Scripting API Reference - Dungeon Architect (Unity)

1.0.1

Generated by Doxygen 1.8.10

Wed Feb 17 2016 21:12:33

Contents

Chapter 1

Namespace Index

1.1 Packages

Here are the packages with brief descriptions (if available):

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 4

Namespace Documentation

4.1 DungeonArchitect Namespace Reference

Namespaces

- namespace Editors
- namespace Graphs
- namespace Navigation
- namespace Triangulator
- namespace Utils

Classes

- class BlurFilter

  A fast Gaussian blurring filter applied over a 2D data array
- class Cell

  Data-structure to hold the Cell information. A cell is a piece of the dungeon layout and can be either a room or a corridor
- class CellDoor

  Data-structure to hold the door information
- class CellHeightFrameInfo

  Temporary data-structure used while assigning heights on the dungeon.
- class CellHeightNode

  Temporary data-structure to hold the height data of the cell node A graph is build of the dungeon layout while the heights are assigned and this node contains the cell's height information
- class DebugDrawer

  Helper functions to draw debug information of the dungeon layout in the scene view
- class DoorManager

  Manages the doors in the grid based builder
- class Dungeon

  The main dungeon behavior that manages the creation and destruction of dungeons
- class DungeonBuilder

  Builds the layout of the dungeon and emits markers around the layout Implement this class to create your own builder
- class DungeonConfig

  Base dungeon configuration. Create your own implementation of this configuration based on your dungeon builder's needs
- class DungeonEventListener

  Listen to various dungeon events during the build and destroy phase

- class DungeonMarkerEmitter

  Marker Emitters let you emit your own markers anywhere in the map. Implement this class and add it to the Dungeon object to add your own markers right after the dungeon layout is created
- class DungeonModel

  Abstract dungeon model. Create your own implementation of the model depending on your builder's needs
- class DungeonPaintMode

  Manage the editor paint mode so you can paint the layout of you dungeon. You should implement your own paint mode depending on your dungeon builder's data structures and requirements
- class DungeonPaintModeGrid

  Editor tooling for the grid based dungeon builder. Lets you paint with a grid based brush
- class DungeonPropDataAsset

  The data-structure for serializing the theme graph to disk
- class DungeonSceneProvider

  A scene provider instantiates game objects into the scene. Implementations can customize the instantiation process if needed (e.g. object pooling etc)
- class DungeonSceneProviderData

  Meta-data added to each spawned game object in the scene. This is used to identify objects that belong to the dungeons, for later destruction and rebuilding
- class DungeonToolData

  Tool Data represented by the grid based builder
- interface Filter

  A data filter applied over a 2D data array
- class GameObjectPropTypeData

  Game Object node data asset attributes
- class GridCellInfo

  Contains meta data about the cells. This structure is used for caching cell information for faster lookup during and after generation of the dungeon
- class GridDungeonBuilder

  A Dungeon Builder implementation that builds a grid based dungeon.
- class GridDungeonConfig

  The dungeon configuration for the Grid builder
- class GridDungeonModel

  Data model for the grid based dungeon builder
- class GridDungeonModelUtils
- struct IntVector

  Represent an integer vector
- struct IntVector2Key

  Data-structure for IntVector pair. Used for caching
- class LandscapeDataRasterizer

  Manages the landscape data and performs various rasterization algorithms (draw cells, lines etc)
- class LandscapeTexture

  Data-structure to hold the texture settings. This contains enough information to paint the texture on to the terrain
- class LandscapeTransformerGrid

  The terrain modifier that works with the grid based dungeon builder (DungeonBuilderGrid) It modifies the terrain by adjusting the height around the layout of the dungeon and painting it based on the specified texture settings
- class LeftToRightNodeComparer

  Sorts the nodes from left to right based on the X-axis. This is used for sorting the visual nodes for execution, since they are executed from left to right
- class MarkerEmitterCornerBeautifier

  Emits markers to beautify the level around corners based on the surrounding tiles
- class MarkerEmitterEmptySpace

  Emits markers in the nearby empty space of the dungeon layout

- class MarkerEmitterFindLowestPoint

  Finds the lowest dungeon point and emits a marker at that position. Also sets the scale of the marker to match the width / height
- class MarkerEmitterFreeSpaceDecorator

  A more specialized version of the EmptySpace emitter. Emits decorative markers in empty space near the layout
- class NegationVolume

  Negation volumes remove procedural geometries from the scene that lie with it's bounds
- class PlatformVolume

  Platform volumes add a platform in the scene encompassing the volume
- class PooledDungeonSceneProvider

  Implementation of the Scene provider that adds object pooling over the existing functionality. This is useful for quick rebuilding and better performance, as object in the scene are reused while rebuilding, instead of destroying everything and rebuilding
- class PropChildSocketData

  Props can emit new sockets when they are inserted, to add more child props relative to them
- class PropSocket

  The data structure for a marker
- class PropTypeData

  The data structure to hold information about a single node in the asset file
- struct Rectangle

  Represents an integer rectangle
- class SelectorRule

  Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene
- class SpritePropTypeData

  Sprite node data asset attributes
- class StairAdjacencyQueueNode

  Temporary data-structure used while assigning stairs on the dungeon.
- struct StairEdgeInfo

  Data structure to hold the adjacent cells connected to the stairs (entry / exit)
- class StairInfo

  Data-structure to hold the stair information in the grid based builder
- class ThemeOverrideVolume

  Dungeon layout that lies within this volumes bounds picks up the theme set in this volume
- class TransformationRule

  Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene
- class Volume

  A volume is an abstract representation of space in the world. A volume can be scaled and moved around like any other game object and custom functionality can be added to volumes to influence the dungeon with it's spatial volume

Typedefs

- using **PropBySocketType_t** = Dictionary< string, List< PropTypeData >>
- using **PropBySocketTypeByTheme_t** = Dictionary< DungeonPropDataAsset, Dictionary< string, List< PropTypeData >>>

Enumerations

- enum LandscapeTextureType { **Fill**, **Room**, **Corridor**, **Cliff** }

  The type of the texture defined in the landscape paint settings. This determines how the specified texture would be painted in the modified terrain

- enum DungeonModelBuildState {
  Initial, **Separation**, **Triangulation**, **SpanningTree**,
  Corridors, **Complete** }

  The build state used to track the progress
- enum CellType { **Room**, **Corridor**, **CorridorPadding**, **Unknown** }

  The type of cell used in the grid builder

4.1.1 Enumeration Type Documentation

4.1.1.1 enum DungeonArchitect.CellType [strong]

The type of cell used in the grid builder

4.1.1.2 enum DungeonArchitect.DungeonModelBuildState [strong]

The build state used to track the progress

4.1.1.3 enum DungeonArchitect.LandscapeTextureType [strong]

The type of the texture defined in the landscape paint settings. This determines how the specified texture would be painted in the modified terrain

4.2 DungeonArchitect.Editors Namespace Reference

Classes

- class AssetThumbnailCache

  Manages the asset thumbnails to display in the visual nodes
- class CursorDragLink

  Manages a link dragged out of a node with the other end following the mouse cursor
- class DungeonArchitectGraphEditor

  The main editor window for the Theme graph editor. This hosts the graph editor for managing the theme graph
- class DungeonAssetPostprocessor

  An asset processor to create dungeon tags when DungeonArchitect is imported into a new project
- class DungeonEditorHelper

  Utility functions for various editor based features of Dungeon Architect
- class DungeonEditorResources

  The resource filename constants used by dungeon architect editor
- class DungeonObjectTraker

  Tracks active dungeon objects in the scene and finds ones that have the active graph being edited This is used for real-time updates on the dungeon object as the graph is modified from the editor
- class DungeonPaintModeEditor

  Custom property editor for the paint mode object
- class DungeonPaintModeGridEditor

  Custom property editor for the Paint model game object
- class DungeonPropertyEditor

  Custom property editor for the dungeon game object
- class GraphContextMenu

  The context menu shown when the user right clicks on the theme graph editor
- class GraphContextMenuEvent

The graph context menu event data

- class GraphEditor

  The graph editor script for managing a graph. This contains the bulk of the logic for graph editing
- class GraphEditorConstants

  Graph editor constants
- class GraphInputHandler
- class GraphInspector

  Custom property editor for graph objects Shows the graph editor when a theme graph asset is selected
- class GraphLinkRenderer

  Renders the graph link in the graph editor
- class GraphNodeRenderer

  Renders the graph node in the graph editor
- class GraphNodeRendererFactory
- class GraphOperations
- class GraphPinHierarchyComparer

  Sorts the pins based on their owning node's type
- class GraphPinRenderer

  Renders a graph pin hosted inside a node
- class GraphRendererContext

  The rendering context for drawing the theme editor
- class GraphSelectionBox

  Manages the selection box for selecting multiple objects in the graph editor
- class GraphTooltip

  Graph tooltip singleton
- class GraphTooltipRenderer

  Renders a tooltip in the graph editor. The tooltip message is defined in GraphTooltip.message
- class GridDungeonConfigPropertyEditor

  Custom property editor for the grid based dungeon configuration
- class InspectorUtils

  Utility functions for drawing UI in the Inspector window
- class KeyboardState

  Caches the keyboard state
- class LandscapeTextureEditor

  Custom property editor for the Landscape texture data-structure
- class MarkerEmitterNodeEditor

  Custom property editors for MarkerEmitterNode
- class MarkerEmitterNodeRenderer

  Renders a MarkerEmitterNode
- class MarkerNodeEditor

  Custom property editors for MarkerNode
- class MarkerNodeRenderer

  Renders a marker node
- class MeshNodeEditor

  Custom property editors for GameObjectNode
- class MeshNodeRenderer

  Renders a mesh node
- class NegationVolumeEditor

  Custom property editor for Negation volumes
- class NodeDeletionOrderComparer

  Sorts based on the node's Z-index in decending order
- class NodeReversedZIndexComparer

Sorts based on the node's Z-index in decending order

- class NodeZIndexComparer

  Sorts based on the node's Z-index
- class PlaceableNodeEditor

  Custom property editor for placeable node
- class PlatformVolumeEditor

  Custom property editor for Platform volumes
- class SpriteNodeEditor

  Custom property editor for a sprite node
- class SpriteNodeRenderer

  Renders a sprite node
- class ThemeOverrideVolumeEditor

  Custom property editor for Theme override volumes
- class Timer

  Ticks every few milli-seconds
- class VisualNodeEditor

  Custom property editor for visual nodes
- class VisualNodeRenderer

  Renders a visual node
- class VolumeEditor

  Custom property editor for volumes game objects

Enumerations

- enum GraphMenuAction { **AddGameObjectNode**, **AddSpriteNode**, **AddMarkerNode**, **AddMarkerEmitterNode** }

  The type of menu action to perform

4.2.1 Enumeration Type Documentation

4.2.1.1 enum DungeonArchitect.Editors.GraphMenuAction [strong]

The type of menu action to perform

4.3 DungeonArchitect.Graphs Namespace Reference

Classes

- class GameObjectNode
- class Graph

  Theme Graph data structure holds all the theme nodes and their connections
- class GraphCamera

  A camera that manages the graph editor's viewport
- class GraphLink

  A graph link is a directional connection between two graph nodes
- class GraphNode

  Represents a graph node in the theme graph. This is the base class for all graph nodes
- class GraphPin

  A pin is used to connect a link to a node
- class GraphSchema

The graph schema defines the rules of the theme graph

- class IndexCounter

  An ID provider for graph objects
- class MarkerEmitterNode
- class MarkerNode
- class PlaceableNode
- class SpriteNode
- class VisualNode

Enumerations

- enum GraphPinType { **Input**, **Output**, **Unknown** }

  The graph pin type
- enum GraphPinMouseState { **Hover**, **Clicked**, **None** }

  The state of the mouse input on a pin
- enum **DungeonSpriteCollisionType** { **None**, **Box**, **Circle**, **Polygon** }

4.3.1 Enumeration Type Documentation

4.3.1.1 enum DungeonArchitect.Graphs.GraphPinMouseState [strong]

The state of the mouse input on a pin

4.3.1.2 enum DungeonArchitect.Graphs.GraphPinType [strong]

The graph pin type

4.4 DungeonArchitect.Navigation Namespace Reference

Classes

- class Collision2DTriangleProvider
- class CollisionTriangleProvider
- class DungeonNavAgent
- class DungeonNavAgent2D
- class DungeonNavAgent3D
- class DungeonNavMesh
- class LayoutFloorTriangleProvider
- class NavigationBuildInvoker

  Drop this script into your dungeon object and assign the nav mesh prefab to automatically rebuild the nav mesh whenever the dungeon is rebuild (works both with runtime and design time)
- class NavigationTriangleProvider
- class StaticMeshTriangleProvider
- class TerrainTriangleProvider

4.5 DungeonArchitect.Triangulator Namespace Reference

Namespaces

- namespace Geometry

Classes

- class Delauney

  Performs the Delauney triangulation on a set of vertices.

4.6 DungeonArchitect.Triangulator.Geometry Namespace Reference

Classes

- class Edge

  Edge made from two point indexes
- class Point

  2D Point with double precision
- struct Triangle

  Triangle made from three point indexes

4.7 DungeonArchitect.Utils Namespace Reference

Classes

- class Blackboard

  A blackboard holds global data that can be shared across multiple scripts
- class BlackboardDatabase
- class DungeonConstants

  Contains various project specific constants
- class GraphUtils

  Theme graph utility functions
- class InstanceCache

  Caches instances by their name so they can be reused when needed again instead of recreating it
- class MathUtils

  Various math utility functions
- class Matrix

  Utility function to extract and put data into a Matrix4x4 object
- class PMRandom

  A random stream based on normal distribution. Also support uniform distsribution

Chapter 5

Class Documentation

5.1 DungeonArchitect.Editors.AssetThumbnailCache Class Reference

Manages the asset thumbnails to display in the visual nodes

Public Member Functions

- void Reset ()

  Clears all the thumbnail from the cache
- Texture2D GetThumb (Object asset)

  Gets the thumbnail of the specified asset. Tries to retrieve it from the cache, if it was accessed earlier
- void **Update** ()

Properties

- static AssetThumbnailCache Instance `[get]`

  Singleton access

5.1.1 Detailed Description

Manages the asset thumbnails to display in the visual nodes

5.1.2 Member Function Documentation

5.1.2.1 Texture2D DungeonArchitect.Editors.AssetThumbnailCache.GetThumb (Object *asset*)

Gets the thumbnail of the specified asset. Tries to retrieve it from the cache, if it was accessed earlier

Parameters

asset	The asset to get the thumbnail for

Returns

The thumbnail of the asset. If thumbnail cannot be created, returns the defaultTexture instead

5.1.2.2 void DungeonArchitect.Editors.AssetThumbnailCache.Reset ( )

Clears all the thumbnail from the cache

5.1.3 Property Documentation

5.1.3.1 AssetThumbnailCache DungeonArchitect.Editors.AssetThumbnailCache.Instance [static], [get]

Singleton access

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/AssetThumbnailCache.cs

5.2 DungeonArchitect.Utils.Blackboard Class Reference

A blackboard holds global data that can be shared across multiple scripts

Properties

- BlackboardDatabase< int > **IntEntries** [get]
- BlackboardDatabase< float > **FloatEntries** [get]
- BlackboardDatabase< string > **StringEntries** [get]
- BlackboardDatabase< Vector3 > **VectorEntries** [get]
- BlackboardDatabase< IntVector > **IntVectorEntries** [get]

5.2.1 Detailed Description

A blackboard holds global data that can be shared across multiple scripts

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/Blackboard.cs

5.3 DungeonArchitect.Utils.BlackboardDatabase< T > Class Template Reference

Public Member Functions

- **BlackboardDatabase** (T defaultValue)
- void **SetValue** (string key, T value)
- T **GetValue** (string key)

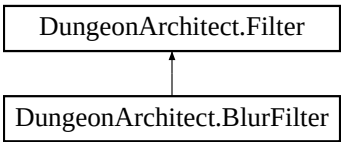
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/Blackboard.cs

5.4 DungeonArchitect.BlurFilter Class Reference

A fast Gaussian blurring filter applied over a 2D data array

Inheritance diagram for DungeonArchitect.BlurFilter:



Public Member Functions

- **BlurFilter** (int radius)
- float[,] **ApplyFilter** (float[,] data)

5.4.1 Detailed Description

A fast Gaussian blurring filter applied over a 2D data array

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Landscape/Filter/BlurFilter.cs

5.5 DungeonArchitect.Cell Class Reference

Data-structure to hold the Cell information. A cell is a piece of the dungeon layout and can be either a room or a corridor

Public Member Functions

- **Cell** (int x, int z, int width, int length)
- override bool **Equals** (System.Object obj)
- override int **GetHashCode** ()

Properties

- int **Id** `[get, set]`
- Rectangle **Bounds** `[get, set]`
- CellType **CellType** `[get, set]`
- bool **UserDefined** `[get, set]`
- HashSet< int > **ConnectedRooms** `[get, set]`
- HashSet< int > **FixedRoomConnections** `[get, set]`
- HashSet< int > **AdjacentCells** `[get, set]`
- IntVector **Center** `[get]`
- Vector3 **CenterF** `[get]`

5.5.1 Detailed Description

Data-structure to hold the Cell information. A cell is a piece of the dungeon layout and can be either a room or a corridor

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.6 DungeonArchitect.CellDoor Class Reference

Data-structure to hold the door information

Public Member Functions

- override string **ToString** ()

Properties

- IntVector[ ] AdjacentTiles `[get]`
  The adjacent tile positions shared by this door (entry / exit tiles)
- int[ ] **AdjacentCells** `[get, set]`

5.6.1 Detailed Description

Data-structure to hold the door information

5.6.2 Property Documentation

5.6.2.1 IntVector [ ] DungeonArchitect.CellDoor.AdjacentTiles `[get]`

The adjacent tile positions shared by this door (entry / exit tiles)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.7 DungeonArchitect.CellHeightFrameInfo Class Reference

Temporary data-structure used while assigning heights on the dungeon.

Public Member Functions

- **CellHeightFrameInfo** (int pCellId, int pCurrentHeight)

Public Attributes

- int **CellId**
- int **CurrentHeight**

5.7.1 Detailed Description

Temporary data-structure used while assigning heights on the dungeon.

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.8 DungeonArchitect.CellHeightNode Class Reference

Temporary data-structure to hold the height data of the cell node A graph is build of the dungeon layout while the heights are assigned and this node contains the cell's height information

Public Attributes

- int **CellId**
- int **Height**
- bool **MarkForIncrease**
- bool **MarkForDecrease**

5.8.1 Detailed Description

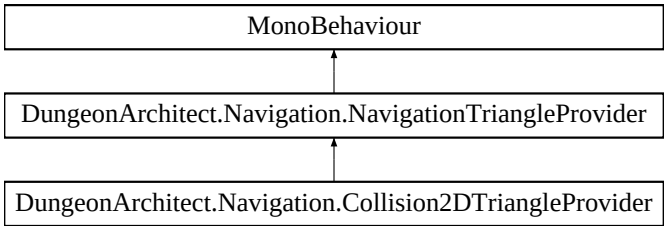
Temporary data-structure to hold the height data of the cell node A graph is build of the dungeon layout while the heights are assigned and this node contains the cell's height information

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.9 DungeonArchitect.Navigation.Collision2DTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.Collision2DTriangleProvider:



Public Member Functions

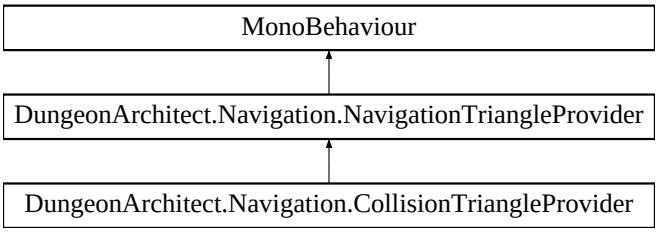
- override void **AddNavTriangles** (List< Triangle3 > triangles)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/TriangleProviders/Collision2DTriangleProvider.cs

5.10 DungeonArchitect.Navigation.CollisionTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.CollisionTriangleProvider:



Public Member Functions

- override void **AddNavTriangles** (List< Triangle3 > triangles)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/TriangleProviders/CollisionTriangleProvider.cs

5.11 DungeonArchitect.Editors.CursorDragLink Class Reference

Manages a link dragged out of a node with the other end following the mouse cursor

Public Member Functions

- delegate void **OnDraggedLinkReleased** (Vector2 mousePositionScreen)
- **CursorDragLink** (GraphEditor graphEditor)
- void **Destroy** ()
- void **Activate** (GraphPin fromPin)
- void **Deactivate** ()
- void **Draw** (GraphRendererContext rendererContext, GraphCamera camera)
- void **HandleInput** (Event e)

Properties

- GraphPin **AttachedPin** `[get]`

Events

- OnDraggedLinkReleased **DraggedLinkReleased**

5.11.1 Detailed Description

Manages a link dragged out of a node with the other end following the mouse cursor

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.12 DungeonArchitect.DebugDrawer Class Reference

Helper functions to draw debug information of the dungeon layout in the scene view

Static Public Member Functions

- static void **DrawCell** (Cell cell, Color color, Vector3 gridScale)
- static void **DrawBounds** (Rectangle bounds, Color color, Vector3 gridScale)
- static void **DrawCellId** (Cell cell, Vector3 gridScale)
- static void **DrawMarker** (PropSocket marker, Color color)
- static void **DrawAdjacentCells** (Cell cell, GridDungeonModel model, Color color)

5.12.1 Detailed Description

Helper functions to draw debug information of the dungeon layout in the scene view

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Dungeon.cs

5.13 DungeonArchitect.Triangulator.Delauney Class Reference

Performs the Delauney triangulation on a set of vertices.

Static Public Member Functions

- static List< Geometry.Triangle > Triangulate (List< Triangulator.Geometry.Point > Vertex)

  Performs Delauney triangulation on a set of points.

5.13.1 Detailed Description

Performs the Delauney triangulation on a set of vertices.

Based on Paul Bourke's "An Algorithm for Interpolating Irregularly-Spaced Data with Applications in Terrain Modelling" http://astronomy.swin.edu.au/~pbourke/modelling/triangulate/

5.13.2 Member Function Documentation

5.13.2.1 static List<Geometry.Triangle> DungeonArchitect.Triangulator.Delauney.Triangulate (List< Triangulator.Geometry.Point > *Vertex*) [static]

Performs Delauney triangulation on a set of points.

The triangulation doesn't support multiple points with the same planar location. Vertex-lists with duplicate points may result in strange triangulation with intersecting edges. To avoid adding multiple points to your vertex-list you can use the following anonymous predicate method:

```
if(!Vertices.Exists(delegate(Triangulator.Geometry.Point p) { return pNew.Equals2D(p); }))
    Vertices.Add(pNew);
```

The triangulation algorithm may be described in pseudo-code as follows:

```
subroutine Triangulate
input : vertex list
output : triangle list
   initialize the triangle list
   determine the supertriangle
   add supertriangle vertices to the end of the vertex list
   add the supertriangle to the triangle list
   for each sample point in the vertex list
      initialize the edge buffer
```

```
      for each triangle currently in the triangle list
         calculate the triangle circumcircle center and radius
         if the point lies in the triangle circumcircle then
            add the three triangle edges to the edge buffer
            remove the triangle from the triangle list
         endif
      endfor
      delete all doubly specified edges from the edge buffer
         this leaves the edges of the enclosing polygon only
      add to the triangle list all triangles formed between the point
         and the edges of the enclosing polygon
   endfor
   remove any triangles from the triangle list that use the supertriangle vertices
   remove the supertriangle vertices from the vertex list
end
```

Parameters

Vertex	List of vertices to triangulate.

