[0]	SoMFFloat	Refer to *The Inventor Mentor,* Ch. 8, for information on restrictions to knot vectors.
	vKnotVector	[0]	SoMFFloat	
	sKnotVector	[0]	SoMFFloat	
	tKnotVector	[0]	SoMFFloat	
	textureCoordIndex	[-1]	SoMFLong	≥ 0, -1

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
IndexedTriangle-StripSet	*Indexed triangle strip set shape node*			
	coordIndex	[0]	SoMFLong	-1 (SO_END_MESH_–INDEX) or ≥ 0
	materialIndex	[-1]	SoMFLong	(see above)
	normalIndex	[-1]	SoMFLong	(see above)
	textureCoordIndex	[-1]	SoMFLong	(see above)
Info	*Contains an information text string*			
	string	"<Undefined info>"	SoSFString	any
JackManip	*Transform node with 3D interface for editing* translation, rotation, *and* scaleFactor			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any
Label	*Contains a label text string*			
	label	"<Undefined label>"	SoSFName	any
LevelOfDetail	*Group node that allows switching between various levels of detail*			
	screenArea	[0]	SoMFloat	≥ 0
LightModel	*Defines the lighting model to use when rendering*			
	model	PHONG	SoSFEnum	BASE_COLOR, PHONG
LinearProfile	*Piecewise linear profile curve*			
	index	[0]	SoMFLong	≥ 0
	linkage	START_FIRST	SoSFEnum	START_FIRST START_NEW ADD_TO_CURRENT

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
LineSet	*Constructs polylines from the current coordinates*			
	startIndex	0	SoSFLong	≥ 0
	numVertices	[-1]	SoMFLong	-1 (SO_LINE_SET_–USE_REST_OF_–VERTICES) or ≥ 0
Material	*Surface material node*			
	ambientColor	[0.2 0.2 0.2]	SoMFColor	0 – 1
	diffuseColor	[0.8 0.8 0.8]	SoMFColor	0 – 1
	specularColor	[0 0 0]	SoMFColor	0 – 1
	emissiveColor	[0 0 0]	SoMFColor	0 – 1
	shininess	[0.2]	SoMFFloat	0 – 1
	transparency	[0]	SoMFFloat	0 – 1
MaterialBinding	*Specifies how materials are bound to shapes*			
	value	DEFAULT	SoSFEnum	DEFAULT OVERALL PER_PART PER_PART_INDEXED PER_FACE PER_FACE_INDEXED PER_VERTEX PER_VERTEX_INDEXED
MaterialIndex	*Surface material node for color index mode*			
	ambientIndex	[1]	SoMFLong	any valid color map index
	diffuseIndex	[2]	SoMFLong	any valid color map index
	specularIndex	[3]	SoMFLong	any valid color map index
	shininess	[0.2]	SoMFFloat	0 – 1
	transparency	[0]	SoMFFloat	0 – 1
MatrixTransform	*Specifies a 3D geometric transformation as a matrix*			
	matrix	1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1	SoSFMatrix	any non-singular matrix

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
MultipleCopy	*Group node that traverses its children multiple times, applying a different transformation matrix each time*			
	matrix	[1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1]	SoMFMatrix	any non-singular matrix
Normal	*Defines surface normals for shapes*			
	vector	[0 0 1]	SoMFVec3f	any unit vector
NormalBinding	*Specifies how surface normals are bound to shapes*			
	value	DEFAULT	SoSFEnum	DEFAULT OVERALL PER_PART PER_PART_ INDEXED PER_FACE PER_FACE_INDEXED PER_VERTEX PER_VERTEX_ INDEXED
NurbsCurve	*NURBS curve shape node*			
	numControlPoints	0	SoSFLong	≥ 0
	knotVector	[0]	SoMFFloat	Refer to *The Inventor Mentor*, Ch. 8, for information on restrictions to knot vectors.
NurbsProfile	*NURBS profile curve*			
	index	[0]	SoMFLong	≥ 0
	linkage	START_FIRST	SoSFEnum	START_FIRST START_NEW ADD_TO_CURRENT

