

Matrix3D

Public Properties

det:Number n22:Number
 IDENTITY:Matrix3D n23:Number
 n11:Number n24:Number
 n12:Number n31:Number
 n13:Number n32:Number
 n14:Number n33:Number
 n21:Number n34:Number

Public Methods

Matrix3D(args:Array)
 add(m1:Matrix3D, m2:Matrix3D):Matrix3D
 axis2quaternion(x:Number, y:Number,
 z:Number, angle:Number):Object
 axisRotationWithReference(axis:Number3D,
 ref:Number3D,
 pAngle:Number):Matrix3D

clone(m:Matrix3D):Matrix3D
 copy(m:Matrix3D):Matrix3D
 copy3x3(m:Matrix3D):Matrix3D
 euler2matrix(angle:Number3D):Matrix3D
 euler2quaternion(ax:Number, ay:Number,
 az:Number):Object
 getTrace(m:Matrix3D):Number
 inverse(m:Matrix3D):Matrix3D
 magnitudeQuaternion(q:Object):Number
 matrix2euler(mat:Matrix3D):Number3D
 multiply(m1:Matrix3D, m2:Matrix3D):Matrix3D
 multiply3x3(m1:Matrix3D, m2:Matrix3D):Matrix3D
 multiplyQuaternion(qa:Object, qb:Object):Object
 multiplyVector(m:Matrix3D, v:Number3D):void
 multiplyVector3x3(m:Matrix3D, v:Number3D):void
 normalizeQuaternion(q:Object):Object
 quaternion2matrix(x:Number, y:Number,
 z:Number, w:Number):Matrix3D
 rotateAxis(m:Matrix3D, v:Number3D):void
 rotationMatrix(u:Number, v:Number,
 w:Number,
 angle:Number):Matrix3D
 rotationX(angleRad:Number):Matrix3D
 rotationY(angleRad:Number):Matrix3D
 rotationZ(angleRad:Number):Matrix3D
 scaleMatrix(u:Number, v:Number, w:Number):Matrix3D
 toString():String
 translationMatrix(u:Number, v:Number, w:Number):Matrix3D

Number3D

Public Properties

modulo:Number
 x:Number
 y:Number
 z:Number
 ZERO:Number3D

Public Methods

Number3D(x:Number = 0, y:Number = 0, z:Number = 0)
 add(v:Number3D, w:Number3D):Number3D
 clone():Number3D
 cross(v:Number3D, w:Number3D):Number3D
 dot(v:Number3D, w:Number3D):Number
 normalize():void
 sub(v:Number3D, w:Number3D):Number3D
 toString():String

NumberUV

Public Properties

u:Number
 v:Number
 ZERO:Number

Public Methods

NumberUV(u:Number = 0, v:Number = 0)
 clone():NumberUV
 toString():String

Papervision3D

Public Properties

AUTHOR:String
 DATE:String
 NAME:String
 useDEGREES:Boolean
 usePERCENT:Boolean
 VERBOSE:Boolean
 VERSION:String

Public Methods

log(message:String):void

Camera3D

Public Properties

goto:Number3D
 target:DisplayObject3D

Public Methods

Camera3D(target:DisplayObject3D = null,
 zoom:Number = 2,
 focus:Number = 100,
 initObject:Object = null)
 hover(type:Number,
 mouseX:Number,
 mouseY:Number):void
 transformView(transform:Matrix3D = null):void

FreeCamera3D

Public Methods

FreeCamera3D(zoom:Number = 2,
 focus:Number = 100,
 initObject:Object = null)
 transformView(transform:Matrix3D = null):void

MovieScene3D

Public Methods

MovieScene3D(container:Sprite)
 addChild(child:DisplayObject3D,
 name:String = null):DisplayObject3D
 getSprite(child:DisplayObject3D):Sprite

Protected Methods

renderObjects(sort:Boolean):void

Scene3D

Public Methods

Scene3D(container:Sprite)

Protected Methods

renderObjects(sort:Boolean):void

FileLoadEvent

Public Properties

file:String
 LOAD_COMPLETE:String = "loadComplete"
 LOAD_ERROR:String = "loadError"