Returns

Triangles referencing vertex indices arranged in clockwise order

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Triangulator/Delauney.cs

5.14 DungeonArchitect.DoorManager Class Reference

Manages the doors in the grid based builder

Public Member Functions

- void **Clear** ()
- CellDoor CreateDoor (IntVector p1, IntVector p2, int cellId1, int cellId2)

  Creates a door between the two grid points
- bool ContainsDoorBetweenCells (int cellA, int cellB)

  Check if a door exists between the two cells
- bool **ContainsDoor** (int x1, int z1, int x2, int z2)

Properties

- CellDoor[] Doors `[get]`

  List of registered doors

5.14.1 Detailed Description

Manages the doors in the grid based builder

5.14.2 Member Function Documentation

5.14.2.1 bool DungeonArchitect.DoorManager.ContainsDoorBetweenCells (int *cellA*, int *cellB*)

Check if a door exists between the two cells

Parameters

cellA	Cell Id of the first cell
cellB	Cell Id of the second cell

Returns

5.14.2.2 CellDoor DungeonArchitect.DoorManager.CreateDoor (IntVector *p1*, IntVector *p2*, int *cellId1*, int *cellId2*)

Creates a door between the two grid points

Parameters

p1	The grid poition 1
p2	The grid poition 2
cellId1	Cell Id of the first adjacent cell
cellId2	Cell Id of the second adjacent cell

Returns

5.14.3 Property Documentation

5.14.3.1 CellDoor [ ] DungeonArchitect.DoorManager.Doors [get]

List of registered doors

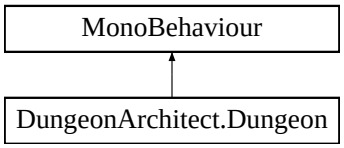
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.15 DungeonArchitect.Dungeon Class Reference

The main dungeon behavior that manages the creation and destruction of dungeons

Inheritance diagram for DungeonArchitect.Dungeon:



Public Member Functions

- void Build ()

  Builds the complete dungeon (layout and visual phase)
- void ReapplyTheme ()

  Runs the theming engine over the existing layout to rebuild the game objects from the theme file. The layout is not built in this stage
- void DestroyDungeon ()

Destroys the dungeon

- void RequestRebuild ()

  Requests the dungeon to be rebuilt in the next update phase
- void AddPaintCell (IntVector location, bool automaticRebuild)

  Registers a painted cell
- void RemovePaintCell (IntVector location, bool automaticRebuild)

  Remove a previous painted cell
- void ClearToolOverlayData (bool automaticRebuild)

  Clears all overlay data

Public Attributes

- bool **debugDraw** = false
- List< Graph > dungeonThemes

  List of themes assigned to this dungeon

Properties

- DungeonModel ActiveModel `[get]`

  Active model used by the dungeon
- bool IsLayoutBuilt `[get]`

  Flag to check if the layout has been built. This is used to quickly reapply the theme after the theme graph has been modified, without rebuilding the layout, if it has already been built
- DungeonConfig **Config** `[get]`

5.15.1 Detailed Description

The main dungeon behavior that manages the creation and destruction of dungeons

5.15.2 Member Function Documentation

5.15.2.1 void DungeonArchitect.Dungeon.AddPaintCell (IntVector *location*, bool *automaticRebuild*)

Registers a painted cell

Parameters

location	the location of the painted cell, in grid cooridnates
automatic↩ Rebuild	if true, the dungeon would be rebuilt, if the data model has changed due to this request

5.15.2.2 void DungeonArchitect.Dungeon.Build ( )

Builds the complete dungeon (layout and visual phase)

5.15.2.3 void DungeonArchitect.Dungeon.ClearToolOverlayData (bool *automaticRebuild*)

Clears all overlay data

Parameters

automatic↩ Rebuild	

5.15.2.4 void DungeonArchitect.Dungeon.DestroyDungeon ( )

Destroys the dungeon

5.15.2.5 void DungeonArchitect.Dungeon.ReapplyTheme ( )

Runs the theming engine over the existing layout to rebuild the game objects from the theme file. The layout is not built in this stage

5.15.2.6 void DungeonArchitect.Dungeon.RemovePaintCell (IntVector *location,* bool *automaticRebuild*)

Remove a previous painted cell

Parameters

location	the location of the painted cell to remove, in grid cooridnates
automatic↩ Rebuild	if true, the dungeon would be rebuilt, if the data model has changed due to this request

5.15.2.7 void DungeonArchitect.Dungeon.RequestRebuild ( )

Requests the dungeon to be rebuilt in the next update phase

5.15.3 Member Data Documentation

5.15.3.1 List<Graph> DungeonArchitect.Dungeon.dungeonThemes

List of themes assigned to this dungeon

5.15.4 Property Documentation

5.15.4.1 DungeonModel DungeonArchitect.Dungeon.ActiveModel [get]

Active model used by the dungeon

5.15.4.2 bool DungeonArchitect.Dungeon.IsLayoutBuilt [get]

Flag to check if the layout has been built. This is used to quickly reapply the theme after the theme graph has been modified, without rebuilding the layout, if it has already been built

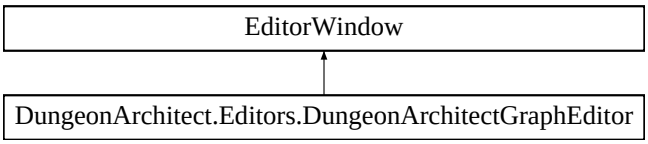
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Dungeon.cs

5.16 DungeonArchitect.Editors.DungeonArchitectGraphEditor Class Reference

The main editor window for the Theme graph editor. This hosts the graph editor for managing the theme graph

Inheritance diagram for DungeonArchitect.Editors.DungeonArchitectGraphEditor:



Public Member Functions

- void **Init** (Graph graph)

Properties

- GraphEditor **GraphEditor** `[get]`

5.16.1 Detailed Description

The main editor window for the Theme graph editor. This hosts the graph editor for managing the theme graph

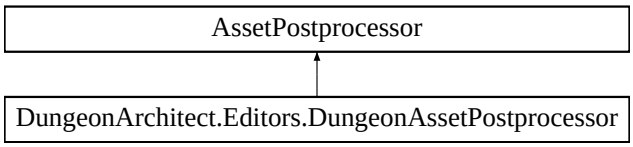
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/DungeonArchitectGraphEditor.cs

5.17 DungeonArchitect.Editors.DungeonAssetPostprocessor Class Reference

An asset processor to create dungeon tags when DungeonArchitect is imported into a new project

Inheritance diagram for DungeonArchitect.Editors.DungeonAssetPostprocessor:



5.17.1 Detailed Description

An asset processor to create dungeon tags when DungeonArchitect is imported into a new project

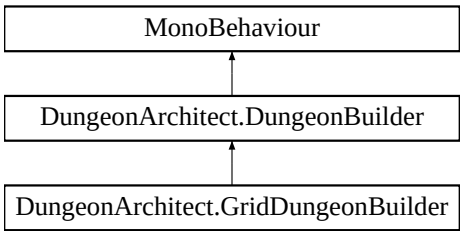
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/DungeonAssetPostprocessor.cs

5.18 DungeonArchitect.DungeonBuilder Class Reference

Builds the layout of the dungeon and emits markers around the layout Implement this class to create your own builder

Inheritance diagram for DungeonArchitect.DungeonBuilder:



Public Member Functions

- virtual void BuildDungeon (DungeonConfig config, DungeonModel model)

  Builds the dungeon layout
- virtual void **OnDestroyed** ()
- virtual void EmitMarkers ()

  Emit markers defined by this builder
- void EmitCustomMarkers ()

  Emit markers defined by the user (implementation of DungeonMarkerEmitter)
- void **EmitMarker** (string SocketType, Matrix4x4 transform, IntVector gridPosition, int cellId)
- virtual void **ApplyTheme** (List< DungeonPropDataAsset > Themes, DungeonSceneProvider SceneProvider)

Protected Member Functions

- void **ClearSockets** ()
- void **EmitMarker** (string SocketType, Matrix4x4 _transform, int count, Vector3 InterOffset, IntVector gridPosition, int cellId)
- void **EmitMarker** (List< PropSocket > pPropSockets, string SocketType, Matrix4x4 transform, IntVector gridPosition, int cellId)
- void **CreatePropLookup** (DungeonPropDataAsset PropAsset, PropBySocketTypeByTheme_t PropBySocketTypeByTheme)
- DungeonPropDataAsset **GetBestMatchedTheme** (List< DungeonPropDataAsset > Themes, PropSocket socket, PropBySocketTypeByTheme_t PropBySocketTypeByTheme)

Protected Attributes

- DungeonConfig **config**
- PMRandom **nrandom**
- PMRandom **random**
- DungeonModel **model**
- Vector3 **GridToMeshScale**
- List< PropSocket > **PropSockets** = new List<PropSocket>()
- int **_SocketIdCounter** = 0
- Blackboard **blackboard** = new Blackboard()

Properties

- bool **IsLayoutBuilt** `[get]`
- DungeonArchitect.DungeonModel **Model** `[get]`
- Blackboard **Blackboard** `[get]`

5.18.1 Detailed Description

Builds the layout of the dungeon and emits markers around the layout Implement this class to create your own builder

5.18.2 Member Function Documentation

5.18.2.1 virtual void DungeonArchitect.DungeonBuilder.BuildDungeon (DungeonConfig *config*, DungeonModel *model*) [virtual]

Builds the dungeon layout

Parameters

config	The builder configuration
model	The dungeon model that the builder will populate

Reimplemented in DungeonArchitect.GridDungeonBuilder.

5.18.2.2 void DungeonArchitect.DungeonBuilder.EmitCustomMarkers ( )

Emit markers defined by the user (implementation of DungeonMarkerEmitter)

5.18.2.3 virtual void DungeonArchitect.DungeonBuilder.EmitMarkers ( ) [virtual]

Emit markers defined by this builder

Reimplemented in DungeonArchitect.GridDungeonBuilder.

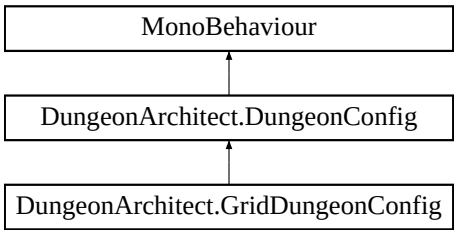
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonBuilder.cs

5.19 DungeonArchitect.DungeonConfig Class Reference

Base dungeon configuration. Create your own implementation of this configuration based on your dungeon builder's needs

Inheritance diagram for DungeonArchitect.DungeonConfig:



Public Attributes

- uint **Seed** = 0
- Vector3 **GridCellSize** = new Vector3(1, 1, 1)

5.19.1 Detailed Description

Base dungeon configuration. Create your own implementation of this configuration based on your dungeon builder's needs

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonConfig.cs

5.20 DungeonArchitect.Utils.DungeonConstants Class Reference

Contains various project specific constants

Static Public Attributes

- static readonly string **ST_FENCE** = "Fence"
- static readonly string **ST_FENCESEPARATOR** = "FenceSeparator"
- static readonly string **ST_DOOR** = "Door"
- static readonly string **ST_WALL** = "Wall"
- static readonly string **ST_WALLSEPARATOR** = "WallSeparator"
- static readonly string **ST_GROUND** = "Ground"
- static readonly string **ST_STAIR** = "Stair"
- static readonly string **ST_STAIR2X** = "Stair2X"
- static readonly string **ST_WALLHALF** = "WallHalf"
- static readonly string **ST_WALLHALFSEPARATOR** = "WallHalfSeparator"
- static readonly string **ST_NONE** = "None"
- static readonly string **ST_ROOMWALL** = "RoomWall"
- static readonly string **ST_ROOMWALLSEPARATOR** = "RoomWallSeparator"
- static readonly string **ST_ROOMOPENSPACE** = "RoomOpenSpace"
- static readonly string **ST_LIGHT** = "Light"

5.20.1 Detailed Description

Contains various project specific constants

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/DungeonConstants.cs

5.21 DungeonArchitect.Editors.DungeonEditorHelper Class Reference

Utility functions for various editor based features of Dungeon Architect

Static Public Member Functions

- static bool OnOpenAsset (int instanceID, int line)

  Handle opening of theme graphs. When the user right clicks on the theme graph and selects open, the graph is shown in the theme editor
- static void ShowEditor (Graph graph)

  Shows the dungeon theme editor window and loads the specified graph into it
- static string MakeFilenameUnique (string dir, string filename)

Creates a unique filename in the specified asset directory

- static void AddToAsset (Graph graph, GraphNode node)

  Adds the node to the graph asset so it can be serialized to disk
- static void AddToAsset (Graph graph, GraphLink link)

  Adds the node to the graph asset so it can be serialized to disk
- static void MarkAsDirty (Graph graph)

  Marks the graph as dirty so that it is serialized to disk again when saved
- static void CreateEditorTag (string tag)

  Creates an editor tag
- static void **_Advanced_RecreateGraphNodeIds** ()

5.21.1 Detailed Description

Utility functions for various editor based features of Dungeon Architect

5.21.2 Member Function Documentation

5.21.2.1 static void DungeonArchitect.Editors.DungeonEditorHelper.AddToAsset (Graph *graph*, GraphNode *node*) [static]

Adds the node to the graph asset so it can be serialized to disk

Parameters

graph	The owning graph
node	The node to add to the graph

5.21.2.2 static void DungeonArchitect.Editors.DungeonEditorHelper.AddToAsset (Graph *graph*, GraphLink *link*) [static]

Adds the node to the graph asset so it can be serialized to disk

Parameters

graph	The owning graph
link	The link to add to the graph

5.21.2.3 static void DungeonArchitect.Editors.DungeonEditorHelper.CreateEditorTag (string *tag*) [static]

Creates an editor tag

Parameters

tag	

5.21.2.4 static string DungeonArchitect.Editors.DungeonEditorHelper.MakeFilenameUnique (string *dir*, string *filename*) [static]

Creates a unique filename in the specified asset directory

Parameters

dir	The target directory this file will be placed in. Used for finding non-colliding filenames
filename	The prefered filename. Will add incremental numbers to it till it finds a free filename

Returns

A filename not currently used in the specified directory

5.21.2.5 static void DungeonArchitect.Editors.DungeonEditorHelper.MarkAsDirty (Graph *graph*) [static]

Marks the graph as dirty so that it is serialized to disk again when saved

Parameters

graph	

5.21.2.6 static bool DungeonArchitect.Editors.DungeonEditorHelper.OnOpenAsset (int *instanceID,* int *line*) [static]

Handle opening of theme graphs. When the user right clicks on the theme graph and selects open, the graph is shown in the theme editor

Parameters

instanceID	
line	

Returns

true if trying to open a dungeon theme, indicating that it has been handled. false otherwise

5.21.2.7 static void DungeonArchitect.Editors.DungeonEditorHelper.ShowEditor (Graph *graph*) [static]

Shows the dungeon theme editor window and loads the specified graph into it

Parameters

graph	The graph to load in the dungeon theme editor window

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/DungeonEditorHelper.cs

5.22 DungeonArchitect.Editors.DungeonEditorResources Class Reference

The resource filename constants used by dungeon architect editor

Public Member Functions

- T GetResource< T > (string path)

  Loads and retrieves the resource of the specified type

Static Public Attributes

- static readonly string **TEXTURE_GO_NODE_SELECTION** = "graph_node_go_selection"
- static readonly string **TEXTURE_GO_NODE_FRAME** = "graph_node_go_frame"
- static readonly string **TEXTURE_GO_NODE_BG** = "graph_node_go_bg"
- static readonly string **TEXTURE_PIN_GLOW** = "graph_pin_glow"
- static readonly string **TEXTURE_MARKER_NODE_SELECTION** = "graph_node_marker_selection"
- static readonly string **TEXTURE_MARKER_NODE_FRAME** = "graph_node_marker_frame"
- static readonly string **TEXTURE_MARKER_EMITTER_NODE_FRAME** = "graph_node_marker_emitter_↩ frame"
- static readonly string **TEXTURE_MARKER_NODE_BG** = "graph_node_marker_bg"
- static readonly string **GUI_STYLE_BANNER** = "DABannerStyle"

5.22.1 Detailed Description

The resource filename constants used by dungeon architect editor

5.22.2 Member Function Documentation

5.22.2.1 T DungeonArchitect.Editors.DungeonEditorResources.GetResource< T > (string *path*)

Loads and retrieves the resource of the specified type

Template Parameters

T	The type of the resource (e.g. Texture2D)

Parameters

path	The path to load the resource from. Usually specified from the constants defined in this class

Returns

The loaded resource

Type Constraints

T **:** ***Object***

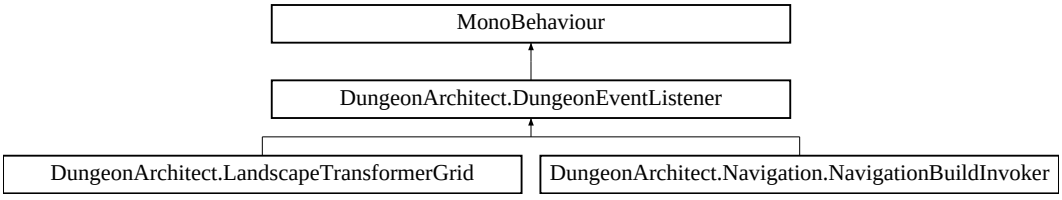
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/DungeonEditorResources.cs

5.23 DungeonArchitect.DungeonEventListener Class Reference

Listen to various dungeon events during the build and destroy phase

Inheritance diagram for DungeonArchitect.DungeonEventListener:



Public Member Functions

- virtual void OnPostDungeonLayoutBuild (Dungeon dungeon, DungeonModel model)

  Called after the layout is built in memory, but before the markers are emitted
- virtual void OnPostDungeonBuild (Dungeon dungeon, DungeonModel model)

  Called after the dungeon is completely built
- virtual void OnDungeonDestroyed (Dungeon dungeon)

  Called after the dungeon is destroyed

5.23.1 Detailed Description

Listen to various dungeon events during the build and destroy phase

5.23.2 Member Function Documentation

5.23.2.1 virtual void DungeonArchitect.DungeonEventListener.OnDungeonDestroyed (Dungeon *dungeon*) [virtual]

Called after the dungeon is destroyed

Parameters

model	The dungeon model

5.23.2.2 virtual void DungeonArchitect.DungeonEventListener.OnPostDungeonBuild (Dungeon *dungeon,* DungeonModel *model*) [virtual]

Called after the dungeon is completely built

Parameters

model	The dungeon model

Reimplemented in DungeonArchitect.Navigation.NavigationBuildInvoker.

5.23.2.3 virtual void DungeonArchitect.DungeonEventListener.OnPostDungeonLayoutBuild (Dungeon *dungeon,* DungeonModel *model*) [virtual]

Called after the layout is built in memory, but before the markers are emitted

Parameters

model	The dungeon model

Reimplemented in DungeonArchitect.LandscapeTransformerGrid.

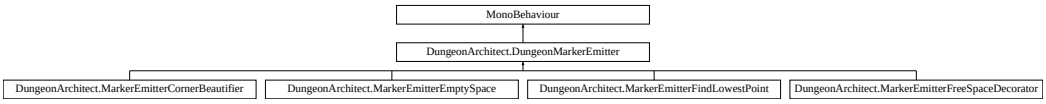
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonEventListener.cs

5.24 DungeonArchitect.DungeonMarkerEmitter Class Reference

Marker Emitters let you emit your own markers anywhere in the map. Implement this class and add it to the Dungeon object to add your own markers right after the dungeon layout is created

Inheritance diagram for DungeonArchitect.DungeonMarkerEmitter:



Public Member Functions

- virtual void EmitMarkers (DungeonBuilder builder)

  Called by the dungeon object right after the dungeon is created

5.24.1 Detailed Description

Marker Emitters let you emit your own markers anywhere in the map. Implement this class and add it to the Dungeon object to add your own markers right after the dungeon layout is created

5.24.2 Member Function Documentation

5.24.2.1 virtual void DungeonArchitect.DungeonMarkerEmitter.EmitMarkers (DungeonBuilder *builder*) [virtual]

Called by the dungeon object right after the dungeon is created

Parameters

builder	reference to the builder object used to build the dungeon

Reimplemented in DungeonArchitect.MarkerEmitterEmptySpace, DungeonArchitect.MarkerEmitterFreeSpaceDecorator, DungeonArchitect.MarkerEmitterFindLowestPoint, and DungeonArchitect.MarkerEmitterCornerBeautifier.