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
NurbsSurface	*NURBS surface shape node*			
	numUControlPoints	0	SoSFLong	≥ 0
	numVControlPoints	0	SoSFLong	≥ 0
	numSControlPoints	0	SoSFLong	≥ 0
	numTControlPoints	0	SoSFLong	≥ 0
	uKnotVector	[0]	SoMFFloat	Refer to *The Inventor Mentor*, Ch. 8, for information on restrictions to knot vectors.
	vKnotVector	[0]	SoMFFloat	
	sKnotVector	[0]	SoMFFloat	
	tKnotVector	[0]	SoMFFloat	
Orthographic–Camera	*Defines an orthographic camera*			
	viewportMapping	ADJUST_CAMERA	SoSFEnum	CROP_VIEWPORT_–FILL_FRAME CROP_VIEWPORT_–LINE_FRAME CROP_VIEWPORT_–NO_FRAME ADJUST_CAMERA LEAVE_ALONE
	position	0 0 1	SoSFVec3f	any
	orientation	0 0 1 0	SoSFRotation	any
	aspectRatio	1	SoSFFloat	> 0
	nearDistance	1	SoSFFloat	any
	farDistance	10	SoSFFloat	> nearDistance
	focalDistance	5	SoSFFloat	> 0
	height	2	SoSFFloat	> 0
PackedColor	*Defines an object's base color using packed colors*			
	rgba	[0xffcccccc]	SoMFULong	any
PathSwitch	*Group node that traverses only the child that matches a path field*			
	path	NULL	SoSFPath	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
Pendulum	*Animated oscillating rotation node*			
	rotation	0 0 1 0	SoSFRotation	any
	rotation0	0 0 1 0	SoSFRotation	any
	rotation1	0 0 1 0	SoSFRotation	any
	speed	1	SoSFFloat	any
	on	TRUE	SoSFBool	TRUE, FALSE
PerspectiveCamera	*Defines a perspective camera node*			
	viewportMapping	ADJUST_CAMERA	SoSFEnum	CROP_VIEWPORT_–FILL_FRAME CROP_VIEWPORT_–LINE_FRAME CROP_VIEWPORT_–NO_FRAME ADJUST_CAMERA LEAVE_ALONE
	position	0 0 1	SoSFVec3f	any
	orientation	0 0 1 0	SoSFRotation	any
	aspectRatio	1	SoSFFloat	> 0
	nearDistance	1	SoSFFloat	any
	farDistance	10	SoSFFloat	> nearDistance
	focalDistance	5	SoSFFloat	any
	heightAngle	0.785398 (π/4)	SoSFFloat	> 0 , < π
PickStyle	*Defines a picking style*			
	style	SHAPE	SoSFEnum	SHAPE BOUNDING_BOX UNPICKABLE
PointLight	*Represents a point light source*			
	on	TRUE	SoSFBool	TRUE, FALSE
	intensity	1	SoSFFloat	0 – 1
	color	1 1 1	SoSFColor	0 – 1
	location	0 0 1	SoSFVec3f	any
PointSet	*Shape node that creates points at the current coordinates*			
	startIndex	0	SoSFLong	≥ 0
	numPoints	-1	SoSFLong	-1 (SO_POINT_SET_–USE_REST_OF_–VERTICES) or ≥ 0

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
ProfileCoordinate2	*Nonrational profile coordinate node*			
	point	[0 0]	SoMFVec2f	any
ProfileCoordinate3	*Rational profile coordinate node*			
	point	[0 0 1]	SoMFVec3f	any
QuadMesh	*Quadrilateral mesh shape node*			
	startIndex	0	SoSFLong	≥ 0
	verticesPerColumn	1	SoSFLong	≥ 1
	verticesPerRow	1	SoSFLong	≥ 1
ResetTransform	*Resets the current transformation to identity; resets the current bounding box to empty*			
	whatToReset	TRANSFORM	SoSFBitMask	TRANSFORM, BBOX
Rotation	*Represents a 3D rotation about an arbitrary axis*			
	rotation	0 0 1 0	SoSFRotation	any
RotationXYZ	*Represents a 3D rotation about the x axis, y axis, or z axis*			
	axis	X	SoSFEnum	X Y Z
	angle	0	SoSFFloat	any
Rotor	*Animated rotation node*			
	rotation	0 0 1 0	SoSFRotation	any
	speed	1	SoSFFloat	any
	on	TRUE	SoSFBool	TRUE, FALSE
Scale	*Represents a 3D geometric scale*			
	scaleFactor	1 1 1	SoSFVec3f	> 0

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
Selection	*Manages a list of selected objects*			
	renderCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	boundingBoxCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	renderCulling	AUTO	SoSFEnum	ON, OFF, AUTO
	pickCulling	AUTO	SoSFEnum	ON, OFF, AUTO
	policy	SHIFT	SoSFEnum	SINGLE, TOGGLE, SHIFT
Separator	*Group node that saves and restores traversal state*			
	renderCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	boundingBoxCaching	AUTO	SoSFEnum	ON, OFF, AUTO
	renderCulling	AUTO	SoSFEnum	ON, OFF, AUTO
	pickCulling	AUTO	SoSFEnum	ON, OFF, AUTO
ShapeHints	*Provides hints about subsequent shapes*			
	vertexOrdering	UNKNOWN_– ORDERING	SoSFEnum	UNKNOWN_– ORDERING CLOCKWISE COUNTERCLOCKWISE
	shapeType	UNKNOWN_– SHAPE_TYPE	SoSFEnum	UNKNOWN_SHAPE_– TYPE, SOLID
	faceType	CONVEX	SoSFEnum	UNKNOWN_FACE_– TYPE, CONVEX
	creaseAngle	0.5	SoSFFloat	any
Shuttle	*Animated oscillating translation node*			
	translation	0 0 0	SoSFVec3f	any
	translation0	0 0 0	SoSFVec3f	any
	translation1	0 0 0	SoSFVec3f	any
	speed	1	SoSFFloat	any
	on	TRUE	SoSFBool	TRUE, FALSE
Sphere	*Represents a sphere shape*			
	radius	1	SoSFFloat	> 0