Public Methods

FileLoadEvent(type:String, p_file:String = "",
 bubbles:Boolean = false,
 cancelable:Boolean = false)



Face3D

Public Properties

id:Number
 materialName:String
 screenZ:Number
 uv:Array
 vertices:Array
 visible:Boolean

Public Methods

Face3D(vertices:Array,
 materialName:String = null,
 uv:Array = null)
 render(instance:DisplayObject3D,
 container:Sprite):Number
 transformUV(inst:DisplayObject3D = null):Object

Mesh3D

Public Methods

Mesh3D(material:MaterialObject3D,
 vertices:Array, faces:Array,
 name:String = null,
 initObject:Object = null)
 project(parent:DisplayObject3D,
 camera:CameraObject3D,
 sorted:Array = null):Number
 projectTexture(u:String = "x",
 v:String = "y"):void

Vertex2D

Public Properties

extra:Object
 visible:Boolean
 x:Number
 y:Number
 z:Number

Public Methods

Vertex2D(x:Number = 0,
 y:Number = 0,
 z:Number = 0)

Vertex3D

Public Properties

extra:Object
 visible:Boolean
 x:Number
 y:Number
 z:Number

Public Methods

Vertex3D(x:Number = 0,
 y:Number = 0,
 z:Number = 0)

Vertices3D

Public Methods

Vertices3D(vertices:Array,
 name:String = null,
 initObject:Object = null)
 boundingBox():Object
 project(parent:DisplayObject3D,
 camera:CameraObject3D,
 sorted:Array = null):Number
 transformVertices(trans:Matrix3D):void

CameraObject3D

Public Properties

DEFAULT_POS:Number3D sort:Boolean
focus:Number zoom:Number

Public Methods

CameraObject3D(zoom:Number = 3,
 focus:Number = 500,
 initObject:Object = null)
pan(angle:Number):void
tilt(angle:Number):void
transformView(transform:Matrix3D = null):void

DisplayObjectContainer3D

Public Properties

children:Object
numChildren:int
root:DisplayObjectContainer3D

Protected Properties

_children:Dictionary
_childrenByName:Object

Public Methods

DisplayObjectContainer3D()
addChild(child:DisplayObject3D,
 name:String = null):DisplayObject3D
addChildren(parent:DisplayObject3D):DisplayObjectContainer3D
addCollada(filename:String,
 materials:MaterialsList = null,
 scale:Number = 1):void
childrenList():String
getChildByName(name:String):DisplayObject3D
removeChild(child:DisplayObject3D):DisplayObject3D
removeChildByName(name:String):DisplayObject3D
toString():String

GeometryObject3D

Public Properties

boundingSphere2:Number ready:Boolean = false
faces:Array vertices:Array

Protected Properties

_boundingSphere2 : Number
_boundingSphereDirty : Boolean = true
_material : MaterialObject3D

Public Methods

GeometryObject3D(initObject:Object = null)
getBoundingSphere2():Number
transformUV(material:MaterialObject3D):void
transformVertices(transformation:Matrix3D):void

MaterialObject3D

Public Properties

animated:Boolean
bitmap:BitmapData
DEBUG:MaterialObject3D
DEBUG_COLOR:int = 0xFF00FF
DEFAULT:MaterialObject3D
DEFAULT_COLOR:int = 0x000000
doubleSided:Boolean
fillAlpha:Number
fillColor:Number
id:Number
invisible:Boolean
lineAlpha:Number
lineColor:Number
name:String
oneSide:Boolean
opposite:Boolean
scene:SceneObject3D
smooth:Boolean

Public Methods

MaterialObject3D(initObject:Object = null)
clone():MaterialObject3D
copy(material:MaterialObject3D):void
toString():String
updateBitmap():void

SceneObject3D

Public Properties

container:Sprite
materials:MaterialsList
objects:Array
stats:Object

Public Methods

SceneObject3D(container:Sprite)
addChild(child:DisplayObject3D,
 name:String = null):DisplayObject3D
removeChild(child:DisplayObject3D):DisplayObject3D
renderCamera(camera:CameraObject3D):void