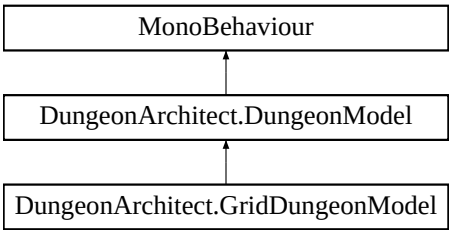
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonMarkerEmitter.cs

5.25 DungeonArchitect.DungeonModel Class Reference

Abstract dungeon model. Create your own implementation of the model depending on your builder's needs

Inheritance diagram for DungeonArchitect.DungeonModel:



Public Member Functions

- virtual void **ResetModel** ()

Public Attributes

- DungeonToolData **ToolData** = new DungeonToolData()

5.25.1 Detailed Description

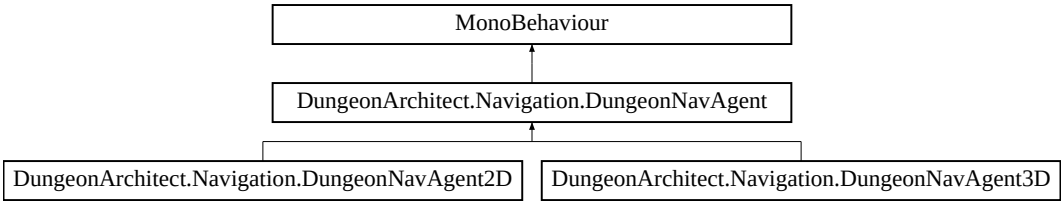
Abstract dungeon model. Create your own implementation of the model depending on your builder's needs

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonModel.cs

5.26 DungeonArchitect.Navigation.DungeonNavAgent Class Reference

Inheritance diagram for DungeonArchitect.Navigation.DungeonNavAgent:



Public Member Functions

- abstract void **Resume** ()
- abstract void **Stop** ()
- abstract float **GetRemainingDistance** ()

Properties

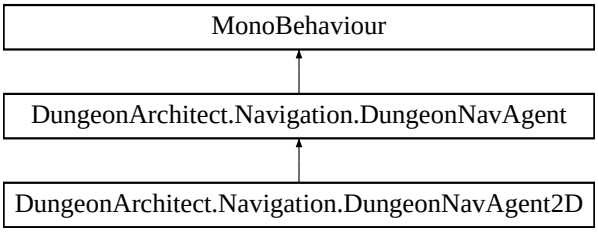
- abstract Vector3 **Destination** `[get, set]`
- abstract Vector3 **Velocity** `[get, set]`
- abstract Vector3 **Direction** `[get]`

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/DungeonNavAgent.cs

5.27 DungeonArchitect.Navigation.DungeonNavAgent2D Class Reference

Inheritance diagram for DungeonArchitect.Navigation.DungeonNavAgent2D:



Public Member Functions

- override void **Stop** ()
- override void **Resume** ()
- override float **GetRemainingDistance** ()

Static Public Member Functions

- static SharpNav.Geometry.Vector3 **ToSV3** (Vector3 v)
- static Vector3 **ToV3** (SharpNav.Geometry.Vector3 v)

Public Attributes

- float **radius** = 0.5f
- float **height** = 1f
- float **maxAcceleration** = 8
- float **maxSpeed** = 3f
- float **collisionQueryRange** = 4
- float **pathOptimizationRange** = 15
- float **separationWeight** = 3
- Vector2 **navAgentCollisionOffset**
- float **updateFrequency** = 2

Properties

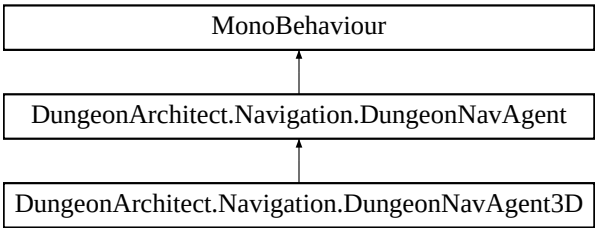
- DungeonNavMesh **NavMesh** `[get]`
- override Vector3 **Destination** `[get, set]`
- override Vector3 **Velocity** `[get, set]`
- override Vector3 **Direction** `[get]`
- float **DesiredSpeed** `[get]`

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/DungeonNavAgent2D.cs

5.28 DungeonArchitect.Navigation.DungeonNavAgent3D Class Reference

Inheritance diagram for DungeonArchitect.Navigation.DungeonNavAgent3D:



Public Member Functions

- override void **Stop** ()
- override void **Resume** ()
- override float **GetRemainingDistance** ()

Static Public Member Functions

- static SharpNav.Geometry.Vector3 **ToSV3** (Vector3 v)
- static Vector3 **ToV3** (SharpNav.Geometry.Vector3 v)

Public Attributes

- float **radius** = 0.5f
- float **height** = 1f
- float **maxAcceleration** = 8
- float **maxSpeed** = 3f
- float **collisionQueryRange** = 4
- float **pathOptimizationRange** = 15
- float **separationWeight** = 3
- float **gravity** = -10
- float **updateFrequency** = 2

Properties

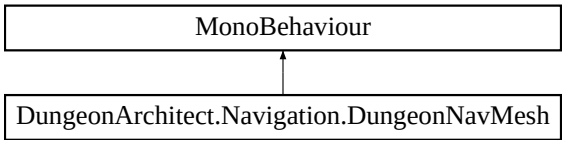
- DungeonNavMesh **NavMesh** `[get]`
- override Vector3 **Destination** `[get, set]`
- override Vector3 **Velocity** `[get, set]`
- override Vector3 **Direction** `[get]`
- float **DesiredSpeed** `[get]`

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/DungeonNavAgent3D.cs

5.29 DungeonArchitect.Navigation.DungeonNavMesh Class Reference

Inheritance diagram for DungeonArchitect.Navigation.DungeonNavMesh:



Public Member Functions

- void **SetNavMeshVisible** (bool show)
- void **Build** ()

Static Public Member Functions

- static Vector3 **ToV3** (SVector3 v)

Public Attributes

- float **agentHeight** = 2
- float **agentRadius** = 0.5f
- float **agentClimbHeight** = 0.5f
- float **cellSize** = 0.2f
- int **maxCrowdAgents** = 50
- Mesh **visualization**
- Color **visualizationColor** = new Color(0, 0.5f, 1, 0.25f)
- bool **visualize2D** = false
- Crowd **crowd**

Properties

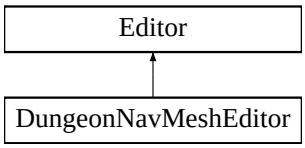
- SharpNav.NavMesh **NavMesh** `[get]`
- SharpNav.NavMeshQuery **NavMeshQuery** `[get]`
- Crowd **Crowd** `[get]`
- SharpNav.PolyMesh **PolyMesh** `[get]`
- SharpNav.PolyMeshDetail **PolyMeshDetail** `[get]`

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/DungeonNavMesh.cs

5.30 DungeonNavMeshEditor Class Reference

Inheritance diagram for DungeonNavMeshEditor:



Public Member Functions

- void **OnEnable** ()
- void **OnDisable** ()
- override void **OnInspectorGUI** ()

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Navigation/DungeonNavMeshEditor.cs

5.31 DungeonArchitect.Editors.DungeonObjectTraker Class Reference

Tracks active dungeon objects in the scene and finds ones that have the active graph being edited This is used for real-time updates on the dungeon object as the graph is modified from the editor

Public Member Functions

- void **Update** ()
- void RequestRebuild ()

  Rebuilds the dungeons that reference the theme graphs tracked by this object

Properties

- Graph ActiveGraph `[get, set]`

  The active graph being edited by the theme graph editor
- Dungeon[] Dungeons `[get]`

  The dungeon objects in the scene that uses the graph tracked by this object

5.31.1 Detailed Description

Tracks active dungeon objects in the scene and finds ones that have the active graph being edited This is used for real-time updates on the dungeon object as the graph is modified from the editor

5.31.2 Member Function Documentation

5.31.2.1 void DungeonArchitect.Editors.DungeonObjectTraker.RequestRebuild ( )

Rebuilds the dungeons that reference the theme graphs tracked by this object

5.31.3 Property Documentation

5.31.3.1 Graph DungeonArchitect.Editors.DungeonObjectTraker.ActiveGraph [get], [set]

The active graph being edited by the theme graph editor

5.31.3.2 Dungeon [ ] DungeonArchitect.Editors.DungeonObjectTraker.Dungeons [get]

The dungeon objects in the scene that uses the graph tracked by this object

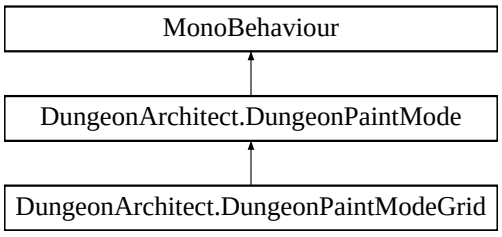
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.32 DungeonArchitect.DungeonPaintMode Class Reference

Manage the editor paint mode so you can paint the layout of you dungeon. You should implement your own paint mode depending on your dungeon builder's data structures and requirements

Inheritance diagram for DungeonArchitect.DungeonPaintMode:



Public Member Functions

- DungeonConfig GetDungeonConfig ()

  Gets the configuration of the dungeon
- DungeonModel GetDungeonModel ()

  Gets the model used by the owning dungeon
- Dungeon GetDungeon ()

  Gets the owning dungeon
- T **GetSiblingComponent**< **T** > ()

Protected Attributes

- Dungeon **dungeon**
- DungeonModel **dungeonModel**
- DungeonConfig **dungeonConfig**

5.32.1 Detailed Description

Manage the editor paint mode so you can paint the layout of you dungeon. You should implement your own paint mode depending on your dungeon builder's data structures and requirements

5.32.2 Member Function Documentation

5.32.2.1 Dungeon DungeonArchitect.DungeonPaintMode.GetDungeon ( )

Gets the owning dungeon

Returns

The owning dungeon

5.32.2.2 DungeonConfig DungeonArchitect.DungeonPaintMode.GetDungeonConfig ( )

Gets the configuration of the dungeon

Returns

5.32.2.3 DungeonModel DungeonArchitect.DungeonPaintMode.GetDungeonModel ( )

Gets the model used by the owning dungeon

Returns

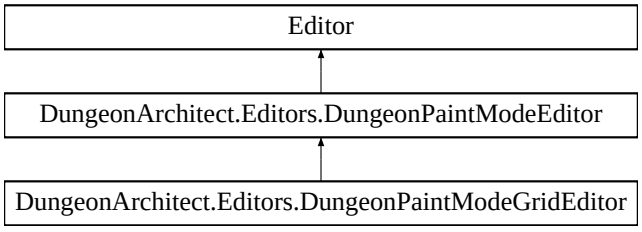
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonPaintMode.cs

5.33 DungeonArchitect.Editors.DungeonPaintModeEditor Class Reference

Custom property editor for the paint mode object

Inheritance diagram for DungeonArchitect.Editors.DungeonPaintModeEditor:



Protected Member Functions

- virtual void **SceneGUI** (SceneView sceneview)

5.33.1 Detailed Description

Custom property editor for the paint mode object

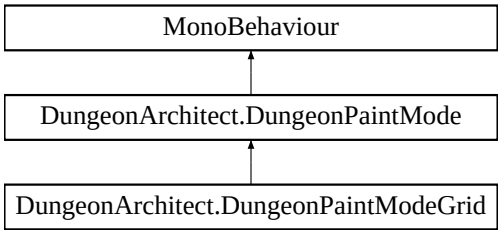
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/DungeonPaintModeEditor.cs

5.34 DungeonArchitect.DungeonPaintModeGrid Class Reference

Editor tooling for the grid based dungeon builder. Lets you paint with a grid based brush

Inheritance diagram for DungeonArchitect.DungeonPaintModeGrid:



Public Member Functions

- float **GetCursorHeight** ()
- void **SetElevationDelta** (int delta)
- GridDungeonModel **GetDungeonModelGrid** ()

Public Attributes

- int cursorLogicalHeight = 0

  The height of the cursor in grid cooridnates. Can also be changed with the mouse wheel in the editor when activated
- float overlayOpacity = 0.1f

  The opacity of the overlay colored tiles
- bool mode2D = false

  Indicates if the painting is to be done in 2D mode (for 2D dungeons) This flag is used for the editor tooling. The model still stores it in 3D
- int brushSize = 1

  The size of the brush. This would create a brush of size NxN

Additional Inherited Members

5.34.1 Detailed Description

Editor tooling for the grid based dungeon builder. Lets you paint with a grid based brush

5.34.2 Member Data Documentation

5.34.2.1 int DungeonArchitect.DungeonPaintModeGrid.brushSize = 1

The size of the brush. This would create a brush of size NxN

5.34.2.2 int DungeonArchitect.DungeonPaintModeGrid.cursorLogicalHeight = 0

The height of the cursor in grid cooridnates. Can also be changed with the mouse wheel in the editor when activated

5.34.2.3 bool DungeonArchitect.DungeonPaintModeGrid.mode2D = false

Indicates if the painting is to be done in 2D mode (for 2D dungeons) This flag is used for the editor tooling. The model still stores it in 3D

5.34.2.4 float DungeonArchitect.DungeonPaintModeGrid.overlayOpacity = 0.1f

The opacity of the overlay colored tiles

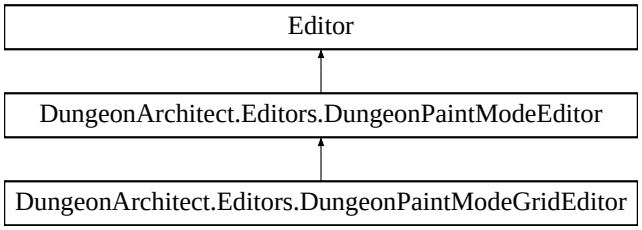
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/PaintModes/DungeonPaintModeGrid.cs

5.35 DungeonArchitect.Editors.DungeonPaintModeGridEditor Class Reference

Custom property editor for the Paint model game object

Inheritance diagram for DungeonArchitect.Editors.DungeonPaintModeGridEditor:



Public Member Functions

- override void **OnInspectorGUI** ()

Protected Member Functions

- override void **SceneGUI** (SceneView sceneview)

5.35.1 Detailed Description

Custom property editor for the Paint model game object

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/PaintModes/DungeonPaintModeGridEditor.cs

5.36 DungeonArchitect.DungeonPropDataAsset Class Reference

The data-structure for serializing the theme graph to disk

Public Member Functions

- void **BuildFromGraph** (Graph graph)

Public Attributes

- List< PropTypeData > **Props** = new List<PropTypeData>()

5.36.1 Detailed Description

The data-structure for serializing the theme graph to disk

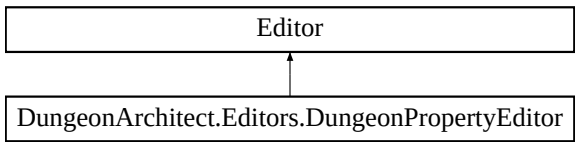
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonPropDataAsset.cs

5.37 DungeonArchitect.Editors.DungeonPropertyEditor Class Reference

Custom property editor for the dungeon game object

Inheritance diagram for DungeonArchitect.Editors.DungeonPropertyEditor:



Public Member Functions

- override void **OnInspectorGUI** ()

5.37.1 Detailed Description

Custom property editor for the dungeon game object

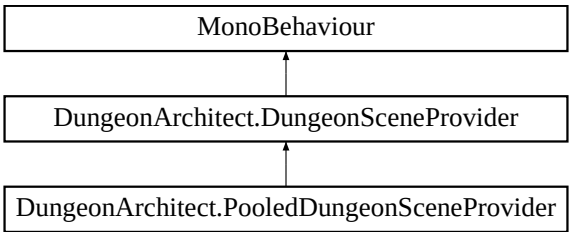
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/DungeonPropertyEditor.cs

5.38 DungeonArchitect.DungeonSceneProvider Class Reference

A scene provider instantiates game objects into the scene. Implementations can customize the instantiation process if needed (e.g. object pooling etc)

Inheritance diagram for DungeonArchitect.DungeonSceneProvider:



Public Member Functions

- virtual void OnDungeonBuildStart ()

  Called when build is started
- virtual void OnDungeonBuildStop ()

  Called after build has ended
- virtual void AddGameObject (GameObjectPropTypeData gameObjectProp, Matrix4x4 transform)

  Request the creation of a game object
- virtual void AddSprite (SpritePropTypeData spriteProp, Matrix4x4 transform)

  Request the creation of a sprite object

Public Attributes

- GameObject itemParent

  The parent for all spawned game objects. Assign this to create all spawned objects underneath it to avoid cluttering up the hierarchy

Protected Member Functions

- void **Initialize** ()
- GameObject **BuildGameObject** (GameObjectPropTypeData gameObjectProp, Matrix4x4 transform)
- void **FlipSpriteTransform** (ref Matrix4x4 transform, Sprite sprite)
- void **FlipSpritePosition** (ref Matrix4x4 transform)
- void **FlipSpritePosition** (ref Vector3 position)
- GameObject **BuildSpriteObject** (SpritePropTypeData spriteData, Matrix4x4 transform, string NodeId)
- void **SetTransform** (Transform transform, Matrix4x4 matrix)

Protected Attributes

- DungeonConfig config

  Dungeon config used by the builder
- Dungeon dungeon

  The owning dungeon actor reference
- Vector3 **_position** = new Vector3()
- Quaternion **_rotation** = new Quaternion()
- Vector3 **_scale** = new Vector3()

5.38.1 Detailed Description

A scene provider instantiates game objects into the scene. Implementations can customize the instantiation process if needed (e.g. object pooling etc)

5.38.2 Member Function Documentation

5.38.2.1 virtual void DungeonArchitect.DungeonSceneProvider.AddGameObject (GameObjectPropTypeData *gameObjectProp*, Matrix4x4 *transform*) [virtual]

Request the creation of a game object

Parameters

gameObjectProp	The template to use for instantiation
transform	The transform of the instantiated game object

Reimplemented in DungeonArchitect.PooledDungeonSceneProvider.

5.38.2.2 virtual void DungeonArchitect.DungeonSceneProvider.AddSprite (SpritePropTypeData *spriteProp*, Matrix4x4 *transform*) [virtual]

Request the creation of a sprite object

Parameters

spriteProp	The sprite game object template reference
transform	The transform of the prop

Reimplemented in DungeonArchitect.PooledDungeonSceneProvider.

5.38.2.3 virtual void DungeonArchitect.DungeonSceneProvider.OnDungeonBuildStart ( ) [virtual]

Called when build is started

Reimplemented in DungeonArchitect.PooledDungeonSceneProvider.

5.38.2.4 virtual void DungeonArchitect.DungeonSceneProvider.OnDungeonBuildStop ( ) [virtual]

Called after build has ended

Reimplemented in DungeonArchitect.PooledDungeonSceneProvider.

5.38.3 Member Data Documentation

5.38.3.1 DungeonConfig DungeonArchitect.DungeonSceneProvider.config [protected]

Dungeon config used by the builder

5.38.3.2 Dungeon DungeonArchitect.DungeonSceneProvider.dungeon [protected]

The owning dungeon actor reference

5.38.3.3 GameObject DungeonArchitect.DungeonSceneProvider.itemParent

The parent for all spawned game objects. Assign this to create all spawned objects underneath it to avoid cluttering up the hierarchy

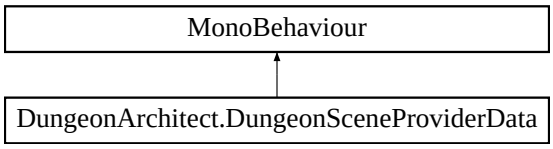
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonSceneProvider.cs

5.39 DungeonArchitect.DungeonSceneProviderData Class Reference

Meta-data added to each spawned game object in the scene. This is used to identify objects that belong to the dungeons, for later destruction and rebuilding

Inheritance diagram for DungeonArchitect.DungeonSceneProviderData:



Public Attributes

- string NodeId

  The graph node id this game object was spawned from in the theme graph
- Dungeon dungeon

  The dungeon this game object belongs to
- bool affectsNavigation = false

  Indicates if the geometry in this node contributes to navigation mesh generation This flag reflects the state set in the theme graph's visual node affectsNavigation flag

5.39.1 Detailed Description

Meta-data added to each spawned game object in the scene. This is used to identify objects that belong to the dungeons, for later destruction and rebuilding

5.39.2 Member Data Documentation

5.39.2.1 bool DungeonArchitect.DungeonSceneProviderData.affectsNavigation = false

Indicates if the geometry in this node contributes to navigation mesh generation This flag reflects the state set in the theme graph's visual node affectsNavigation flag

5.39.2.2 Dungeon DungeonArchitect.DungeonSceneProviderData.dungeon

The dungeon this game object belongs to

5.39.2.3 string DungeonArchitect.DungeonSceneProviderData.NodeId

The graph node id this game object was spawned from in the theme graph

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonSceneProviderData.cs

5.40 DungeonArchitect.DungeonToolData Class Reference

Tool Data represented by the grid based builder

Properties

- List< IntVector > **PaintedCells** [get]

5.40.1 Detailed Description

Tool Data represented by the grid based builder

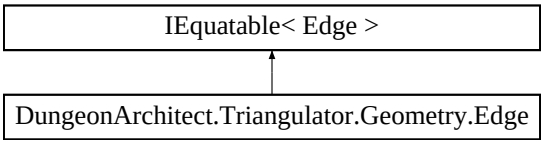
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.41 DungeonArchitect.Triangulator.Geometry.Edge Class Reference

Edge made from two point indexes

Inheritance diagram for DungeonArchitect.Triangulator.Geometry.Edge:



Public Member Functions

- Edge (int point1, int point2)
  Initializes a new edge instance
- Edge ()
  Initializes a new edge instance with start/end indexes of '0'
- bool Equals (Edge other)
  Checks whether two edges are equal disregarding the direction of the edges

Public Attributes

- int p1
  Start of edge index
- int p2
  End of edge index

5.41.1 Detailed Description

Edge made from two point indexes

5.41.2 Constructor & Destructor Documentation

5.41.2.1 DungeonArchitect.Triangulator.Geometry.Edge.Edge (int *point1*, int *point2*)

Initializes a new edge instance

Parameters

point1	Start edge vertex index
point2	End edge vertex index

5.41.2.2 DungeonArchitect.Triangulator.Geometry.Edge.Edge ( )

Initializes a new edge instance with start/end indexes of '0'

5.41.3 Member Function Documentation

5.41.3.1 bool DungeonArchitect.Triangulator.Geometry.Edge.Equals (Edge *other*)

Checks whether two edges are equal disregarding the direction of the edges

Parameters

other	

Returns

5.41.4 Member Data Documentation

5.41.4.1 int DungeonArchitect.Triangulator.Geometry.Edge.p1

Start of edge index

5.41.4.2 int DungeonArchitect.Triangulator.Geometry.Edge.p2

End of edge index

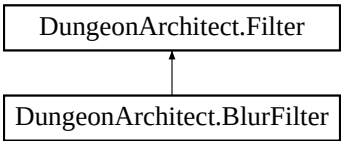
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Triangulator/Geometry/Edge.cs

5.42 DungeonArchitect.Filter Interface Reference

A data filter applied over a 2D data array

Inheritance diagram for DungeonArchitect.Filter:



Public Member Functions

- float[,] **ApplyFilter** (float[,] data)

5.42.1 Detailed Description

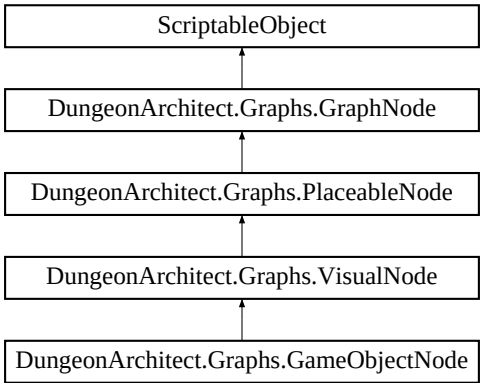
A data filter applied over a 2D data array

The documentation for this interface was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Landscape/Filter/Filter.cs

5.43 DungeonArchitect.Graphs.GameObjectNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.GameObjectNode:



Public Member Functions

- override void **Initialize** (string id, Graph graph)
- override void CopyFrom (GraphNode node)

  Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Public Attributes

- GameObject **Template**

Additional Inherited Members

5.43.1 Member Function Documentation

5.43.1.1 override void DungeonArchitect.Graphs.GameObjectNode.CopyFrom (GraphNode *node*) [virtual]

Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Parameters

node	

Reimplemented from DungeonArchitect.Graphs.GraphNode.