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
SpotLight	*Represents a spotlight source*			
	on	TRUE	SoSFBool	TRUE, FALSE
	intensity	1	SoSFFloat	0 – 1
	color	1 1 1	SoSFColor	0 – 1
	location	0 0 1	SoSFVec3f	any
	direction	0 0 -1	SoSFVec3f	any unit vector
	dropOffRate	0	SoSFFloat	0 – 1
	cutOffAngle	0.785398 ($\pi/4$)	SoSFFloat	0 – π
SpotLightManip	*Spot light node with 3D interface for editing* location, direction, *and* cutOffAngle			
	on	TRUE	SoSFBool	TRUE, FALSE
	intensity	1	SoSFFloat	0 – 1
	color	1 1 1	SoSFColor	0 – 1
	location	0 0 1	SoSFVec3f	any
	direction	0 0 -1	SoSFVec3f	any unit vector
	dropOffRate	0	SoSFFloat	0 – 1
	cutOffAngle	0.785398 ($\pi/4$)	SoSFFloat	0 – π
SurroundScale	*Adjusts the current matrix so a default cube will surround other objects*			
	numNodesUpTo–Container	0	SoSFLong	any non-negative integer
	numNodesUpToReset	0	SoSFLong	any non-negative integer
Switch	*Group node that traverses one chosen child*			
	whichChild	-1	SoSFLong	-1 (SO_SWITCH_NONE) -2 (SO_SWITCH_–INHERIT) -3 (SO_SWITCH_ALL) or ≥ 0
TabBoxManip	*Transform node with 3D interface for editing* translation *and* scaleFactor			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
Text2	*Screen-aligned 2D text node*			
	string	[""]	SoMFString	any
	spacing	1	SoSFFloat	any
	justification	LEFT	SoSFEnum	LEFT RIGHT CENTER
Text3	*3D text node*			
	string	[""]	SoMFString	any
	spacing	1	SoSFFloat	any
	justification	LEFT	SoSFEnum	LEFT RIGHT CENTER
	parts	FRONT	SoSFBitMask	SIDES FRONT BACK ALL
Texture2	*Texture map node*			
	filename	""	SoSFString	any
	image	0 0 0	SoSFImage	any
	wrapS	REPEAT	SoSFEnum	REPEAT CLAMP
	wrapT	REPEAT	SoSFEnum	REPEAT CLAMP
	model	MODULATE	SoSFEnum	MODULATE DECAL BLEND
	blendColor	0 0 0	SoSFColor	0 – 1
Texture2Transform	*2D texture transformation node*			
	translation	0 0	SoSFVec2f	any
	rotation	0	SoSFFloat	any
	scaleFactor	1 1	SoSFVec2f	> 0
	center	0 0	SoSFVec2f	any
TextureCoordinate2	*Defines 2D texture coordinates*			
	point	[0 0]	SoMFVec2f	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
TextureCoordinate-Binding	*Specifies how texture coordinates are bound to shapes*			
	value	DEFAULT	SoSFEnum	DEFAULT PER_VERTEX PER_VERTEX_INDEXED
TextureCoordinate-Default	*Removes texture coordinates from state*			
TextureCoordinate-Environment	*Specifies texture coordinates by projection from an environment*			
	coord	ALL	SoSFEnum	S T ALL
TextureCoordinate-Plane	*Specifies texture coordinates by projection from a plane*			
	directionS	1 0 0	SoSFVec3f	any
	directionT	0 1 0	SoSFVec3f	any
TrackballManip	*Transform node with 3D interface for editing* translation, rotation,*and* scaleFactor			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any
Transform	*Represents a 3D geometric transformation*			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any
TransformBox-Manip	*Transform node with 3D interface for editing* translation, rotation, *and* scaleFactor			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)

Node	Field	Default Value	Value Type	Value Range
TransformManip	*Base class for all transform nodes with built-in 3D user interface*			
	translation	0 0 0	SoSFVec3f	any
	rotation	0 0 1 0	SoSFRotation	any
	scaleFactor	1 1 1	SoSFVec3f	> 0
	scaleOrientation	0 0 1 0	SoSFRotation	any
	center	0 0 0	SoSFVec3f	any
TransformSeparator	*Group node that saves and restores transformation state*			
Translation	*Represents a 3D geometric translation*			
	translation	0 0 0	SoSFVec3f	any
TriangleStripSet	*Constructs strips of triangular faces from the current coordinates*			
	startIndex	0	SoSFLong	≥ 0
	numVertices	[-1]	SoMFLong	-1 (SO_TRI_STRIP_–SET_USE_REST_OF_–VERTICES) or ≥ 0
Units	*Scales to convert units of length*			
	units	METERS	SoSFEnum	METERS CENTIMETERS MILLIMETERS MICROMETERS MICRONS NANOMETERS ANGSTROMS KILOMETERS FEET INCHES POINTS YARDS MILES NAUTICAL_MILES

Table 2-1 Inventor Nodes/File Format Quick Reference (continued)