Protected Methods

renderObjects(sort:Boolean):void

BitmapAssetMaterial

Public Methods

BitmapAssetMaterial(id:String, initObject:Object = null)

Protected Methods

createBitmap(asset:*):BitmapData

BitmapFileMaterial

Public Properties

loaded:Boolean
LOADING_COLOR:int
url:String = ""

Public Methods

BitmapFileMaterial(url:String, initObject:Object = null)

Protected Methods

createBitmap(asset:*):BitmapData

BitmapMaterial

Public Properties

texture:*

Protected Properties

_texture:*

Protected Methods

createBitmap(asset:*):BitmapData

ColorMaterial

Public Methods

ColorMaterial(color:Number = 0xFF00FF,
 alpha:Number = 100,
 initObject:Object = null)

toString():String

MaterialsList

Public Properties

materialsByName:Dictionary
numMaterials:int

Protected Properties

_materials:Dictionary

Public Methods

MaterialsList(materials:* = null)
addMaterial(material:MaterialObject3D,
 name:String = null):MaterialObject3D
clone():MaterialsList
getMaterialByName(name:String):MaterialObject3D
removeMaterial(material:MaterialObject3D):MaterialObject3D
removeMaterialByName(name:String):MaterialObject3D
toString():String

MovieAssetMaterial

Public Methods

MovieAssetMaterial(id:*,
 transparent:Boolean = false,
 initObject:Object = null)

Protected Methods

createBitmap(asset:*):BitmapData

MovieMaterial

Public Properties

movie : MovieClip
movieTransparent : Boolean

Public Methods

MovieMaterial(asset:*,
 transparent:Boolean = false,
 initObject:Object = null)

updateBitmap():void

Protected Methods

createBitmap(asset:*):BitmapData

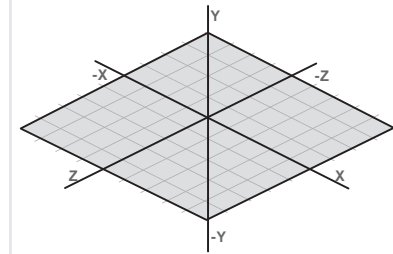
WireframeMaterial

Public Methods

WireframeMaterial(color:Number = 0xff00ff,
 alpha:Number = 100,
 initObject:Object = null)

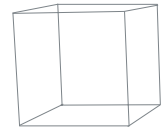
toString():String

World Space



Primitive Shapes

Cube



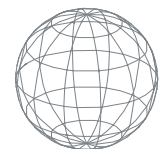
Cylinder



Cone



Sphere



Ase

Public Properties

DEFAULT_SCALING : Number = 1
INTERNAL_SCALING : Number = 50
loaded : Boolean

Public Methods

Ase(material:MaterialObject3D,
filename:String,
scale:Number = 1,
initObject:Object = null)

Collada

Public Properties

DEFAULT_SCALING : Number = 1
loaded : Boolean

Public Methods

Collada(COLLADA:*,
materials:MaterialsList = null,
scale:Number = 1,
initObject:Object = null)

Cone

Public Methods

Cone(material:MaterialObject3D = null,
radius:Number = 100,
height:Number = 100,
segmentsW:int = 8,
segmentsH:int = 6,
initObject:Object = null)

Cube

Public Properties

DEFAULT_SCALE : Number = 1
DEFAULT_SEGMENTS : Number = 1
DEFAULT_SIZE : Number = 500
__segmentsH : Number
__segmentsS : Number
__segmentsT : Number

Public Methods

Cube(material:MaterialObject3D = null,
width:Number = 500,
depth:Number = 500,
height:Number = 500,
__segmentsS:Number = 1,
__segmentsT:Number = 1,
__segmentsH:Number = 1,
initObject:Object = null)