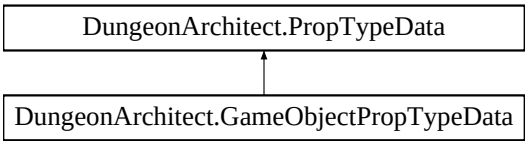
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/GameObjectNode.cs

5.44 DungeonArchitect.GameObjectPropTypeData Class Reference

Game Object node data asset attributes

Inheritance diagram for DungeonArchitect.GameObjectPropTypeData:



Public Attributes

- GameObject **Template**

5.44.1 Detailed Description

Game Object node data asset attributes

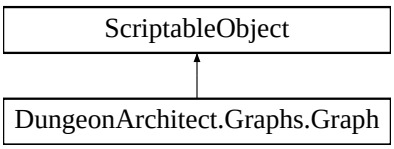
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonProp.cs

5.45 DungeonArchitect.Graphs.Graph Class Reference

Theme Graph data structure holds all the theme nodes and their connections

Inheritance diagram for DungeonArchitect.Graphs.Graph:



Public Member Functions

- delegate void **OnMarkedDirty** (Graph graph)
- delegate void **OnGraphStateChanged** (Graph graph)
- void **OnEnable** ()
- GraphNode GetNode (string id)

  Gets the node by it's id
- T[ ] GetNodes< T > ()

  Get all nodes of the specified type
- void MarkAsDirty ()

  Marks the model as dirty
- void NotifyStateChanged ()

  Call to notify all listeners that the graph state has changed

Properties

- DungeonArchitect.Graphs.IndexCounter **IndexCounter** [get]
- List< GraphNode > Nodes [get]

  List of graph nodes
- List< GraphLink > Links [get]

  List of graph links connecting the nodes
- IndexCounter TopZIndex [get]

  The z index of the top most node

Events

- OnMarkedDirty **MarkedDirty**
- OnGraphStateChanged **GraphStateChanged**

5.45.1 Detailed Description

Theme Graph data structure holds all the theme nodes and their connections

5.45.2 Member Function Documentation

5.45.2.1 GraphNode DungeonArchitect.Graphs.Graph.GetNode (string *id*)

Gets the node by it's id

Parameters

id	The ID of the node

Returns

The retrieved node. null if node with this id doesn't exist

5.45.2.2 T [ ] DungeonArchitect.Graphs.Graph.GetNodes< T > ( )

Get all nodes of the specified type

Template Parameters

T	The type of nodes to retrieve. Should be a subclass of GraphNode

Returns

List of all the nodes of the specified type

Type Constraints

T* : *GraphNode

5.45.2.3 void DungeonArchitect.Graphs.Graph.MarkAsDirty ( )

Marks the model as dirty

5.45.2.4 void DungeonArchitect.Graphs.Graph.NotifyStateChanged ( )

Call to notify all listeners that the graph state has changed

5.45.3 Property Documentation

5.45.3.1 List<GraphLink> DungeonArchitect.Graphs.Graph.Links [get]

List of graph links connecting the nodes

5.45.3.2 List<GraphNode> DungeonArchitect.Graphs.Graph.Nodes [get]

List of graph nodes

5.45.3.3 IndexCounter DungeonArchitect.Graphs.Graph.TopZIndex [get]

The z index of the top most node

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/Graph.cs

5.46 DungeonArchitect.Graphs.GraphCamera Class Reference

A camera that manages the graph editor's viewport

Public Member Functions

- void Pan (int x, int y)

  Pan the camera along the specified delta value
- void Pan (Vector2 delta)

  Pan the camera along the specified delta value
- void HandleInput (Event e)

  Handles the user mouse and keyboard input
- Vector2 WorldToScreen (Vector2 worldCoord)

  Converts world coordinates (in the graph view) into Screen coordinates (relative to the editor window)
- Vector2 ScreenToWorld (Vector2 screenCoord)

  Converts the Screen coordinates (of the editor window) into the graph's world coordinate
- void FocusOnBestFit (Graph graph, Rect editorBounds)

  Moves the camera so most of the nodes are visible
- void FocusOnMarker (Graph graph, Rect editorBounds, string markerName)

  Moves the camera to the marker node

Properties

- Vector2 Position [get, set]

  Position of the camera
- Vector2 Scale [get, set]

  Zoom scale of the graph camera

5.46.1 Detailed Description

A camera that manages the graph editor's viewport

5.46.2 Member Function Documentation

5.46.2.1 void DungeonArchitect.Graphs.GraphCamera.FocusOnBestFit (Graph *graph*, Rect *editorBounds*)

Moves the camera so most of the nodes are visible

Parameters

graph	The graph to query
editorBounds	The bounds of the editor window

5.46.2.2 void DungeonArchitect.Graphs.GraphCamera.FocusOnMarker (Graph *graph*, Rect *editorBounds*, string *markerName*)

Moves the camera to the marker node

Parameters

graph	The graph to work on
editorBounds	The bounds of the editor window
markerName	The marker name to focus on

5.46.2.3 void DungeonArchitect.Graphs.GraphCamera.HandleInput (Event *e*)

Handles the user mouse and keyboard input

Parameters

e	

5.46.2.4 void DungeonArchitect.Graphs.GraphCamera.Pan (int *x*, int *y*)

Pan the camera along the specified delta value

Parameters

x	Delta value to move along the X value
y	Delta value to move along the Y value

5.46.2.5 void DungeonArchitect.Graphs.GraphCamera.Pan (Vector2 *delta*)

Pan the camera along the specified delta value

Parameters

delta	The delta offset to move the camera to

5.46.2.6 Vector2 DungeonArchitect.Graphs.GraphCamera.ScreenToWorld (Vector2 *screenCoord*)

Converts the Screen coordinates (of the editor window) into the graph's world coordinate

Parameters

screenCoord	

Returns

The world coordinates in the graph view

5.46.2.7 Vector2 DungeonArchitect.Graphs.GraphCamera.WorldToScreen (Vector2 *worldCoord*)

Converts world coordinates (in the graph view) into Screen coordinates (relative to the editor window)

Parameters

worldCoord	The world cooridnates of the graph view

Returns

The screen cooridnates relative to the editor window

5.46.3 Property Documentation

5.46.3.1 Vector2 DungeonArchitect.Graphs.GraphCamera.Position [get],[set]

Position of the camera

5.46.3.2 Vector2 DungeonArchitect.Graphs.GraphCamera.Scale [get],[set]

Zoom scale of the graph camera

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/GraphCamera.cs

5.47 DungeonArchitect.Editors.GraphContextMenu Class Reference

The context menu shown when the user right clicks on the theme graph editor

Public Member Functions

- delegate void **OnRequestContextMenuCreation** (Event e)
- delegate void **OnMenuItemClicked** (GraphMenuAction action, GraphContextMenuEvent e)
- void HandleInput (Event e)

  Handles mouse input
- void Show (Graph graph, GraphPin sourcePin, Vector2 mouseWorld)

  Shows the context menu in the theme graph editor
- void Show (Graph graph)

  Show the context menu

Events

- OnRequestContextMenuCreation **RequestContextMenuCreation**
- OnMenuItemClicked **MenuItemClicked**

5.47.1 Detailed Description

The context menu shown when the user right clicks on the theme graph editor

5.47.2 Member Function Documentation

5.47.2.1 void DungeonArchitect.Editors.GraphContextMenu.HandleInput (Event *e*)

Handles mouse input

Parameters

e	Input event data

5.47.2.2 void DungeonArchitect.Editors.GraphContextMenu.Show (Graph *graph*, GraphPin *sourcePin*, Vector2 *mouseWorld*)

Shows the context menu in the theme graph editor

Parameters

graph	The graph shown in the graph editor
sourcePin	The source pin, if the user dragged a link out of a pin. null otherwise
mouseWorld	The position of the mouse. The context menu would be shown from here

5.47.2.3 void DungeonArchitect.Editors.GraphContextMenu.Show (Graph *graph*)

Show the context menu

Parameters

graph	The owning graph

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphContextMenu.cs

5.48 DungeonArchitect.Editors.GraphContextMenuEvent Class Reference

The graph context menu event data

Public Attributes

- GraphPin **sourcePin**
- Vector2 **mouseWorldPosition**
- object **userdata**

5.48.1 Detailed Description

The graph context menu event data

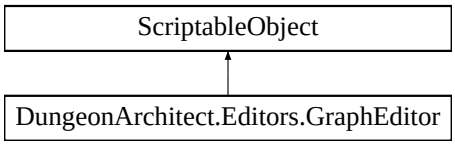
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphContextMenu.cs

5.49 DungeonArchitect.Editors.GraphEditor Class Reference

The graph editor script for managing a graph. This contains the bulk of the logic for graph editing

Inheritance diagram for DungeonArchitect.Editors.GraphEditor:



Public Member Functions

- void Init (Graph graph, Rect editorBounds)
  Initializes the graph editor with the specified graph
- void FocusCameraOnMarker (string markerName, Rect editorBounds)
  Moves the graph editor viewport to show the marker on the screen
- void FocusCameraOnBestFit (Rect editorBounds)
  Moves the graph editor viewport to show as many markers as possible. Called when a new graph is loaded
- void **OnEnable** ()
- void **OnDisable** ()
- void **OnDestroy** ()
- void **Update** ()
- void HandleInput (Event e)
  Handles user input (mouse and keyboard)
- void **OnNodeSelectionChanged** ()
- void Draw (Rect bounds)
  Renders the graph editor in the editor window
- T CreateNode< T > (Vector2 screenCoord)
  Creates a new node in the specified screen coordinate
- void SelectNode (GraphNode nodeToSelect)
  Selects and highlights a node
- GraphPin GetPinUnderPosition (Vector2 worldPosition)
  Gets the node pin under the mouse position. Takes the owning node's Z-order into consideration

Properties

- Graph Graph `[get]`
  The owning graph
- bool RealtimeUpdate `[get, set]`
  If set, updates the dungeon in the viewport whenever the state of the graph is modified

5.49.1 Detailed Description

The graph editor script for managing a graph. This contains the bulk of the logic for graph editing

5.49.2 Member Function Documentation

5.49.2.1 T DungeonArchitect.Editors.GraphEditor.CreateNode< T > (Vector2 *screenCoord*)

Creates a new node in the specified screen coordinate

Template Parameters

T	The type of node to created. Should be a subclass of GraphNode

Parameters

screenCoord	The screen coordinate to place the node at

Returns

The created graph node

Type Constraints

T* : *GraphNode
T* : *new()

5.49.2.2 void DungeonArchitect.Editors.GraphEditor.Draw (Rect *bounds*)

Renders the graph editor in the editor window

Parameters

bounds	The bounds of the editor window

5.49.2.3 void DungeonArchitect.Editors.GraphEditor.FocusCameraOnBestFit (Rect *editorBounds*)

Moves the graph editor viewport to show as many markers as possible. Called when a new graph is loaded

Parameters

editorBounds	The bounds of the editor window

5.49.2.4 void DungeonArchitect.Editors.GraphEditor.FocusCameraOnMarker (string *markerName,* Rect *editorBounds*)

Moves the graph editor viewport to show the marker on the screen

Parameters

markerName	The name of the marker to focus on
editorBounds	The bounds of the editor

5.49.2.5 GraphPin DungeonArchitect.Editors.GraphEditor.GetPinUnderPosition (Vector2 *worldPosition*)

Gets the node pin under the mouse position. Takes the owning node's Z-order into consideration

Parameters

worldPosition	The world position in graph coordinates

Returns

The pin under the specified position. null otherwise

5.49.2.6 void DungeonArchitect.Editors.GraphEditor.HandleInput (Event *e*)

Handles user input (mouse and keyboard)

Parameters

e	

5.49.2.7 void DungeonArchitect.Editors.GraphEditor.Init (Graph *graph*, Rect *editorBounds*)

Initializes the graph editor with the specified graph

Parameters

graph	The owning graph
editorBounds	The bounds of the editor window

5.49.2.8 void DungeonArchitect.Editors.GraphEditor.SelectNode (GraphNode *nodeToSelect*)

Selects and highlights a node

Parameters

nodeToSelect	

5.49.3 Property Documentation

5.49.3.1 Graph DungeonArchitect.Editors.GraphEditor.Graph [get]

The owning graph

5.49.3.2 bool DungeonArchitect.Editors.GraphEditor.RealtimeUpdate [get], [set]

If set, updates the dungeon in the viewport whenever the state of the graph is modified

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.50 DungeonArchitect.Editors.GraphEditorConstants Class Reference

Graph editor constants

Static Public Attributes

- static readonly Color **PIN_COLOR** = new Color(0.4f, 0.4f, 0.4f)
- static readonly Color **PIN_COLOR_HOVER** = new Color(1, 0.6f, 0.0f)
- static readonly Color **PIN_COLOR_CLICK** = new Color(1, 0.9f, 0.0f)
- static readonly Color **NODE_COLOR** = new Color(0.2824f, 0.2824f, 0.2824f)
- static readonly Color **NODE_COLOR_SELECTED** = new Color(.9f, 0.5f, 0.0f)
- static readonly Color **TEXT_COLOR** = new Color(0.9f, 0.9f, 0.9f)
- static readonly Color **TEXT_COLOR_SELECTED** = Color.white

5.50.1 Detailed Description

Graph editor constants

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditorConstants.cs

5.51 DungeonArchitect.Editors.GraphInputHandler Class Reference

Static Public Member Functions

- static bool HandleNodeInput (GraphNode node, Event e, GraphCamera camera)

  Handles user input (keyboard and mouse)
- static bool HandlePinInput (GraphPin pin, Event e, GraphCamera camera)

  Handles the mouse input and returns true if handled

5.51.1 Member Function Documentation

5.51.1.1 static bool DungeonArchitect.Editors.GraphInputHandler.HandleNodeInput (GraphNode *node*, Event *e*, GraphCamera *camera*) [static]

Handles user input (keyboard and mouse)

Parameters

e	Input event
camera	Graph camera to convert to / from screen to world coordinates

Returns

true if the input was processed, false otherwise.

5.51.1.2 static bool DungeonArchitect.Editors.GraphInputHandler.HandlePinInput (GraphPin *pin*, Event *e*, GraphCamera *camera*) [static]

Handles the mouse input and returns true if handled

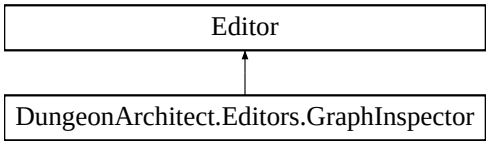
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphOperations.cs

5.52 DungeonArchitect.Editors.GraphInspector Class Reference

Custom property editor for graph objects Shows the graph editor when a theme graph asset is selected

Inheritance diagram for DungeonArchitect.Editors.GraphInspector:



Public Member Functions

- void **OnEnable** ()
- override void OnInspectorGUI ()

5.52.1 Detailed Description

Custom property editor for graph objects Shows the graph editor when a theme graph asset is selected

5.52.2 Member Function Documentation

5.52.2.1 override void DungeonArchitect.Editors.GraphInspector.OnInspectorGUI ( )

ShowEditor();

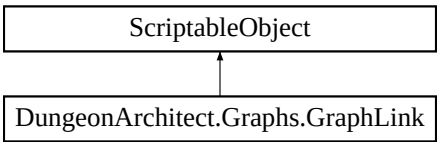
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/GraphInspector.cs

5.53 DungeonArchitect.Graphs.GraphLink Class Reference

A graph link is a directional connection between two graph nodes

Inheritance diagram for DungeonArchitect.Graphs.GraphLink:



Public Member Functions

- void **OnEnable** ()
- float GetTangentStrength ()

  Determines the spring strength of the link. It reduces as it gets smaller to draw good looking link at any distance

Properties

- int Id `[get, set]`

  The ID of the link
- GraphPin Input `[get, set]`

  The input pin this link originates from
- GraphPin Output `[get, set]`

  The output pin this link points to
- Graph Graph `[get, set]`

  The graph this link belongs to

5.53.1 Detailed Description

A graph link is a directional connection between two graph nodes

5.53.2 Member Function Documentation

5.53.2.1 float DungeonArchitect.Graphs.GraphLink.GetTangentStrength ( )

Determines the spring strength of the link. It reduces as it gets smaller to draw good looking link at any distance

Returns

5.53.3 Property Documentation

5.53.3.1 Graph DungeonArchitect.Graphs.GraphLink.Graph [get], [set]

The graph this link belongs to

5.53.3.2 int DungeonArchitect.Graphs.GraphLink.Id [get], [set]

The ID of the link

5.53.3.3 GraphPin DungeonArchitect.Graphs.GraphLink.Input [get], [set]

The input pin this link originates from

5.53.3.4 GraphPin DungeonArchitect.Graphs.GraphLink.Output [get], [set]

The output pin this link points to

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/GraphLink.cs

5.54 DungeonArchitect.Editors.GraphLinkRenderer Class Reference

Renders the graph link in the graph editor

Static Public Member Functions

- static void **DrawGraphLink** (GraphRendererContext rendererContext, GraphLink link, GraphCamera camera)

5.54.1 Detailed Description

Renders the graph link in the graph editor

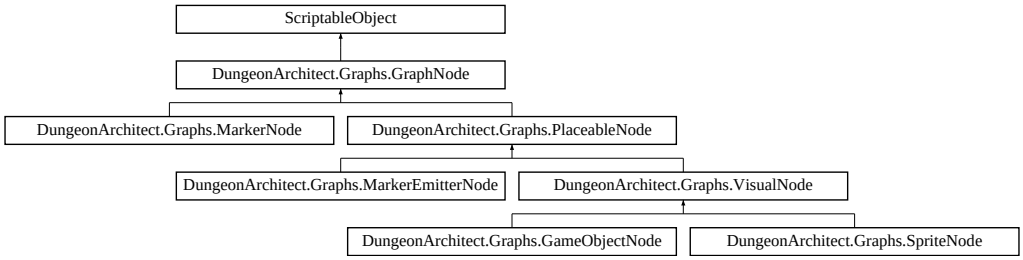
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/GraphLinkRenderer.cs

5.55 DungeonArchitect.Graphs.GraphNode Class Reference

Represents a graph node in the theme graph. This is the base class for all graph nodes

Inheritance diagram for DungeonArchitect.Graphs.GraphNode:



Public Member Functions

- virtual void **OnEnable** ()
- virtual void **Initialize** (string id, Graph graph)
- virtual void CopyFrom (GraphNode node)

  Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)
- GraphNode[ ] GetParentNodes ()

  Gets the list of parent graph nodes
- GraphNode[ ] GetChildNodes ()

  Gets the list of child nodes
- void DragNode (Vector2 delta)

  Moves the node by the specified delta

Protected Member Functions

- void **UpdateName** (string prefix)
- void CreatePin (GraphPinType pinType, Vector2 position, Rect boundsOffset, Vector2 tangent)

  Creates a pin with the specified configuration

Protected Attributes

- string **id**
- string **caption**
- Rect **bounds** = new Rect(10, 10, 120, 120)
- bool **selected** = false
- int **zIndex**
- List< GraphPin > **inputPins**
- List< GraphPin > **outputPins**
- Graph **graph**

Properties

- string Id `[get, set]`

  The ID of the graph node
- string Caption `[get, set]`

  The caption label of the node. It is up to the implementation to draw this label, if needed

- Rect Bounds [get, set]

  The bounds of the node
- bool Selected [get, set]

  Flag to indicate if the node has been selected
- Vector2 Size [get, set]

  The size of the node
- Vector2 Position [get, set]

  The position of the node
- int ZIndex [get, set]

  The Z-index of the node. It determines if the node is on top of other nodes
- List< GraphPin > InputPins [get]

  List of input pins owned by this node
- List< GraphPin > OutputPins [get]

  List of output pins owned by this node
- GraphPin OutputPin [get]

  Gets the first output pin. Returns null if no output pins are defined
- GraphPin InputPin [get]

  Gets the first input pin. Returns null if no input pins are defined
- Graph Graph [get]

  The graph that owns this node
- bool **Dragging** [get, set]

5.55.1 Detailed Description

Represents a graph node in the theme graph. This is the base class for all graph nodes

5.55.2 Member Function Documentation

5.55.2.1 virtual void DungeonArchitect.Graphs.GraphNode.CopyFrom (GraphNode *node*) [virtual]

Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Parameters

node	

Reimplemented in DungeonArchitect.Graphs.VisualNode, DungeonArchitect.Graphs.SpriteNode, DungeonArchitect.Graphs.GameObjectNode, and DungeonArchitect.Graphs.PlaceableNode.

5.55.2.2 void DungeonArchitect.Graphs.GraphNode.CreatePin (GraphPinType *pinType*, Vector2 *position*, Rect *boundsOffset*, Vector2 *tangent*) [protected]

Creates a pin with the specified configuration

Parameters

pinType	The type of pin (input / output)
position	The position of the pin, relative to the node bounds
boundsOffset	The bounds of the pin, relative to the position

tangent	The tangent of the pin. Links connected to the pin would come out from this direction

5.55.2.3 void DungeonArchitect.Graphs.GraphNode.DragNode (Vector2 *delta*)

Moves the node by the specified delta

Parameters

delta	The delta offset to move the node by

5.55.2.4 GraphNode [ ] DungeonArchitect.Graphs.GraphNode.GetChildNodes ( )

Gets the list of child nodes

Returns

List of child nodes

5.55.2.5 GraphNode [ ] DungeonArchitect.Graphs.GraphNode.GetParentNodes ( )

Gets the list of parent graph nodes

Returns

List of parent graph nodes

5.55.3 Property Documentation

5.55.3.1 Rect DungeonArchitect.Graphs.GraphNode.Bounds [get], [set]

The bounds of the node

5.55.3.2 string DungeonArchitect.Graphs.GraphNode.Caption [get], [set]

The caption label of the node. It is up to the implementation to draw this label, if needed

5.55.3.3 Graph DungeonArchitect.Graphs.GraphNode.Graph [get]

The graph that owns this node

5.55.3.4 string DungeonArchitect.Graphs.GraphNode.Id [get], [set]

The ID of the graph node

5.55.3.5 GraphPin DungeonArchitect.Graphs.GraphNode.InputPin [get]

Gets the first input pin. Returns null if no input pins are defined

5.55.3.6 List<GraphPin> DungeonArchitect.Graphs.GraphNode.InputPins [get]

List of input pins owned by this node

5.55.3.7 GraphPin DungeonArchitect.Graphs.GraphNode.OutputPin [get]

Gets the first output pin. Returns null if no output pins are defined

5.55.3.8 List<GraphPin> DungeonArchitect.Graphs.GraphNode.OutputPins [get]

List of output pins owned by this node

5.55.3.9 Vector2 DungeonArchitect.Graphs.GraphNode.Position [get],[set]

The position of the node

5.55.3.10 bool DungeonArchitect.Graphs.GraphNode.Selected [get],[set]

Flag to indicate if the node has been selected

5.55.3.11 Vector2 DungeonArchitect.Graphs.GraphNode.Size [get],[set]

The size of the node

5.55.3.12 int DungeonArchitect.Graphs.GraphNode.ZIndex [get],[set]

The Z-index of the node. It determines if the node is on top of other nodes

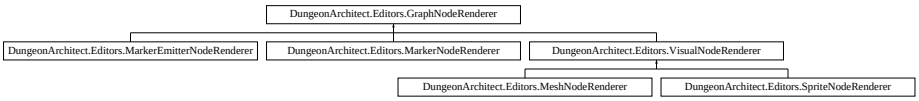
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/GraphNode.cs

5.56 DungeonArchitect.Editors.GraphNodeRenderer Class Reference

Renders the graph node in the graph editor

Inheritance diagram for DungeonArchitect.Editors.GraphNodeRenderer:



Public Member Functions

- virtual void **Draw** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera)

Protected Member Functions

- virtual Color **getBackgroundColor** (GraphNode node)
- void **DrawBackgroundBox** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera)
- void **DrawNodeTexture** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera, string textureName)

5.56.1 Detailed Description

Renders the graph node in the graph editor

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/GraphNodeRenderer.cs

5.57 DungeonArchitect.Editors.GraphNodeRendererFactory Class Reference

Public Member Functions

- void **RegisterNodeRenderer** (Type nodeType, GraphNodeRenderer renderer)
- GraphNodeRenderer **GetRenderer** (Type nodeType)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/GraphNodeRenderer.cs

5.58 DungeonArchitect.Editors.GraphOperations Class Reference

Static Public Member Functions

- static T CreateNode< T > (Graph graph)

  Creates a new graph node of the specified type
- static GraphNode CreateNode (Graph graph, Type t)

  Creates a graph node of the specified type
- static T DuplicateNode< T > (Graph graph, T originalNode)

  Makes a deep copy of a node. Called when a node is copy pasted
- static void DestroyNode (GraphNode node)

  Destroys a node and removes all references of it from the graph model. Called when the node is deleted from the editor
- static void DestroyLink (GraphLink link)

  Destroys a node and removes all references of it from the graph model. Called when the node is deleted from the editor
- static void BreakInputLinks (GraphNode node)

  Breaks all links connected to the input pins
- static void BreakOutputLinks (GraphNode node)

  Breaks all links connected to the output pins
- static T CreateLink< T > (Graph graph, GraphPin output, GraphPin input)

  Creates a graph link between the two specified pins

5.58.1 Member Function Documentation

5.58.1.1 static void DungeonArchitect.Editors.GraphOperations.BreakInputLinks (GraphNode *node*) [static]

Breaks all links connected to the input pins

5.58.1.2 static void DungeonArchitect.Editors.GraphOperations.BreakOutputLinks (GraphNode *node*) [static]

Breaks all links connected to the output pins

5.58.1.3 static T DungeonArchitect.Editors.GraphOperations.CreateLink< T > (Graph *graph*, GraphPin *output*, GraphPin *input*) [static]

Creates a graph link between the two specified pins

Template Parameters

T	The type of the link. Should be GraphLink or one of its subclass

Parameters

output	The output pin from where the link originates
input	The input pin, where the link points to

Returns

Type Constraints

T* : *GraphLink

5.58.1.4 static GraphNode DungeonArchitect.Editors.GraphOperations.CreateNode (Graph *graph*, Type *t*) [static]

Creates a graph node of the specified type

Parameters

t	The type of node to create. Should be a subclass of GraphNode

Returns

The created graph node

5.58.1.5 static T DungeonArchitect.Editors.GraphOperations.CreateNode< T > (Graph *graph*) [static]

Creates a new graph node of the specified type

Template Parameters

T	The type of node to create. Should be a subclass of GraphNode

Returns

The created graph node

Type Constraints

T* : *GraphNode

5.58.1.6 static void DungeonArchitect.Editors.GraphOperations.DestroyLink (GraphLink *link*) [static]

Destroys a node and removes all references of it from the graph model. Called when the node is deleted from the editor

Parameters

node	

5.58.1.7 static void DungeonArchitect.Editors.GraphOperations.DestroyNode (GraphNode *node*) [static]

Destroys a node and removes all references of it from the graph model. Called when the node is deleted from the editor

Parameters

node	

5.58.1.8 static T DungeonArchitect.Editors.GraphOperations.DuplicateNode< T > (Graph *graph*, T *originalNode*) [static]

Makes a deep copy of a node. Called when a node is copy pasted

Template Parameters

T	

Parameters

originalNode	

Returns

Type Constraints

T* : *GraphNode

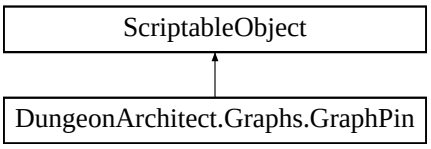
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphOperations.cs

5.59 DungeonArchitect.Graphs.GraphPin Class Reference

A pin is used to connect a link to a node

Inheritance diagram for DungeonArchitect.Graphs.GraphPin:



Public Member Functions

- delegate void **OnPinLinksDestroyed** (GraphPin pin)
- void **OnEnable** ()
- GraphLink[ ] GetConntectedLinks ()

  Gets all the links connected to this pin
- bool ContainsPoint (Vector2 worldPoint)

  Checks if a point is inside the pin
- Rect GetWorldBounds ()

  Gets the bounds of the pin, in world coordinates
- Rect GetBounds ()

  Gets the bounds of the pin, relative to the node position
- void **NotifyPinLinksDestroyed** ()

Properties

- GraphPinMouseState ClickState `[get, set]`
  The state of the mouse input on this pin
- GraphPinType PinType `[get, set]`
  The type of this pin
- GraphNode Node `[get, set]`
  The owning graph node
- Vector2 Position `[get, set]`
  The position of the graph pin, relative to the owning node's position
- Vector2 WorldPosition `[get]`
  The world position of the pin
- Rect BoundsOffset `[get, set]`
  The bounds of the pin, relative to the node's position
- Vector2 Tangent `[get, set]`
  The tangent of the pin. Links connected to this pin would come in or out from this direction
- float TangentStrength `[get, set]`
  The spring strength of the link connected to this pin
- bool **RequestLinkDeletionInitiated** `[get, set]`

Events

- OnPinLinksDestroyed PinLinksDestroyed
  Notifies whenever the pin is destroyed

5.59.1 Detailed Description

A pin is used to connect a link to a node

5.59.2 Member Function Documentation

5.59.2.1 bool DungeonArchitect.Graphs.GraphPin.ContainsPoint (Vector2 *worldPoint*)

Checks if a point is inside the pin

Parameters

worldPoint	The point to test in world coordinates

Returns

true, if inside the bounds of this pin, false otherwise

5.59.2.2 Rect DungeonArchitect.Graphs.GraphPin.GetBounds ( )

Gets the bounds of the pin, relative to the node position

Returns

The bounds of the pin, relative to the node position

5.59.2.3 GraphLink [ ] DungeonArchitect.Graphs.GraphPin.GetConntectedLinks ( )

Gets all the links connected to this pin

Returns

The connected links.

5.59.2.4 Rect DungeonArchitect.Graphs.GraphPin.GetWorldBounds ( )

Gets the bounds of the pin, in world coordinates

Returns

The bounds of the pin, in world coordinates

5.59.3 Property Documentation

5.59.3.1 Rect DungeonArchitect.Graphs.GraphPin.BoundsOffset [get], [set]

The bounds of the pin, relative to the node's position

5.59.3.2 GraphPinMouseState DungeonArchitect.Graphs.GraphPin.ClickState [get], [set]

The state of the mouse input on this pin

5.59.3.3 GraphNode DungeonArchitect.Graphs.GraphPin.Node [get], [set]

The owning graph node

5.59.3.4 GraphPinType DungeonArchitect.Graphs.GraphPin.PinType [get], [set]

The type of this pin

5.59.3.5 Vector2 DungeonArchitect.Graphs.GraphPin.Position [get], [set]

The position of the graph pin, relative to the owning node's position

5.59.3.6 Vector2 DungeonArchitect.Graphs.GraphPin.Tangent [get], [set]

The tangent of the pin. Links connected to this pin would come in or out from this direction

5.59.3.7 float DungeonArchitect.Graphs.GraphPin.TangentStrength [get], [set]

The spring strength of the link connected to this pin

5.59.3.8 Vector2 DungeonArchitect.Graphs.GraphPin.WorldPosition [get]

The world position of the pin

5.59.4 Event Documentation

5.59.4.1 OnPinLinksDestroyed DungeonArchitect.Graphs.GraphPin.PinLinksDestroyed

Notifies whenever the pin is destroyed

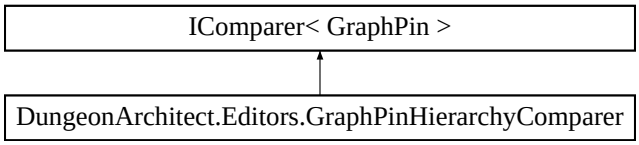
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/GraphPin.cs

5.60 DungeonArchitect.Editors.GraphPinHierarchyComparer Class Reference

Sorts the pins based on their owning node's type

Inheritance diagram for DungeonArchitect.Editors.GraphPinHierarchyComparer:



Public Member Functions

- int **Compare** (GraphPin x, GraphPin y)

5.60.1 Detailed Description

Sorts the pins based on their owning node's type

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.61 DungeonArchitect.Editors.GraphPinRenderer Class Reference

Renders a graph pin hosted inside a node

Static Public Member Functions

- static void **Draw** (GraphRendererContext rendererContext, GraphPin pin, GraphCamera camera)

5.61.1 Detailed Description

Renders a graph pin hosted inside a node

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/GraphPinRenderer.cs

5.62 DungeonArchitect.Editors.GraphRendererContext Class Reference

The rendering context for drawing the theme editor

Properties

- DungeonEditorResources **Resources** `[get]`

5.62.1 Detailed Description

The rendering context for drawing the theme editor

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.63 DungeonArchitect.Graphs.GraphSchema Class Reference

The graph schema defines the rules of the theme graph

Static Public Member Functions

- static bool CanCreateLink (GraphPin output, GraphPin input)
  Checks if a link between the two nodes can be created
- static bool CanCreateLink (GraphPin output, GraphPin input, out string errorMessage)

5.63.1 Detailed Description

The graph schema defines the rules of the theme graph

5.63.2 Member Function Documentation

5.63.2.1 static bool DungeonArchitect.Graphs.GraphSchema.CanCreateLink (GraphPin *output*, GraphPin *input*) `[static]`

Checks if a link between the two nodes can be created

Parameters

output	The pin from which the link originates and goes out
input	The pin where the link points to

Returns

true, if the link is allowed, false otherwise

5.63.2.2 static bool DungeonArchitect.Graphs.GraphSchema.CanCreateLink (GraphPin *output*, GraphPin *input*, out string *errorMessage*) `[static]`

Parameters

output	The pin from which the link originates and goes out
input	The pin where the link points to
errorMessage	

Returns

true, if the link is allowed, false otherwise

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/GraphSchema.cs

5.64 DungeonArchitect.Editors.GraphSelectionBox Class Reference

Manages the selection box for selecting multiple objects in the graph editor

Public Member Functions

- delegate void **OnSelectionPerformed** (Rect boundsScreenSpace)
- void HandleInput (Event e)

  Handles user input (mouse)
- bool **IsSelectionValid** ()
- void **Draw** ()

Properties

- Rect **Bounds** `[get, set]`
- bool **Dragging** `[get]`

Events

- OnSelectionPerformed **SelectionPerformed**

5.64.1 Detailed Description

Manages the selection box for selecting multiple objects in the graph editor

5.64.2 Member Function Documentation

5.64.2.1 void DungeonArchitect.Editors.GraphSelectionBox.HandleInput (Event *e*)

Handles user input (mouse)

Parameters

e	

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.65 DungeonArchitect.Editors.GraphTooltip Class Reference

Graph tooltip singleton

Static Public Member Functions

- static void **Clear** ()

Static Public Attributes

- static string message = ""

  Set this to display a tooltip in the graph editor

5.65.1 Detailed Description

Graph tooltip singleton

5.65.2 Member Data Documentation

5.65.2.1 string DungeonArchitect.Editors.GraphTooltip.message = "" [static]

Set this to display a tooltip in the graph editor

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/TooltipRenderer.cs

5.66 DungeonArchitect.Editors.GraphTooltipRenderer Class Reference

Renders a tooltip in the graph editor. The tooltip message is defined in GraphTooltip.message

Static Public Member Functions

- static void **Draw** (GraphRendererContext rendererContext, Vector2 mousePosition)

5.66.1 Detailed Description

Renders a tooltip in the graph editor. The tooltip message is defined in GraphTooltip.message

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/Renderers/TooltipRenderer.cs

5.67 DungeonArchitect.Utils.GraphUtils Class Reference

Theme graph utility functions

5.67.1 Detailed Description

Theme graph utility functions

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/GraphUtils.cs

5.68 DungeonArchitect.GridCellInfo Class Reference

Contains meta data about the cells. This structure is used for caching cell information for faster lookup during and after generation of the dungeon

Public Member Functions

- **GridCellInfo** (int pCellId, CellType pCellType)

Public Attributes

- int **CellId**
- CellType **CellType**
- bool **ContainsDoor**

5.68.1 Detailed Description

Contains meta data about the cells. This structure is used for caching cell information for faster lookup during and after generation of the dungeon

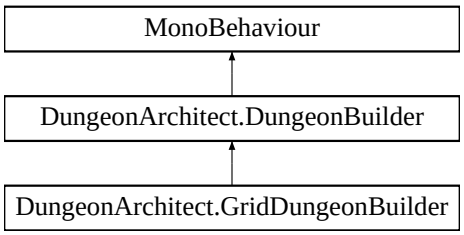
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.69 DungeonArchitect.GridDungeonBuilder Class Reference

A Dungeon Builder implementation that builds a grid based dungeon.

Inheritance diagram for DungeonArchitect.GridDungeonBuilder:



Public Member Functions

- override void BuildDungeon (DungeonConfig config, DungeonModel model)

  Builds the dungeon
- void BuildCells ()

builds the cells in the dungeon

- override void EmitMarkers ()

  Emit markers defined by this builder

- bool **V3Equal** (Vector3 a, Vector3 b)

Static Public Member Functions

- static void Seperate (GridDungeonModel gridModel)

  Separates the cells built in the previous phase

- static void TriangulateRooms (GridDungeonModel gridModel)

  Triangulates the rooms identified in the previous phase This is required to connect the corridors. Delauney triangulation is used to find nice evenly spaced triangles for good connections

Additional Inherited Members

5.69.1 Detailed Description

A Dungeon Builder implementation that builds a grid based dungeon.

It is based on the awesome algorithm described here by the TinyKeep game's author `https://www.reddit.com/r/gamedev/comments/1dlwc4/procedural_dungeon_generation_algorithm_explained/`

5.69.2 Member Function Documentation

5.69.2.1 void DungeonArchitect.GridDungeonBuilder.BuildCells ( )

builds the cells in the dungeon

5.69.2.2 override void DungeonArchitect.GridDungeonBuilder.BuildDungeon (DungeonConfig *config*, DungeonModel *model*) [virtual]

Builds the dungeon

Parameters

config	The dungeon configuration
model	The dungeon model

Reimplemented from DungeonArchitect.DungeonBuilder.

5.69.2.3 override void DungeonArchitect.GridDungeonBuilder.EmitMarkers ( ) [virtual]

Emit markers defined by this builder

Reimplemented from DungeonArchitect.DungeonBuilder.

5.69.2.4 static void DungeonArchitect.GridDungeonBuilder.Seperate (GridDungeonModel *gridModel*) [static]

Separates the cells built in the previous phase

Parameters

gridModel	

5.69.2.5 static void DungeonArchitect.GridDungeonBuilder.TriangulateRooms (GridDungeonModel *gridModel*) [static]

Triangulates the rooms identified in the previous phase This is required to connect the corridors. Delauney triangulation is used to find nice evenly spaced triangles for good connections

Parameters

gridModel	

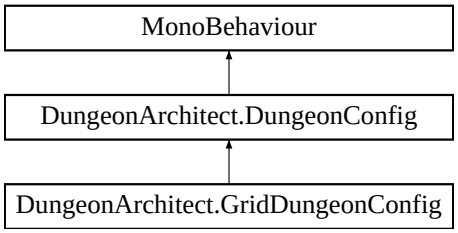
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.70 DungeonArchitect.GridDungeonConfig Class Reference

The dungeon configuration for the Grid builder

Inheritance diagram for DungeonArchitect.GridDungeonConfig:



Public Attributes

- int NumCells = 150

  Changing this number would completely change the layout of the dungeon. This is the base random number seed that is used to build the dungeon. There is a convenience function to randomize this value (button labeled R)
- int MinCellSize = 2

  This is how small a cell size can be. While generation, a cell is either converted to a room, corridor or is discarded completely. The Cell width / height is randomly chosen within this range
- int MaxCellSize = 5

  This is how big a cell size can be. While generation, a cell is either converted to a room, corridor or is discarded completely. The Cell width / height is randomly chosen within this range
- int RoomAreaThreshold = 15

  If a cell size exceeds past this limit, it is converted into a room. After cells are promoted to rooms, all rooms are connected to each other through corridors (either directly or indirectly. See spanning tree later)
- float RoomAspectDelta = 0.4f

  The aspect ratio of the cells (width to height ratio). Keeping this value near 0 would create square rooms. Bringing this close to 1 would create elongated / stretched rooms with a high width to height ratio
- int CorridorPadding = 1

  The extra width to apply to one side of a corridor
- bool CorridorPaddingDoubleSided = false

  Flag to apply the padding on both sides of the corridor

- float HeightVariationProbability = 0.2f

  Tweak this value to increase / reduce the height variations (and stairs) in your dungeon. A value close to 0 reduces the height variation and increases as you approach 1. Increasing this value to a higher level might create dungeons with no place for proper stair placement since there is too much height variation. A value of 0.2 to 0.4 seems good

- int MaxAllowedStairHeight = 2

  The number of logical floor units the dungeon height can vary. This determines how high the dungeon's height can vary (e.g. max 2 floors high). Set this value depending on the stair meshes you designer has created. In the sample demo, there are two stair meshes, one 200 units high (1 floor) and another 400 units high (2 floors). So the default is set to 2

- float SpanningTreeLoopProbability = 0.15f

  Determines how many loops you would like to have in your dungeon. A value near 0 will create fewer loops creating linear dungeons. A value near 1 would create lots of loops, which would look unoriginal. Its good to allow a few loops so a value close to zero (like 0.2 should be good)

- float StairConnectionTollerance = 3

  The generator would add stairs to make different areas of the dungeon accessible. However, we do not want too many stairs. For e.g., before adding a stair in a particular elevated area, the generator would check if this area is already accessible from a nearby stair. If so, it would not add it. This tolerance parameter determines how far to look for an existing path before we can add a stair. Play with this parameter if you see too many stairs close to each other, or too few

- float NormalMean = 0

  The random number generator used in the dungeon generator does not use a uniform distribution. Instead it uses a normal distribution to get higher frequency of lower values and fewer higher values (and hence fewer room cells and a lot more corridor cells). Play with these parameters for different results

- float NormalStd = 0.3f

  The random number generator used in the dungeon generator does not use a uniform distribution. Instead it uses a normal distribution to get higher frequency of lower values and fewer higher values (and hence fewer room cells and a lot more corridor cells). Play with these parameters for different results

- bool **Mode2D** = false
- float InitialRoomRadius = 15

  The radius within which to spawn the initial cells before they are separated. Keep to a low value like 10-15

- int FloorHeight = 0

  __Internal

5.70.1 Detailed Description

The dungeon configuration for the Grid builder

5.70.2 Member Data Documentation

5.70.2.1 int DungeonArchitect.GridDungeonConfig.CorridorPadding = 1

The extra width to apply to one side of a corridor

5.70.2.2 bool DungeonArchitect.GridDungeonConfig.CorridorPaddingDoubleSided = false

Flag to apply the padding on both sides of the corridor

5.70.2.3 int DungeonArchitect.GridDungeonConfig.FloorHeight = 0

__Internal

5.70.2.4 float DungeonArchitect.GridDungeonConfig.HeightVariationProbability = 0.2f

Tweak this value to increase / reduce the height variations (and stairs) in your dungeon. A value close to 0 reduces the height variation and increases as you approach 1. Increasing this value to a higher level might create dungeons with no place for proper stair placement since there is too much height variation. A value of 0.2 to 0.4 seems good

5.70.2.5 float DungeonArchitect.GridDungeonConfig.InitialRoomRadius = 15

The radius within which to spawn the initial cells before they are separated. Keep to a low value like 10-15

5.70.2.6 int DungeonArchitect.GridDungeonConfig.MaxAllowedStairHeight = 2

The number of logical floor units the dungeon height can vary. This determines how high the dungeon's height can vary (e.g. max 2 floors high). Set this value depending on the stair meshes you designer has created. In the sample demo, there are two stair meshes, one 200 units high (1 floor) and another 400 units high (2 floors). So the default is set to 2

5.70.2.7 int DungeonArchitect.GridDungeonConfig.MaxCellSize = 5

This is how big a cell size can be. While generation, a cell is either converted to a room, corridor or is discarded completely. The Cell width / height is randomly chosen within this range

5.70.2.8 int DungeonArchitect.GridDungeonConfig.MinCellSize = 2

This is how small a cell size can be. While generation, a cell is either converted to a room, corridor or is discarded completely. The Cell width / height is randomly chosen within this range

5.70.2.9 float DungeonArchitect.GridDungeonConfig.NormalMean = 0

The random number generator used in the dungeon generator does not use a uniform distribution. Instead it uses a normal distribution to get higher frequency of lower values and fewer higher values (and hence fewer room cells and a lot more corridor cells). Play with these parameters for different results

5.70.2.10 float DungeonArchitect.GridDungeonConfig.NormalStd = 0.3f

The random number generator used in the dungeon generator does not use a uniform distribution. Instead it uses a normal distribution to get higher frequency of lower values and fewer higher values (and hence fewer room cells and a lot more corridor cells). Play with these parameters for different results

5.70.2.11 int DungeonArchitect.GridDungeonConfig.NumCells = 150

Changing this number would completely change the layout of the dungeon. This is the base random number seed that is used to build the dungeon. There is a convenience function to randomize this value (button labeled R)

5.70.2.12 int DungeonArchitect.GridDungeonConfig.RoomAreaThreshold = 15

If a cell size exceeds past this limit, it is converted into a room. After cells are promoted to rooms, all rooms are connected to each other through corridors (either directly or indirectly. See spanning tree later)

5.70.2.13 float DungeonArchitect.GridDungeonConfig.RoomAspectDelta = 0.4f

The aspect ratio of the cells (width to height ratio). Keeping this value near 0 would create square rooms. Bringing this close to 1 would create elongated / stretched rooms with a high width to height ratio

5.70.2.14 float DungeonArchitect.GridDungeonConfig.SpanningTreeLoopProbability = 0.15f

Determines how many loops you would like to have in your dungeon. A value near 0 will create fewer loops creating linear dungeons. A value near 1 would create lots of loops, which would look unoriginal. Its good to allow a few loops so a value close to zero (like 0.2 should be good)

5.70.2.15 float DungeonArchitect.GridDungeonConfig.StairConnectionTollerance = 3

The generator would add stairs to make different areas of the dungeon accessible. However, we do not want too many stairs. For e.g., before adding a stair in a particular elevated area, the generator would check if this area is already accessible from a nearby stair. If so, it would not add it. This tolerance parameter determines how far to look for an existing path before we can add a stair. Play with this parameter if you see too many stairs close to each other, or too few

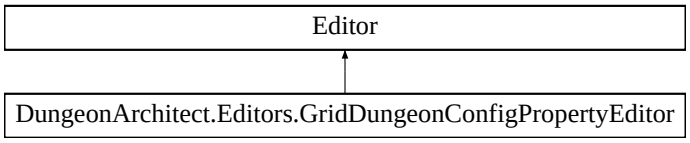
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Configs/GridDungeonConfig.cs

5.71 DungeonArchitect.Editors.GridDungeonConfigPropertyEditor Class Reference

Custom property editor for the grid based dungeon configuration

Inheritance diagram for DungeonArchitect.Editors.GridDungeonConfigPropertyEditor:



Public Member Functions

- void **OnEnable** ()
- override void **OnInspectorGUI** ()