Cylinder

Public Properties

DEFAULT_HEIGHT:Number = 100
DEFAULT_RADIUS:Number = 100
DEFAULT_SCALE:Number = 1
DEFAULT_SEGMENTSH:Number = 6
DEFAULT_SEGMENTSW:Number = 8
MIN_SEGMENTSH:Number = 2
MIN_SEGMENTSW:Number = 3
segmentsH:Number
segmentsW:Number

Public Methods

Cylinder(material:MaterialObject3D = null,
radius:Number = 100,
height:Number = 100,
segmentsW:int = 8,
segmentsH:int = 6,
topRadius:Number = 0,
initObject:Object = null)

DisplayObject3D

Public Properties

container:Sprite
extra:Object
faces:Array
geometry:GeometryObject3D
id:int
material:MaterialObject3D
materials:MaterialsList
name:String
parent:DisplayObjectContainer3D
projected:Dictionary
rotationX:Number
rotationY:Number
rotationZ:Number
scale:Numbe
scaleX:Number
scaleY:Number
scaleZ:Number
scene:SceneObject3D
screenZ:Number
transform:Matrix3D
view:Matrix3D
visible:Boolean
x:Number
y:Number
z:Number
ZERO:DisplayObject3D

Protected Properties

__sorted:Array
__transformDirty:Boolean = false

Public Methods

DisplayObject3D(name:String = null,
geometry:GeometryObject3D = null,
initObject:Object = null)
addGeometry(geometry:GeometryObject3D = null):void
copyPosition(reference:*) :void
copyTransform(reference:*) :void
distanceTo(obj:DisplayObject3D):Number
getMaterialByName(name:String):MaterialObject3D
hitTestObject(obj:DisplayObject3D,
multiplier:Number = 1):Boolean
hitTestPoint(x:Number,
y:Number,
z:Number):Boolean
lookAt(targetObject:DisplayObject3D,
upAxis:Number3D = null):void
materialsList():String
moveBackward(distance:Number):void
moveDown(distance:Number):void
moveForward(distance:Number):void
moveLeft(distance:Number):void
moveRight(distance:Number):void
moveUp(distance:Number):void
pitch(angle:Number):void
project(parent:DisplayObject3D,
camera:CameraObject3D,
sorted:Array = null):Number
render(scene:SceneObject3D):void
roll(angle:Number):void
toString():String
translate(distance:Number, axis:Number3D):void
yaw(angle:Number):void

Protected Methods

updateTransform():void

PaperPlane

Public Properties

DEFAULT_SCALE : Number = 1

Public Methods

PaperPlane(material:MaterialObject3D = null,
scale:Number = 0,
initObject:Object = null)

Plane

Public Properties

DEFAULT_SCALE:Number = 1
DEFAULT_SEGMENTS:Number = 1
DEFAULT_SIZE:Number = 500
segmentsH:Number
segmentsW:Number

Public Methods

Plane(material:MaterialObject3D = null,
width:Number = 0,
height:Number = 0,
segmentsW:Number = 0,
segmentsH:Number = 0,
initObject:Object = null)

Sphere

Public Properties

DEFAULT_RADIUS:Number = 100
DEFAULT_SCALE:Number = 1
DEFAULT_SEGMENTSH:Number = 6
DEFAULT_SEGMENTSW:Number = 8
MIN_SEGMENTSH:Number = 2
MIN_SEGMENTSW:Number = 3
segmentsH:Number
segmentsW:Number

Public Methods

Sphere(material:MaterialObject3D = null,
radius:Number = 100,
segmentsW:int = 8,
segmentsH:int = 6,
initObject:Object = null)

Stars

Public Properties

DEFAULT_SIZE:Number = 1000
DEFAULT_STAGE_HEIGHT:Number = 2048
DEFAULT_STAGE_WIDTH:Number = 2048
depth:Number
height:Number
quantity:Number
stageHeight:Number
stageWidth:Number
target:Sprite
width:Number

Public Methods

Stars(material:ColorMaterial,
target:Sprite,
quantity:Number = 900,
width:Number = 1000,
height:Number = 1000,
depth:Number = 1000,
initObject:Object = null)
render(scene:SceneObject3D):void