5.71.1 Detailed Description

Custom property editor for the grid based dungeon configuration

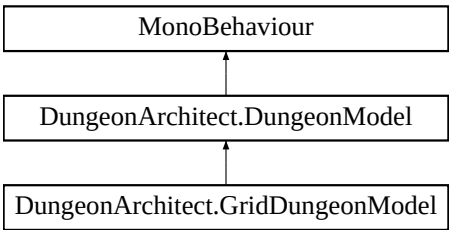
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/DungeonConfigPropertyEditor.cs

5.72 DungeonArchitect.GridDungeonModel Class Reference

Data model for the grid based dungeon builder

Inheritance diagram for DungeonArchitect.GridDungeonModel:



Public Member Functions

- GridCellInfo GetGridCellLookup (int x, int z)

  Get meta-data about the grid in x, z grid coordinate
- void BuildSpatialCellLookup ()

  Builds a lookup for fast data retrieval
- void BuildCellLookup ()

  Builds the cell lookup for faster cell retrieval
- Cell GetCell (int Id)

  Gets the cell information
- Cell FindCellByPosition (IntVector position)

  Finds the cell based on the position in grid coordinates
- override void ResetModel ()

  Clears the dungeon data model
- bool **ContainsStairAtLocation** (int x, int z)
- StairInfo **GetStairAtLocation** (int x, int z)
- bool ContainsStair (int cellA, int cellB)

  Check if a stair exists between the two cells

Public Attributes

- DoorManager **DoorManager** = new DoorManager()
- DungeonModelBuildState **State** = DungeonModelBuildState.Initial
- DungeonConfig **Config**
- List< Cell > **Cells** = new List<Cell>()
- Dictionary< int, List< StairInfo > > **CellStairs** = new Dictionary<int, List<StairInfo>>()
- Dictionary< int, Dictionary< int, GridCellInfo > > **GridCellInfoLookup** = new Dictionary<int, Dictionary<int, GridCellInfo>>()
- Dictionary< int, Cell > CellLookup = new Dictionary<int, Cell>()

  Cell lookup based on the Cell Id

Properties

- CellDoor[] Doors `[get]`

  The list of registered doors

5.72.1 Detailed Description

Data model for the grid based dungeon builder

5.72.2 Member Function Documentation

5.72.2.1 void DungeonArchitect.GridDungeonModel.BuildCellLookup ( )

Builds the cell lookup for faster cell retrieval

5.72.2.2 void DungeonArchitect.GridDungeonModel.BuildSpatialCellLookup ( )

Builds a lookup for fast data retrieval

5.72.2.3 bool DungeonArchitect.GridDungeonModel.ContainsStair (int *cellA*, int *cellB*)

Check if a stair exists between the two cells

Parameters

cellA	
cellB	

Returns

5.72.2.4 Cell DungeonArchitect.GridDungeonModel.FindCellByPosition (IntVector *position*)

Finds the cell based on the position in grid coordinates

Parameters

position	Position to lookup in grid cooridnates

Returns

Cell information at that location. Returns null if none found

5.72.2.5 Cell DungeonArchitect.GridDungeonModel.GetCell (int *Id*)

Gets the cell information

Parameters

Id	Id of the cell to lookup

Returns

5.72.2.6 GridCellInfo DungeonArchitect.GridDungeonModel.GetGridCellLookup (int *x*, int *z*)

Get meta-data about the grid in x, z grid coordinate

Parameters

x	X value in grid coordinate
z	Z value in grid cooridnate

Returns

5.72.2.7 override void DungeonArchitect.GridDungeonModel.ResetModel ( ) [virtual]

Clears the dungeon data model

Reimplemented from DungeonArchitect.DungeonModel.

5.72.3 Member Data Documentation

5.72.3.1 Dictionary<int, Cell> DungeonArchitect.GridDungeonModel.CellLookup = new Dictionary<int, Cell>()

Cell lookup based on the Cell Id

5.72.4 Property Documentation

5.72.4.1 CellDoor [ ] DungeonArchitect.GridDungeonModel.Doors [get]

The list of registered doors

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.73 DungeonArchitect.GridDungeonModelUtils Class Reference

Static Public Member Functions

- static Cell[ ] **FindFurthestRooms** (GridDungeonModel model)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.74 DungeonArchitect.Graphs.IndexCounter Class Reference

An ID provider for graph objects

Public Member Functions

- int **GetNext** ()

5.74.1 Detailed Description

An ID provider for graph objects

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/Graph.cs

5.75 DungeonArchitect.Editors.InspectorUtils Class Reference

Utility functions for drawing UI in the Inspector window

Static Public Member Functions

- static void DrawMatrixProperty (string caption, ref Matrix4x4 matrix)
  Draws the translation / rotation / scale widgets for a Matrix4x4
- static void RoundVector (ref Vector3 vector, int precision)
  Rounds the Vector to the nearest precision
- static float Round (float f, int precision)
  rounds a float to the nearest precision
- static void DrawVectorProperty (string caption, ref Vector3 vector)
  Draws XYZ components of a Vector3 in the inspector window within the same line for better usability and asthetics

5.75.1 Detailed Description

Utility functions for drawing UI in the Inspector window

5.75.2 Member Function Documentation

5.75.2.1 static void DungeonArchitect.Editors.InspectorUtils.DrawMatrixProperty (string *caption*, ref Matrix4x4 *matrix*) [static]

Draws the translation / rotation / scale widgets for a Matrix4x4

Parameters

caption	The caption to display above the widget
matrix	The transform matrix to modify

5.75.2.2 static void DungeonArchitect.Editors.InspectorUtils.DrawVectorProperty (string *caption*, ref Vector3 *vector*) [static]

Draws XYZ components of a Vector3 in the inspector window within the same line for better usability and asthetics

Parameters

caption	The caption to use on the property
vector	The vector to modify

5.75.2.3 static float DungeonArchitect.Editors.InspectorUtils.Round (float *f*, int *precision*) [static]

rounds a float to the nearest precision

Parameters

f	The value to round
precision	The precision in digits

Returns

5.75.2.4 static void DungeonArchitect.Editors.InspectorUtils.RoundVector (ref Vector3 *vector*, int *precision*) [static]

Rounds the Vector to the nearest precision

Parameters

vector	The vector to round
precision	The precision in digits

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/InspectorUtils.cs

5.76 DungeonArchitect.Utils.InstanceCache Class Reference

Caches instances by their name so they can be reused when needed again instead of recreating it

Public Member Functions

- object GetInstance (string typeName)

  Retrieves the instance of the specified ScriptableObject type name. If none exists, a new one is created and stored

5.76.1 Detailed Description

Caches instances by their name so they can be reused when needed again instead of recreating it

5.76.2 Member Function Documentation

5.76.2.1 object DungeonArchitect.Utils.InstanceCache.GetInstance (string *typeName*)

Retrieves the instance of the specified ScriptableObject type name. If none exists, a new one is created and stored

Parameters

typeName	The typename of the ScriptableObject

Returns

The cached instance of the specified ScriptableObject typename

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/InstanceCache.cs

5.77 DungeonArchitect.IntVector Struct Reference

Represent an integer vector

Public Member Functions

- **IntVector** (int x, int y, int z)
- void **Set** (int x, int y, int z)
- float **DistanceSq** ()
- float **Distance** ()
- override bool **Equals** (System.Object obj)
- override int **GetHashCode** ()

Static Public Member Functions

- static IntVector **operator+** (IntVector a, IntVector b)
- static IntVector **operator-** (IntVector a, IntVector b)
- static IntVector **operator*** (IntVector a, IntVector b)
- static Vector3 **operator*** (IntVector a, Vector3 b)
- static IntVector **operator/** (IntVector a, IntVector b)
- static IntVector **operator+** (IntVector a, int b)
- static IntVector **operator-** (IntVector a, int b)
- static IntVector **operator*** (IntVector a, int b)
- static IntVector **operator/** (IntVector a, int b)
- static Vector3 **ToV3** (IntVector iv)

Public Attributes

- int **x**
- int **y**
- int **z**

Static Public Attributes

- static readonly IntVector **Zero** = new IntVector(0, 0, 0)

5.77.1 Detailed Description

Represent an integer vector

The documentation for this struct was generated from the following file:

- github/dungeon-architect-unity/Scripts/Math/IntVector.cs

5.78 DungeonArchitect.IntVector2Key Struct Reference

Data-structure for IntVector pair. Used for caching

Public Member Functions

- **IntVector2Key** (IntVector a, IntVector b)
- override bool **Equals** (System.Object obj)
- override int **GetHashCode** ()

Public Attributes

- IntVector **a**
- IntVector **b**

5.78.1 Detailed Description

Data-structure for IntVector pair. Used for caching

The documentation for this struct was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.79 DungeonArchitect.Editors.KeyboardState Class Reference

Caches the keyboard state

Public Member Functions

- void **SetState** (KeyCode keyCode, bool pressed)
- void **HandleInput** (Event e)
- bool **GetSate** (KeyCode keyCode)

Properties

- bool **ControlPressed** `[get]`
- bool **ShiftPressed** `[get]`
- bool **AltPressed** `[get]`

5.79.1 Detailed Description

Caches the keyboard state

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.80 DungeonArchitect.LandscapeDataRasterizer Class Reference

Manages the landscape data and performs various rasterization algorithms (draw cells, lines etc)

Public Member Functions

- LandscapeDataRasterizer (Terrain terrain, float elevation)

  Creates a new instance
- void LoadData ()

  Loads the data from the terrain into memory for modification
- void DrawCell (float x, float y, float w, float h, float elevation)

  Rasterizes the terrain height along the specified world cooridnate with the specified elevation height
- void SmoothCell (float x, float y, float w, float h, float elevation, int smoothingDistance, AnimationCurve smoothingCurve)

  Applies a smoothing blur filter based on the user-defined smoothing curve
- void SaveData ()

  Saves the data in memory back into the terrain. This modifies the terrain object

Static Public Member Functions

- static float GetHeight (Terrain terrain, float worldX, float worldZ)

  Gets the height of the terrain at the specified world space
- static void WorldToTerrainCoord (Terrain terrain, float x, float y, out int gx, out int gy)

  Converts the world coordinate to internal terrain coordinate where the data is loaded
- static void WorldToTerrainTextureCoord (Terrain terrain, float x, float y, out int tx, out int ty)

  Converts the world coordinate to terrain texture coordinate

5.80.1 Detailed Description

Manages the landscape data and performs various rasterization algorithms (draw cells, lines etc)

5.80.2 Constructor & Destructor Documentation

5.80.2.1 DungeonArchitect.LandscapeDataRasterizer.LandscapeDataRasterizer (Terrain *terrain,* float *elevation*)

Creates a new instance

Parameters

terrain	The terrain object to modify
elevation	The prefered ground level elevation

5.80.3 Member Function Documentation

5.80.3.1 void DungeonArchitect.LandscapeDataRasterizer.DrawCell (float *x,* float *y,* float *w,* float *h,* float *elevation*)

Rasterizes the terrain height along the specified world cooridnate with the specified elevation height

Parameters

x	x cooridnate in world space
y	z coordinate in world space
w	width in world space

h	height in world space
elevation	The elevation to set in the specified bounds

5.80.3.2 static float DungeonArchitect.LandscapeDataRasterizer.GetHeight (Terrain *terrain*, float *worldX*, float *worldZ*) [static]

Gets the height of the terrain at the specified world space

Parameters

terrain	The terrain object
worldX	X cooridnate in world space
worldZ	Z cooridnate in world space

Returns

The Y height of the terrain at the specified location

5.80.3.3 void DungeonArchitect.LandscapeDataRasterizer.LoadData ( )

Loads the data from the terrain into memory for modification

5.80.3.4 void DungeonArchitect.LandscapeDataRasterizer.SaveData ( )

Saves the data in memory back into the terrain. This modifies the terrain object

5.80.3.5 void DungeonArchitect.LandscapeDataRasterizer.SmoothCell (float *x*, float *y*, float *w*, float *h*, float *elevation*, int *smoothingDistance*, AnimationCurve *smoothingCurve*)

Applies a smoothing blur filter based on the user-defined smoothing curve

Parameters

x	x cooridnate in world space
y	z coordinate in world space
w	width in world space
h	height in world space
elevation	The elevation to set in the specified bounds
smoothing↩ Distance	The distance to apply the smoothing transition on. For e.g. if the distance it 5, the smoothing would occur over 5 units
smoothingCurve	The user defined curve to control the steepness of cliffs

5.80.3.6 static void DungeonArchitect.LandscapeDataRasterizer.WorldToTerrainCoord (Terrain *terrain*, float *x*, float *y*, out int *gx*, out int *gy*) [static]

Converts the world coordinate to internal terrain coordinate where the data is loaded

Parameters

terrain	The terrain to query

x	x coordinate in world coordinate
y	z coordinate in world coordinate
gx	x cooridnate in the 2D terrain height data coordinate
gy	y cooridnate in the 2D terrain height data coordinate

5.80.3.7 static void DungeonArchitect.LandscapeDataRasterizer.WorldToTerrainTextureCoord (Terrain *terrain*, float *x*, float *y*, out int *tx*, out int *ty*) [static]

Converts the world coordinate to terrain texture coordinate

Parameters

terrain	The terrain to query
x	x coordinate in world coordinate
y	z coordinate in world coordinate
tx	x cooridnate in the 2D terrain texture data coordinate
ty	y cooridnate in the 2D terrain texture data coordinate

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Landscape/LandscapeDataRasterizer.cs

5.81 DungeonArchitect.LandscapeTexture Class Reference

Data-structure to hold the texture settings. This contains enough information to paint the texture on to the terrain

Public Attributes

- LandscapeTextureType **textureType**
- Texture2D **diffuse**
- Texture2D **normal**
- float **metallic** = 0
- Vector2 **size** = new Vector2(15, 15)
- Vector2 **offset** = Vector2.zero

5.81.1 Detailed Description

Data-structure to hold the texture settings. This contains enough information to paint the texture on to the terrain

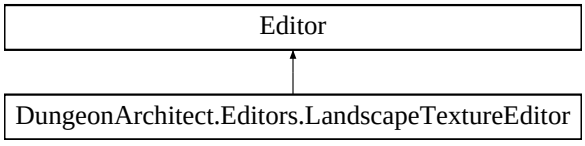
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Landscape/LandscapeTransformerGrid.cs

5.82 DungeonArchitect.Editors.LandscapeTextureEditor Class Reference

Custom property editor for the Landscape texture data-structure

Inheritance diagram for DungeonArchitect.Editors.LandscapeTextureEditor:



Public Member Functions

- void **OnEnable** ()
- override void **OnInspectorGUI** ()

5.82.1 Detailed Description

Custom property editor for the Landscape texture data-structure

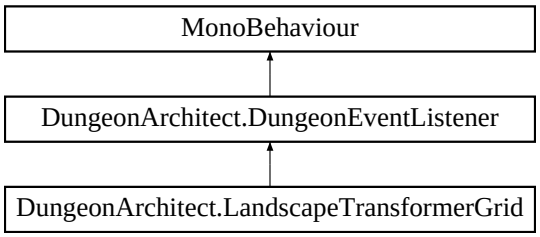
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Dungeon/Landscape/LandscapeTextureEditor.cs

5.83 DungeonArchitect.LandscapeTransformerGrid Class Reference

The terrain modifier that works with the grid based dungeon builder (DungeonBuilderGrid) It modifies the terrain by adjusting the height around the layout of the dungeon and painting it based on the specified texture settings

Inheritance diagram for DungeonArchitect.LandscapeTransformerGrid:



Public Member Functions

- override void OnPostDungeonLayoutBuild (Dungeon dungeon, DungeonModel model)

  Called after the layout is built in memory, but before the markers are emitted

Public Attributes

- Terrain **terrain**
- LandscapeTexture[ ] **textures**
- float groundLevelHeight = 0

  The height of the default ground level
- float **layoutLevelOffset** = 0
- int **smoothingDistance** = 5
- AnimationCurve **roomElevationCurve**
- AnimationCurve **corridorElevationCurve**
- int **roadBlurDistance** = 6
- float **corridorBlurThreshold** = 0.5f

5.83.1 Detailed Description

The terrain modifier that works with the grid based dungeon builder (DungeonBuilderGrid) It modifies the terrain by adjusting the height around the layout of the dungeon and painting it based on the specified texture settings

5.83.2 Member Function Documentation

5.83.2.1 override void DungeonArchitect.LandscapeTransformerGrid.OnPostDungeonLayoutBuild (Dungeon *dungeon,* DungeonModel *model*) [virtual]

Called after the layout is built in memory, but before the markers are emitted

Parameters

model	The dungeon model

Reimplemented from DungeonArchitect.DungeonEventListener.

5.83.3 Member Data Documentation

5.83.3.1 float DungeonArchitect.LandscapeTransformerGrid.groundLevelHeight = 0

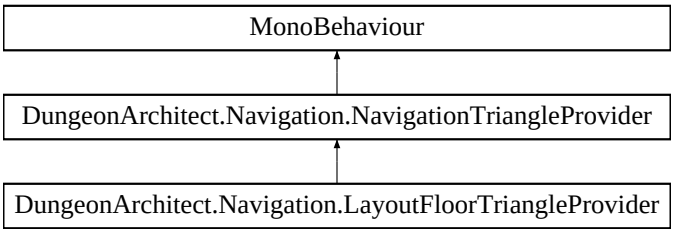
The height of the default ground level

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Landscape/LandscapeTransformerGrid.cs

5.84 DungeonArchitect.Navigation.LayoutFloorTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.LayoutFloorTriangleProvider:



Public Member Functions

- override void **AddNavTriangles** (List< Triangle3 > triangles)

Public Attributes

- Dungeon **dungeon**

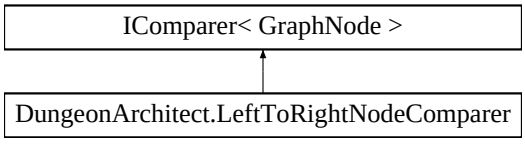
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/TriangleProviders/LayoutFloorTriangleProvider.cs

5.85 DungeonArchitect.LeftToRightNodeComparer Class Reference

Sorts the nodes from left to right based on the X-axis. This is used for sorting the visual nodes for execution, since they are executed from left to right

Inheritance diagram for DungeonArchitect.LeftToRightNodeComparer:



Public Member Functions

- int **Compare** (GraphNode a, GraphNode b)

5.85.1 Detailed Description

Sorts the nodes from left to right based on the X-axis. This is used for sorting the visual nodes for execution, since they are executed from left to right

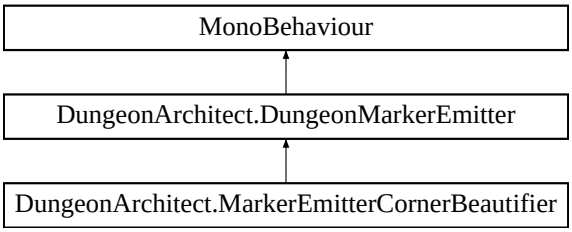
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonPropDataAsset.cs

5.86 DungeonArchitect.MarkerEmitterCornerBeautifier Class Reference

Emits markers to beautify the level around corners based on the surrounding tiles

Inheritance diagram for DungeonArchitect.MarkerEmitterCornerBeautifier:



Public Member Functions

- override void EmitMarkers (DungeonBuilder builder)

  Called by the dungeon object right after the dungeon is created

5.86.1 Detailed Description

Emits markers to beautify the level around corners based on the surrounding tiles

5.86.2 Member Function Documentation

5.86.2.1 override void DungeonArchitect.MarkerEmitterCornerBeautifier.EmitMarkers (DungeonBuilder *builder*) [virtual]

Called by the dungeon object right after the dungeon is created

Parameters

builder	reference to the builder object used to build the dungeon

Reimplemented from DungeonArchitect.DungeonMarkerEmitter.

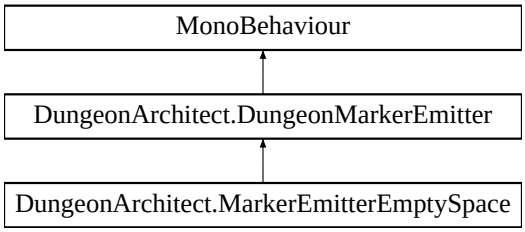
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/MarkerEmitters/Grid/MarkerEmitterCornerBeautifier.cs

5.87 DungeonArchitect.MarkerEmitterEmptySpace Class Reference

Emits markers in the nearby empty space of the dungeon layout

Inheritance diagram for DungeonArchitect.MarkerEmitterEmptySpace:



Public Member Functions

- override void EmitMarkers (DungeonBuilder builder)

  Called by the dungeon object right after the dungeon is created

Public Attributes

- int **distanceToCover** = 3
- string **markerName** = "EmptySpace"
- string **indexedMarkerNamePrefix** = "EmptySpace_"
- bool **overrideY** = false
- string **overrideYBlackboardKey** = "DungeonLowestY"

5.87.1 Detailed Description

Emits markers in the nearby empty space of the dungeon layout

5.87.2 Member Function Documentation

5.87.2.1 override void DungeonArchitect.MarkerEmitterEmptySpace.EmitMarkers (DungeonBuilder *builder*) [virtual]

Called by the dungeon object right after the dungeon is created

Parameters

builder	reference to the builder object used to build the dungeon

Reimplemented from DungeonArchitect.DungeonMarkerEmitter.

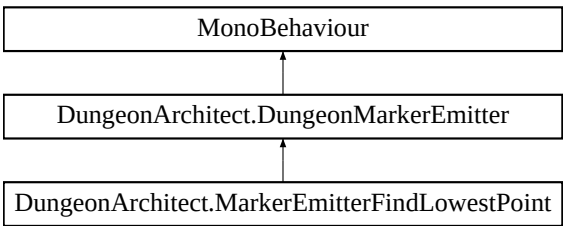
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/MarkerEmitters/Grid/MarkerEmitterEmptySpace.cs

5.88 DungeonArchitect.MarkerEmitterFindLowestPoint Class Reference

Finds the lowest dungeon point and emits a marker at that position. Also sets the scale of the marker to match the width / height

Inheritance diagram for DungeonArchitect.MarkerEmitterFindLowestPoint:



Public Member Functions

- override void EmitMarkers (DungeonBuilder builder)

  Called by the dungeon object right after the dungeon is created

Public Attributes

- string **MarkerName** = "LowestPoint"
- string **BlackboardKeyLowestY** = "DungeonLowestY"

5.88.1 Detailed Description

Finds the lowest dungeon point and emits a marker at that position. Also sets the scale of the marker to match the width / height

5.88.2 Member Function Documentation

5.88.2.1 override void DungeonArchitect.MarkerEmitterFindLowestPoint.EmitMarkers (DungeonBuilder *builder*) [virtual]

Called by the dungeon object right after the dungeon is created

Parameters

builder	reference to the builder object used to build the dungeon

Reimplemented from DungeonArchitect.DungeonMarkerEmitter.

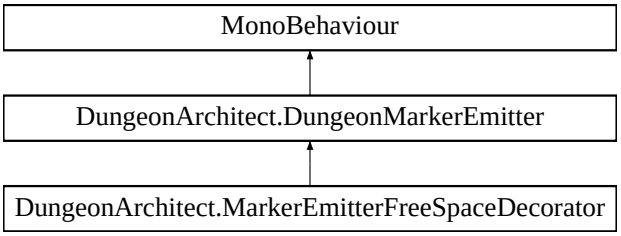
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/MarkerEmitters/Grid/MarkerEmitterFindLowestPoint.cs

5.89 DungeonArchitect.MarkerEmitterFreeSpaceDecorator Class Reference

A more specialized version of the EmptySpace emitter. Emits decorative markers in empty space near the layout

Inheritance diagram for DungeonArchitect.MarkerEmitterFreeSpaceDecorator:



Public Member Functions

- override void EmitMarkers (DungeonBuilder builder)

  Called by the dungeon object right after the dungeon is created

Public Attributes

- int **distanceFromEdge** = 2
- string **markerName** = "EmtpySpaceDecoration"
- float **pushDownAmount** = 6
- Vector3[ ] **pushDownTestAxis** = new Vector3[0]

5.89.1 Detailed Description

A more specialized version of the EmptySpace emitter. Emits decorative markers in empty space near the layout

5.89.2 Member Function Documentation

5.89.2.1 override void DungeonArchitect.MarkerEmitterFreeSpaceDecorator.EmitMarkers (DungeonBuilder *builder*) [virtual]

Called by the dungeon object right after the dungeon is created

Parameters

builder	reference to the builder object used to build the dungeon

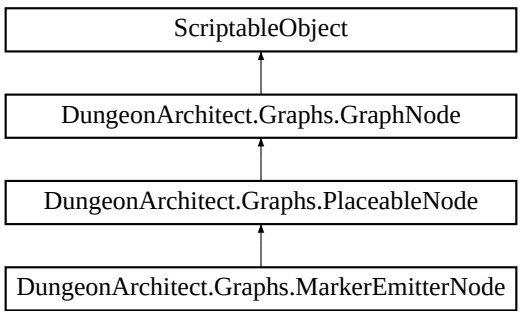
Reimplemented from DungeonArchitect.DungeonMarkerEmitter.

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/MarkerEmitters/Grid/MarkerEmitterFreeSpaceDecorator.cs

5.90 DungeonArchitect.Graphs.MarkerEmitterNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.MarkerEmitterNode:



Public Member Functions

- override void **Initialize** (string id, Graph graph)

Properties

- MarkerNode **Marker** `[get, set]`

Additional Inherited Members

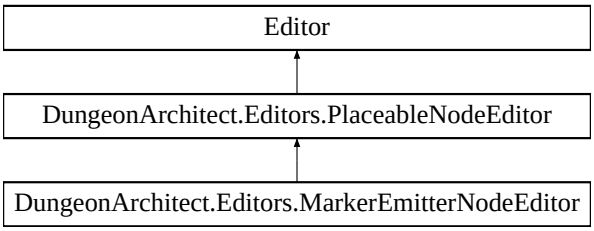
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/MarkerEmitterNode.cs

5.91 DungeonArchitect.Editors.MarkerEmitterNodeEditor Class Reference

Custom property editors for MarkerEmitterNode

Inheritance diagram for DungeonArchitect.Editors.MarkerEmitterNodeEditor:



Public Member Functions

- override void **OnEnable** ()

Protected Member Functions

- override void **DrawPreInspectorGUI** ()

Additional Inherited Members

5.91.1 Detailed Description

Custom property editors for MarkerEmitterNode

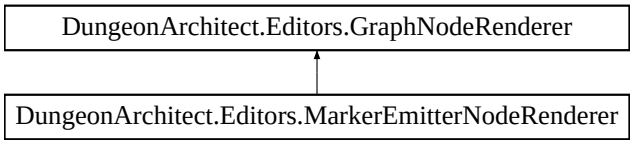
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MarkerEmitterNodeEditor.cs

5.92 DungeonArchitect.Editors.MarkerEmitterNodeRenderer Class Reference

Renders a MarkerEmitterNode

Inheritance diagram for DungeonArchitect.Editors.MarkerEmitterNodeRenderer:



Public Member Functions

- override void **Draw** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera)

Protected Member Functions

- override Color **getBackgroundColor** (GraphNode node)

5.92.1 Detailed Description

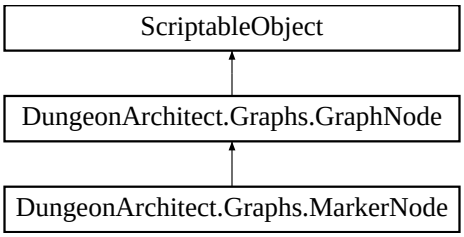
Renders a MarkerEmitterNode

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MarkerEmitterNodeEditor.cs

5.93 DungeonArchitect.Graphs.MarkerNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.MarkerNode:



Public Member Functions

- override void **Initialize** (string id, Graph graph)

Additional Inherited Members

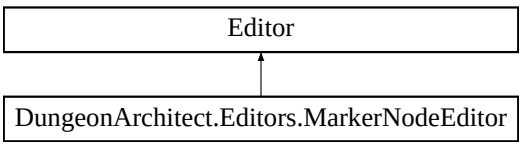
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/MarkerNode.cs

5.94 DungeonArchitect.Editors.MarkerNodeEditor Class Reference

Custom property editors for MarkerNode

Inheritance diagram for DungeonArchitect.Editors.MarkerNodeEditor:



Public Member Functions

- void **OnEnable** ()
- override void **OnInspectorGUI** ()

5.94.1 Detailed Description

Custom property editors for MarkerNode

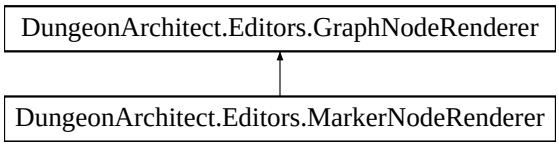
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MarkerNodeEditor.cs

5.95 DungeonArchitect.Editors.MarkerNodeRenderer Class Reference

Renders a marker node

Inheritance diagram for DungeonArchitect.Editors.MarkerNodeRenderer:



Public Member Functions

- override void **Draw** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera)

Additional Inherited Members

5.95.1 Detailed Description

Renders a marker node

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MarkerNodeEditor.cs

5.96 DungeonArchitect.Utils.MathUtils Class Reference

Various math utility functions

Static Public Member Functions

- static Rectangle Copy (Rectangle other)

  Copies the rectangle object
- static Vector3 Divide (Vector3 a, Vector3 b)

  Divides two vector3 objects
- static Vector3 ToVector3 (IntVector v)

  Converts an IntVector to a Vector3
- static IntVector WorldToGrid (Vector3 WorldCoord, Vector3 GridCellSize)

  Converts the world coordinates to grid coordinates
- static Vector3 GridToWorld (Vector3 GridCellSize, IntVector v)

  Converts the grid coordinate to world coordinate
- static Vector3 GridToWorld (Vector3 GridCellSize, Vector3 v)

  Converts the grid coordinate to world coordinate
- static IntVector ToIntVector (Vector3 v)

  Converts an IntVector to a Vector3, with the XYZ components floored
- static IntVector RoundToIntVector (Vector3 v)

  Rounds to an IntVector, with the XYZ components rounded to the nearest int
- static Vector3 SnapToGrid (Vector3 position, Vector3 gridCellSize)

  Snaps the position to the nearest grid cell location
- static Vector3 SnapToGrid (Vector3 position, Vector3 gridCellSize, bool useRounding)

  Snaps the position to the nearest grid cell location
- static bool Intersects (Rect outer, Rect inner)

  Checks if the two rectangles intersect
- static bool Intersects (Rect outer, GraphLink link)

  Test if the graph link lies within the rectangle
- static void FlipYZ (ref Bounds bounds)

  Flips the coordinates for 2D mode
- static Vector3 FlipYZ (Vector3 bounds)

  Flips the coordinates for 2D mode
- static IntVector FlipYZ (IntVector bounds)

  Flips the coordinates for 2D mode

Static Public Attributes

- static readonly int INVALID_LOCATION = -1000000

  Flag to indicate an invalid location

5.96.1 Detailed Description

Various math utility functions

5.96.2 Member Function Documentation

5.96.2.1 static Rectangle DungeonArchitect.Utils.MathUtils.Copy (Rectangle *other*) [static]

Copies the rectangle object

Parameters

other	The object to copy

Returns

The copied object

5.96.2.2 static Vector3 DungeonArchitect.Utils.MathUtils.Divide (Vector3 *a,* Vector3 *b*) [static]

Divides two vector3 objects

Parameters

a	
b	

Returns

The divided vector

5.96.2.3 static void DungeonArchitect.Utils.MathUtils.FlipYZ (ref Bounds *bounds*) [static]

Flips the coordinates for 2D mode

Parameters

bounds	Bounds.

5.96.2.4 static Vector3 DungeonArchitect.Utils.MathUtils.FlipYZ (Vector3 *bounds*) [static]

Flips the coordinates for 2D mode

Returns

The Y.

Parameters

bounds	Bounds.

5.96.2.5 static IntVector DungeonArchitect.Utils.MathUtils.FlipYZ (IntVector *bounds*) [static]

Flips the coordinates for 2D mode

Returns

The Y.

Parameters

bounds	Bounds.

5.96.2.6 static Vector3 DungeonArchitect.Utils.MathUtils.GridToWorld (Vector3 *GridCellSize,* IntVector *v*) [static]

Converts the grid coordinate to world coordinate

Parameters

GridCellSize	The grid cell size
v	The input grid coordinate

Returns

The resulting world coordinate

5.96.2.7 static Vector3 DungeonArchitect.Utils.MathUtils.GridToWorld (Vector3 *GridCellSize,* Vector3 *v*) [static]

Converts the grid coordinate to world coordinate

Parameters

GridCellSize	The grid cell size
v	The input grid coordinate

Returns

The resulting world coordinate

5.96.2.8 static bool DungeonArchitect.Utils.MathUtils.Intersects (Rect *outer,* Rect *inner*) [static]

Checks if the two rectangles intersect

Parameters

outer	The outer rect
inner	The inner rect

Returns

True if they intersect, false otherwise

5.96.2.9 static bool DungeonArchitect.Utils.MathUtils.Intersects (Rect *outer,* GraphLink *link*) [static]

Test if the graph link lies within the rectangle

Parameters

outer	The rect to test against
link	The link to test the intersection

Returns

True if intersects, false otherwise

5.96.2.10 static IntVector DungeonArchitect.Utils.MathUtils.RoundToIntVector (Vector3 *v*) [static]

Rounds to an IntVector, with the XYZ components rounded to the nearest int

Parameters

v	The input Vector3 to convert

Returns

The rounded IntVector

5.96.2.11 static Vector3 DungeonArchitect.Utils.MathUtils.SnapToGrid (Vector3 *position*, Vector3 *gridCellSize*) [static]

Snaps the position to the nearest grid cell location

Parameters

position	The position to snap
gridCellSize	The size of the grid cell

Returns

The snapped position

5.96.2.12 static Vector3 DungeonArchitect.Utils.MathUtils.SnapToGrid (Vector3 *position*, Vector3 *gridCellSize*, bool *useRounding*) [static]

Snaps the position to the nearest grid cell location

Parameters

position	The position to snap
gridCellSize	The size of the grid cell
useRounding	Flag to indicate if rounding is to be used. Uses floor if false

Returns

The snapped position

5.96.2.13 static IntVector DungeonArchitect.Utils.MathUtils.ToIntVector (Vector3 *v*) [static]

Converts an IntVector to a Vector3, with the XYZ components floored

Parameters

v	The input Vector3 to convert

Returns

The corresponding IntVector, floored in each component

5.96.2.14 static Vector3 DungeonArchitect.Utils.MathUtils.ToVector3 (IntVector *v*) [static]

Converts an IntVector to a Vector3

Parameters

v	the input int vector

Returns

5.96.2.15 static IntVector DungeonArchitect.Utils.MathUtils.WorldToGrid (Vector3 *WorldCoord,* Vector3 *GridCellSize*) [static]

Converts the world coordinates to grid coordinates

Parameters

WorldCoord	The world cooridnate
GridCellSize	The grid cell size

Returns

The resulting grid coordinate

5.96.3 Member Data Documentation

5.96.3.1 readonly int DungeonArchitect.Utils.MathUtils.INVALID_LOCATION = -1000000 [static]

Flag to indicate an invalid location

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/MathUtils.cs

5.97 DungeonArchitect.Utils.Matrix Class Reference

Utility function to extract and put data into a Matrix4x4 object

Static Public Member Functions

- static Vector3 GetTranslation (ref Matrix4x4 matrix)

  Extract translation from transform matrix.
- static void SetTranslation (ref Matrix4x4 matrix, Vector3 translate)

  Sets the translation of the matrix object
- static void SetTransform (out Matrix4x4 transform, Vector3 position, Quaternion rotation, Vector3 scale)

  Sets the transform of a matrix
- static Quaternion GetRotation (ref Matrix4x4 matrix)

  Extract rotation quaternion from transform matrix.
- static Vector3 GetScale (ref Matrix4x4 matrix)

  Extract scale from transform matrix.
- static void DecomposeMatrix (ref Matrix4x4 matrix, out Vector3 localPosition, out Quaternion localRotation, out Vector3 localScale)

  Extract position, rotation and scale from TRS matrix.
- static void SetTransformFromMatrix (Transform transform, ref Matrix4x4 matrix)

  Set transform component from TRS matrix.

- static Matrix4x4 Identity ()

  Identity matrix.
- static Matrix4x4 TranslationMatrix (Vector3 offset)

  Get translation matrix.
- static Matrix4x4 Copy (Matrix4x4 In)

  Copies the matrix object
- static Matrix4x4 FromGameTransform (Transform t)

  Creates a Matrix4x4 object from the game object's transform

Static Public Attributes

- static readonly Quaternion IdentityQuaternion = Quaternion.identity

  Identity quaternion.

5.97.1 Detailed Description

Utility function to extract and put data into a Matrix4x4 object

5.97.2 Member Function Documentation

5.97.2.1 static Matrix4x4 DungeonArchitect.Utils.Matrix.Copy (Matrix4x4 *In*) [static]

Copies the matrix object

Parameters

In	The matrix object to copy

Returns

The copied object

5.97.2.2 static void DungeonArchitect.Utils.Matrix.DecomposeMatrix (ref Matrix4x4 *matrix,* out Vector3 *localPosition,* out Quaternion *localRotation,* out Vector3 *localScale*) [static]

Extract position, rotation and scale from TRS matrix.

Parameters

matrix	Transform matrix. This parameter is passed by reference to improve performance; no changes will be made to it.
localPosition	Output position.
localRotation	Output rotation.
localScale	Output scale.

5.97.2.3 static Matrix4x4 DungeonArchitect.Utils.Matrix.FromGameTransform (Transform *t*) [static]

Creates a Matrix4x4 object from the game object's transform

Parameters

t	The game object's transform

Returns

The resulting matrix

5.97.2.4 static Quaternion DungeonArchitect.Utils.Matrix.GetRotation (ref Matrix4x4 *matrix*) [static]

Extract rotation quaternion from transform matrix.

Parameters

matrix	Transform matrix. This parameter is passed by reference to improve performance; no changes will be made to it.

Returns

Quaternion representation of rotation transform.

5.97.2.5 static Vector3 DungeonArchitect.Utils.Matrix.GetScale (ref Matrix4x4 *matrix*) [static]

Extract scale from transform matrix.

Parameters

matrix	Transform matrix. This parameter is passed by reference to improve performance; no changes will be made to it.

Returns

Scale vector.

5.97.2.6 static Vector3 DungeonArchitect.Utils.Matrix.GetTranslation (ref Matrix4x4 *matrix*) [static]

Extract translation from transform matrix.

Parameters

matrix	Transform matrix. This parameter is passed by reference to improve performance; no changes will be made to it.

Returns

Translation offset.

5.97.2.7 static Matrix4x4 DungeonArchitect.Utils.Matrix.Identity ( ) [static]

Identity matrix.

It is faster to access this variation than `Matrix4x4.identity`.

5.97.2.8 static void DungeonArchitect.Utils.Matrix.SetTransform (out Matrix4x4 *transform*, Vector3 *position*, Quaternion *rotation*, Vector3 *scale*) [static]

Sets the transform of a matrix

Parameters

transform	The matrix object to apply the transformation on
position	The position to set
rotation	The rotation to set
scale	The scale ot set

5.97.2.9 static void DungeonArchitect.Utils.Matrix.SetTransformFromMatrix (Transform *transform,* ref Matrix4x4 *matrix*) [static]

Set transform component from TRS matrix.

Parameters

transform	Transform component.
matrix	Transform matrix. This parameter is passed by reference to improve performance; no changes will be made to it.

5.97.2.10 static void DungeonArchitect.Utils.Matrix.SetTranslation (ref Matrix4x4 *matrix,* Vector3 *translate*) [static]

Sets the translation of the matrix object

Parameters

matrix	The matrix to set the translation on
translate	The translation to apply on the matrix

5.97.2.11 static Matrix4x4 DungeonArchitect.Utils.Matrix.TranslationMatrix (Vector3 *offset*) [static]

Get translation matrix.

Parameters

offset	Translation offset.

Returns

The translation transform matrix.

5.97.3 Member Data Documentation

5.97.3.1 readonly Quaternion DungeonArchitect.Utils.Matrix.IdentityQuaternion = Quaternion.identity [static]

Identity quaternion.

It is faster to access this variation than `Quaternion.identity`.

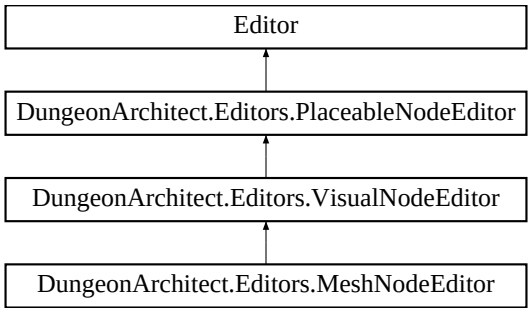
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/Matrix.cs

5.98 DungeonArchitect.Editors.MeshNodeEditor Class Reference

Custom property editors for GameObjectNode

Inheritance diagram for DungeonArchitect.Editors.MeshNodeEditor:



Public Member Functions

- override void **OnEnable** ()

Protected Member Functions

- override void **DrawPreInspectorGUI** ()

Additional Inherited Members

5.98.1 Detailed Description

Custom property editors for GameObjectNode

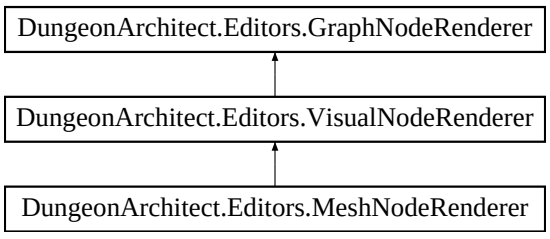
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MeshNodeEditor.cs

5.99 DungeonArchitect.Editors.MeshNodeRenderer Class Reference

Renders a mesh node

Inheritance diagram for DungeonArchitect.Editors.MeshNodeRenderer:



Protected Member Functions

- override Object **GetThumbObject** (GraphNode node)

Additional Inherited Members

5.99.1 Detailed Description

Renders a mesh node

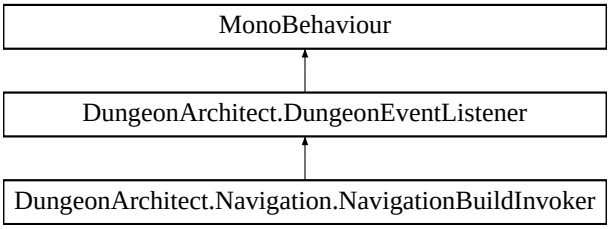
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/MeshNodeEditor.cs

5.100 DungeonArchitect.Navigation.NavigationBuildInvoker Class Reference

Drop this script into your dungeon object and assign the nav mesh prefab to automatically rebuild the nav mesh whenever the dungeon is rebuild (works both with runtime and design time)

Inheritance diagram for DungeonArchitect.Navigation.NavigationBuildInvoker:



Public Member Functions

- override void OnPostDungeonBuild (Dungeon dungeon, DungeonModel model)

  Called after the dungeon is completely built

Public Attributes

- DungeonNavMesh **navMesh**

5.100.1 Detailed Description

Drop this script into your dungeon object and assign the nav mesh prefab to automatically rebuild the nav mesh whenever the dungeon is rebuild (works both with runtime and design time)

5.100.2 Member Function Documentation

5.100.2.1 override void DungeonArchitect.Navigation.NavigationBuildInvoker.OnPostDungeonBuild (Dungeon *dungeon*, DungeonModel *model*) [virtual]

Called after the dungeon is completely built

Parameters

model	The dungeon model

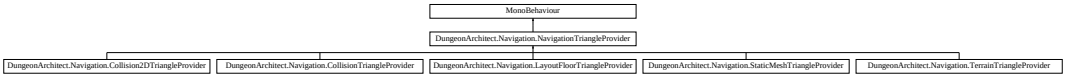
Reimplemented from DungeonArchitect.DungeonEventListener.

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/NavigationBuildInvoker.cs

5.101 DungeonArchitect.Navigation.NavigationTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.NavigationTriangleProvider:



Public Member Functions

- virtual void **AddNavTriangles** (List< Triangle3 > triangles)

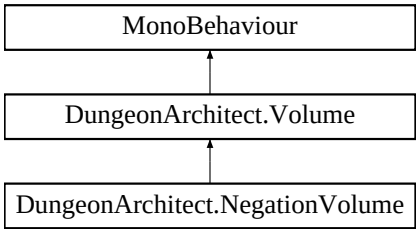
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/NavigationTriangleProvider.cs

5.102 DungeonArchitect.NegationVolume Class Reference

Negation volumes remove procedural geometries from the scene that lie with it's bounds

Inheritance diagram for DungeonArchitect.NegationVolume:



Additional Inherited Members

5.102.1 Detailed Description

Negation volumes remove procedural geometries from the scene that lie with it's bounds

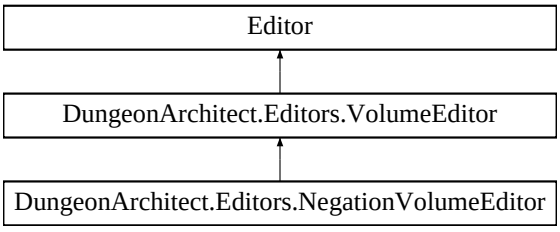
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Volumes/NegationVolume.cs

5.103 DungeonArchitect.Editors.NegationVolumeEditor Class Reference

Custom property editor for Negation volumes

Inheritance diagram for DungeonArchitect.Editors.NegationVolumeEditor:



Additional Inherited Members

5.103.1 Detailed Description

Custom property editor for Negation volumes

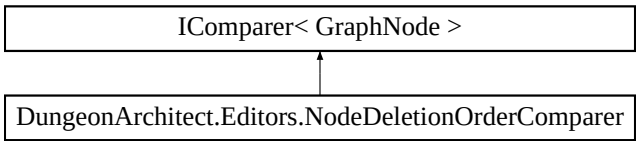
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Volumes/NegationVolumeEditor.cs

5.104 DungeonArchitect.Editors.NodeDeletionOrderComparer Class Reference

Sorts based on the node's Z-index in decending order

Inheritance diagram for DungeonArchitect.Editors.NodeDeletionOrderComparer:



Public Member Functions

- int **Compare** (GraphNode x, GraphNode y)

5.104.1 Detailed Description

Sorts based on the node's Z-index in decending order

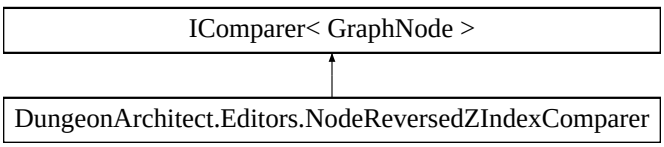
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.105 DungeonArchitect.Editors.NodeReversedZIndexComparer Class Reference

Sorts based on the node's Z-index in decending order

Inheritance diagram for DungeonArchitect.Editors.NodeReversedZIndexComparer:



Public Member Functions

- int **Compare** (GraphNode x, GraphNode y)

5.105.1 Detailed Description

Sorts based on the node's Z-index in decending order

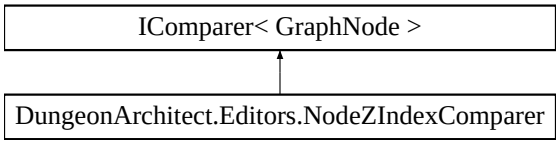
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.106 DungeonArchitect.Editors.NodeZIndexComparer Class Reference

Sorts based on the node's Z-index

Inheritance diagram for DungeonArchitect.Editors.NodeZIndexComparer:



Public Member Functions

- int **Compare** (GraphNode x, GraphNode y)

5.106.1 Detailed Description

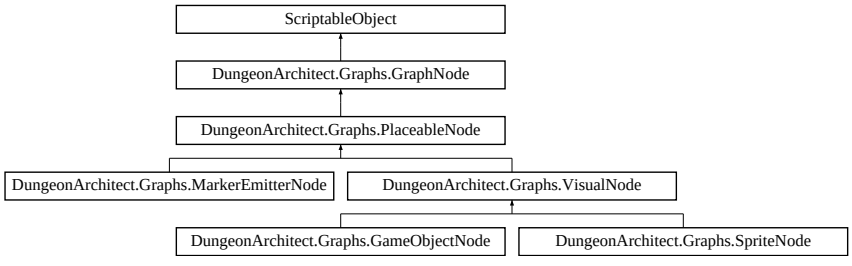
Sorts based on the node's Z-index

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/GraphEditor/GraphEditor.cs

5.107 DungeonArchitect.Graphs.PlaceableNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.PlaceableNode:



Public Member Functions

- override void CopyFrom (GraphNode node)

  Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Public Attributes

- Matrix4x4 **offset** = Matrix4x4.identity
- bool **consumeOnAttach** = true
- float **attachmentProbability** = 1.0f

Additional Inherited Members

5.107.1 Member Function Documentation

5.107.1.1 override void DungeonArchitect.Graphs.PlaceableNode.CopyFrom (GraphNode *node*) [virtual]

Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Parameters

node	

Reimplemented from DungeonArchitect.Graphs.GraphNode.

Reimplemented in DungeonArchitect.Graphs.VisualNode, and DungeonArchitect.Graphs.SpriteNode.

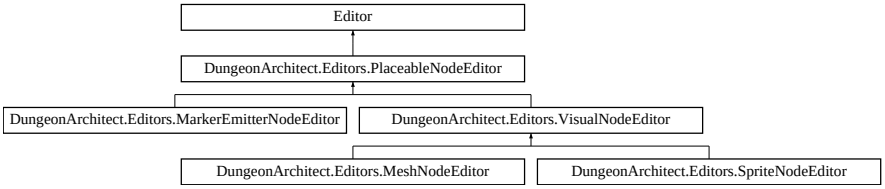
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/PlaceableNode.cs

5.108 DungeonArchitect.Editors.PlaceableNodeEditor Class Reference

Custom property editor for placeable node

Inheritance diagram for DungeonArchitect.Editors.PlaceableNodeEditor:



Public Member Functions

- virtual void **OnEnable** ()
- override void **OnInspectorGUI** ()

Protected Member Functions

- virtual void **DrawPreInspectorGUI** ()
- virtual void **DrawPostInspectorGUI** ()

Protected Attributes

- SerializedObject **sobject**
- bool **drawOffset** = false
- bool **drawAttachments** = false
- const int **CATEGORY_SPACING** = 10

5.108.1 Detailed Description

Custom property editor for placeable node

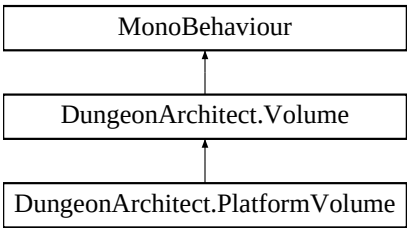
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/PlaceableNodeEditor.cs

5.109 DungeonArchitect.PlatformVolume Class Reference

Platform volumes add a platform in the scene encompassing the volume

Inheritance diagram for DungeonArchitect.PlatformVolume:



Public Attributes

- CellType **cellType** = CellType.Corridor

Additional Inherited Members

5.109.1 Detailed Description

Platform volumes add a platform in the scene encompassing the volume

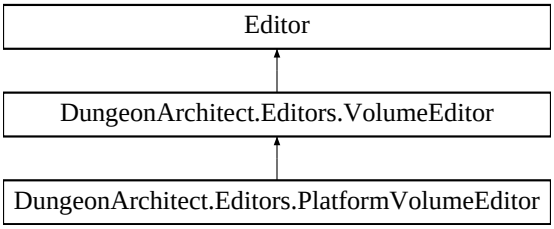
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Volumes/PlatformVolume.cs

5.110 DungeonArchitect.Editors.PlatformVolumeEditor Class Reference

Custom property editor for Platform volumes

Inheritance diagram for DungeonArchitect.Editors.PlatformVolumeEditor:



Public Member Functions

- override void **OnUpdate** (SceneView sceneView)

Additional Inherited Members

5.110.1 Detailed Description

Custom property editor for Platform volumes

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Volumes/PlatformVolumeEditor.cs

5.111 DungeonArchitect.Utils.PMRandom Class Reference

A random stream based on normal distribution. Also support uniform distsribution

Public Member Functions

- PMRandom ()
  Creates a new random stream with seed 0
- PMRandom (uint seed)
  Creates a new random stream with the specified seed
- void Initialize (uint seed)
  Initializes the stream with the given seed
- float NextGaussianFloat ()
  Gets the next random number from a uniform distribution
- float NextGaussianFloat (float mean, float stdDev)
  Gets the next random number from a uniform distribution
- float GetNextUniformFloat ()
  Gets a random number from the uniformly distributed stream

Properties

- Random **UniformRandom** `[get]`

5.111.1 Detailed Description

A random stream based on normal distribution. Also support uniform distsribution

5.111.2 Constructor & Destructor Documentation

5.111.2.1 DungeonArchitect.Utils.PMRandom.PMRandom ( )

Creates a new random stream with seed 0

5.111.2.2 DungeonArchitect.Utils.PMRandom.PMRandom (uint *seed*)

Creates a new random stream with the specified seed

Parameters

seed	The seed to initialize the random stream

5.111.3 Member Function Documentation

5.111.3.1 float DungeonArchitect.Utils.PMRandom.GetNextUniformFloat ( )

Gets a random number from the uniformly distributed stream

Returns

5.111.3.2 void DungeonArchitect.Utils.PMRandom.Initialize (uint *seed*)

Initializes the stream with the given seed

Parameters

seed	

5.111.3.3 float DungeonArchitect.Utils.PMRandom.NextGaussianFloat ( )

Gets the next random number from a uniform distribution

Returns

Random number from a uniform stream

5.111.3.4 float DungeonArchitect.Utils.PMRandom.NextGaussianFloat (float *mean*, float *stdDev*)

Gets the next random number from a uniform distribution

Parameters

mean	The mean used for the normal distribution
stdDev	The standard deviation used for the normal distribution

Returns

The resulting random number from the normal distributed random stream

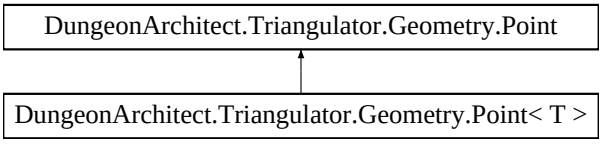
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Utils/PMRandom.cs

5.112 DungeonArchitect.Triangulator.Geometry.Point Class Reference

2D Point with double precision

Inheritance diagram for DungeonArchitect.Triangulator.Geometry.Point:



5.112.1 Detailed Description

2D Point with double precision

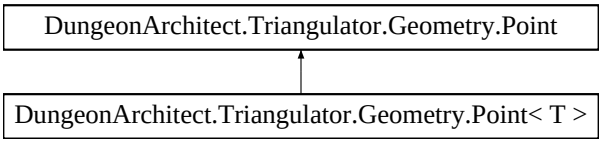
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Triangulator/Geometry/Point.cs

5.113 DungeonArchitect.Triangulator.Geometry.Point Class Reference

2D Point with double precision

Inheritance diagram for DungeonArchitect.Triangulator.Geometry.Point:



5.113.1 Detailed Description

2D Point with double precision

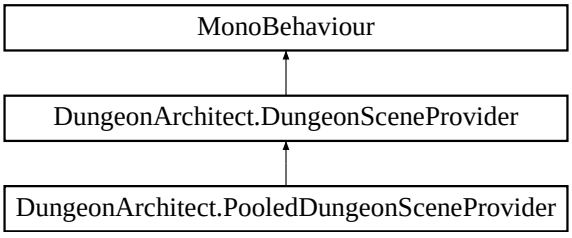
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Triangulator/Geometry/Point.cs

5.114 DungeonArchitect.PooledDungeonSceneProvider Class Reference

Implementation of the Scene provider that adds object pooling over the existing functionality. This is useful for quick rebuilding and better performance, as object in the scene are reused while rebuilding, instead of destroying everything and rebuilding

Inheritance diagram for DungeonArchitect.PooledDungeonSceneProvider:



Public Member Functions

- override void OnDungeonBuildStart ()

  Called when build is started
- override void OnDungeonBuildStop ()

  Called after build has ended
- override void AddSprite (SpritePropTypeData spriteProp, Matrix4x4 transform)

  Request the creation of a sprite object
- override void AddGameObject (GameObjectPropTypeData gameObjectProp, Matrix4x4 transform)

  Request the creation of a game object

Additional Inherited Members

5.114.1 Detailed Description

Implementation of the Scene provider that adds object pooling over the existing functionality. This is useful for quick rebuilding and better performance, as object in the scene are reused while rebuilding, instead of destroying everything and rebuilding

5.114.2 Member Function Documentation

5.114.2.1 override void DungeonArchitect.PooledDungeonSceneProvider.AddGameObject (GameObjectPropTypeData *gameObjectProp,* Matrix4x4 *transform*) [virtual]

Request the creation of a game object

Parameters

gameObjectProp	The template to use for instantiation
transform	The transform of the instantiated game object

Reimplemented from DungeonArchitect.DungeonSceneProvider.

5.114.2.2 override void DungeonArchitect.PooledDungeonSceneProvider.AddSprite (SpritePropTypeData *spriteProp,* Matrix4x4 *transform*) [virtual]

Request the creation of a sprite object

Parameters

spriteProp	The sprite game object template reference
transform	The transform of the prop

Reimplemented from DungeonArchitect.DungeonSceneProvider.

5.114.2.3 override void DungeonArchitect.PooledDungeonSceneProvider.OnDungeonBuildStart ( ) [virtual]

Called when build is started

Reimplemented from DungeonArchitect.DungeonSceneProvider.

5.114.2.4 override void DungeonArchitect.PooledDungeonSceneProvider.OnDungeonBuildStop ( ) [virtual]

Called after build has ended

Reimplemented from DungeonArchitect.DungeonSceneProvider.

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/SceneProviders/PooledDungeonSceneProvider.cs

5.115 DungeonArchitect.PropChildSocketData Class Reference

Props can emit new sockets when they are inserted, to add more child props relative to them

Public Attributes

- string **SocketType**
- Matrix4x4 **Offset**

5.115.1 Detailed Description

Props can emit new sockets when they are inserted, to add more child props relative to them

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonProp.cs

5.116 DungeonArchitect.PropSocket Class Reference

The data structure for a marker

Public Attributes

- int **Id**
- string **SocketType**
- Matrix4x4 **Transform**
- bool **IsConsumed**
- IntVector **gridPosition**
- int **cellId**

5.116.1 Detailed Description

The data structure for a marker

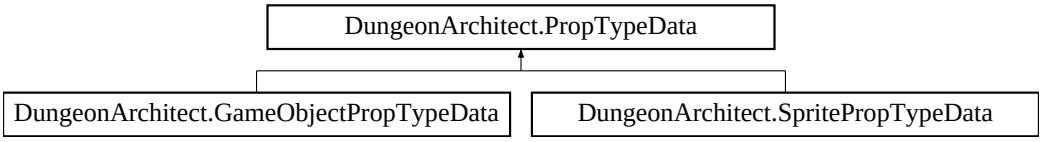
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonProp.cs

5.117 DungeonArchitect.PropTypeData Class Reference

The data structure to hold information about a single node in the asset file

Inheritance diagram for DungeonArchitect.PropTypeData:



Public Attributes

- string NodeId

  The unique guid of the node that generated this prop
- string AttachToSocket

  The socket to attach to
- float Affinity

  The probability of attachment
- bool ConsumeOnAttach

  Should this prop consume the node (i.e. stop further processing of the sibling nodes)
- Matrix4x4 Offset

  The offset to apply from the node's marker position
- List< PropChildSocketData > ChildSockets = new List<PropChildSocketData>()

  The child socket markers emitted from this node
- bool IsStaticObject

  Indicates if the object's static flag is to be set
- bool affectsNavigation

  Flag to indicate if this node's geometry affects the navmesh
- bool UseSelectionRule

  Flag to indicate if a selection rule script is used to determine if this prop is selected for insertion
- string SelectorRuleClassName

  The script to to determine if this prop is selected for insertion. This holds the class of type SelectorRule
- bool UseTransformRule

  Flag to indicate if a transformation rule script is used to determine the transform offset while inserting this mesh
- string TransformRuleClassName

  The script that calculates the transform offset to be used when inserting this mesh. This holds a class of type TransformationRule

5.117.1 Detailed Description

The data structure to hold information about a single node in the asset file

5.117.2 Member Data Documentation

5.117.2.1 bool DungeonArchitect.PropTypeData.affectsNavigation

Flag to indicate if this node's geometry affects the navmesh

5.117.2.2 float DungeonArchitect.PropTypeData.Affinity

The probability of attachment

5.117.2.3 string DungeonArchitect.PropTypeData.AttachToSocket

The socket to attach to

5.117.2.4 List<PropChildSocketData> DungeonArchitect.PropTypeData.ChildSockets = new List<PropChildSocketData>()

The child socket markers emitted from this node

5.117.2.5 bool DungeonArchitect.PropTypeData.ConsumeOnAttach

Should this prop consume the node (i.e. stop further processing of the sibling nodes)

5.117.2.6 bool DungeonArchitect.PropTypeData.IsStaticObject

Indicates if the object's static flag is to be set

5.117.2.7 string DungeonArchitect.PropTypeData.NodeId

The unique guid of the node that generated this prop

5.117.2.8 Matrix4x4 DungeonArchitect.PropTypeData.Offset

The offset to apply from the node's marker position

5.117.2.9 string DungeonArchitect.PropTypeData.SelectorRuleClassName

The script to to determine if this prop is selected for insertion. This holds the class of type SelectorRule

5.117.2.10 string DungeonArchitect.PropTypeData.TransformRuleClassName

The script that calculates the transform offset to be used when inserting this mesh. This holds a class of type TransformationRule

5.117.2.11 bool DungeonArchitect.PropTypeData.UseSelectionRule

Flag to indicate if a selection rule script is used to determine if this prop is selected for insertion

5.117.2.12 bool DungeonArchitect.PropTypeData.UseTransformRule

Flag to indicate if a transformation rule script is used to determine the transform offset while inserting this mesh

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonProp.cs

5.118 DungeonArchitect.Rectangle Struct Reference

Represents an integer rectangle

Public Member Functions

- **Rectangle** (int x, int z, int width, int length)
- **Rectangle** (IntVector location, IntVector size)
- void **SetY** (int y)
- IntVector **Center** ()
- Vector3 **CenterF** ()
- bool **Contains** (Rectangle rect)
- bool **Contains** (IntVector Point)
- bool **Contains** (int x, int z)
- bool **IntersectsWith** (Rectangle rect)
- IntVector[ ] **GetBorderPoints** ()

Static Public Member Functions

- static Vector3 **ToVector3** (IntVector iv)
- static Rectangle **Intersect** (Rectangle a, Rectangle b)
- static Rectangle **ExpandBounds** (Rectangle rect, int distance)

Public Attributes

- IntVector **location**
- IntVector **size**

Properties

- IntVector **Location** `[get, set]`
- IntVector **Size** `[get, set]`
- int **X** `[get]`
- int **Z** `[get]`
- int **Width** `[get]`
- int **Length** `[get]`
- int **Left** `[get]`
- int **Right** `[get]`
- int **Back** `[get]`
- int **Front** `[get]`

5.118.1 Detailed Description

Represents an integer rectangle

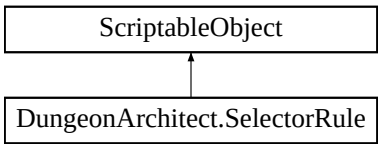
The documentation for this struct was generated from the following file:

- github/dungeon-architect-unity/Scripts/Math/Rectangle.cs

5.119 DungeonArchitect.SelectorRule Class Reference

Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene

Inheritance diagram for DungeonArchitect.SelectorRule:



Public Member Functions

- virtual bool CanSelect (PropSocket socket, Matrix4x4 propTransform, DungeonModel model, System.↩ Random random)

  Implementations should override this and determine if the node should be selected (inserted into the scene)

5.119.1 Detailed Description

Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene

5.119.2 Member Function Documentation

5.119.2.1 virtual bool DungeonArchitect.SelectorRule.CanSelect (PropSocket *socket,* Matrix4x4 *propTransform,* DungeonModel *model,* System.Random *random*) [virtual]

Implementations should override this and determine if the node should be selected (inserted into the scene)

Parameters

socket	The marker data-structure
propTransform	The combined transform of the visual node that invoked this rule
model	The dungeon model
random	The random stream used by the builder. User this random stream for any randomness for consistancy

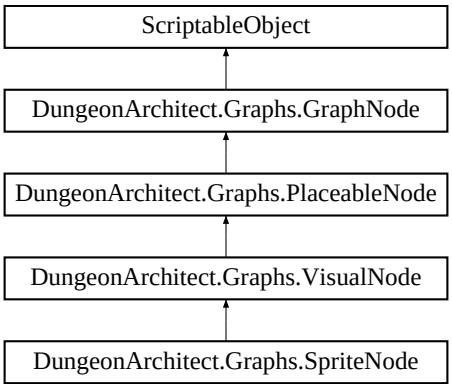
Returns

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Rules/SelectorRule.cs

5.120 DungeonArchitect.Graphs.SpriteNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.SpriteNode:



Public Member Functions

- override void **Initialize** (string id, Graph graph)
- override void CopyFrom (GraphNode node)

  Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Public Attributes

- Sprite **sprite**
- Color **color** = new Color(1, 1, 1, 1)
- Material **materialOverride**
- string **sortingLayerName**
- int **orderInLayer**
- DungeonSpriteCollisionType **collisionType** = DungeonSpriteCollisionType.None
- PhysicsMaterial2D **physicsMaterial**
- Vector2 **physicsOffset** = Vector2.zero
- Vector2 **physicsSize** = Vector2.one
- float **physicsRadius** = 0.5f

Additional Inherited Members

5.120.1 Member Function Documentation

5.120.1.1 override void DungeonArchitect.Graphs.SpriteNode.CopyFrom (GraphNode *node*) [virtual]

Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Parameters

node	

Reimplemented from DungeonArchitect.Graphs.PlaceableNode.

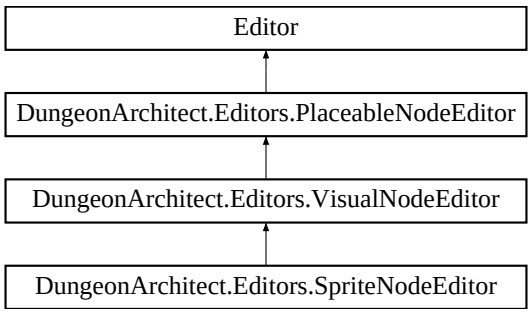
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/SpriteNode.cs

5.121 DungeonArchitect.Editors.SpriteNodeEditor Class Reference

Custom property editor for a sprite node

Inheritance diagram for DungeonArchitect.Editors.SpriteNodeEditor:



Public Member Functions

- override void **OnEnable** ()

Protected Member Functions

- override void **DrawPreInspectorGUI** ()
- override void **DrawPostInspectorGUI** ()

Additional Inherited Members

5.121.1 Detailed Description

Custom property editor for a sprite node

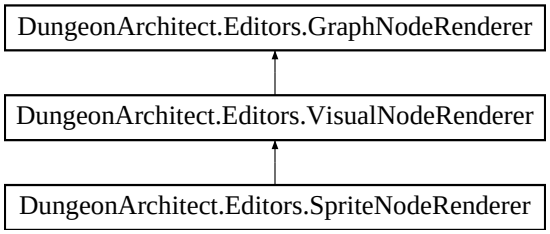
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/SpriteNodeEditor.cs

5.122 DungeonArchitect.Editors.SpriteNodeRenderer Class Reference

Renders a sprite node

Inheritance diagram for DungeonArchitect.Editors.SpriteNodeRenderer:



Protected Member Functions

- override Object **GetThumbObject** (GraphNode node)

Additional Inherited Members

5.122.1 Detailed Description

Renders a sprite node

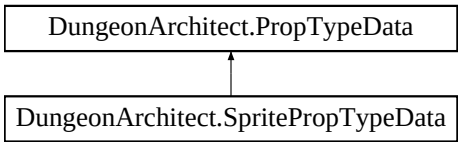
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/SpriteNodeEditor.cs

5.123 DungeonArchitect.SpritePropTypeData Class Reference

Sprite node data asset attributes

Inheritance diagram for DungeonArchitect.SpritePropTypeData:



Public Attributes

- Sprite **sprite**
- Color **color**
- Material **materialOverride**
- string **sortingLayerName**
- int **orderInLayer**
- DungeonSpriteCollisionType **collisionType**
- PhysicsMaterial2D **physicsMaterial**
- Vector2 **physicsOffset**
- Vector2 **physicsSize**
- float **physicsRadius**

5.123.1 Detailed Description

Sprite node data asset attributes

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/DungeonProp.cs

5.124 DungeonArchitect.StairAdjacencyQueueNode Class Reference

Temporary data-structure used while assigning stairs on the dungeon.

Public Member Functions

- **StairAdjacencyQueueNode** (int pCellId, int pDepth)

Public Attributes

- int **cellId**
- int **depth**

5.124.1 Detailed Description

Temporary data-structure used while assigning stairs on the dungeon.

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.125 DungeonArchitect.StairEdgeInfo Struct Reference

Data structure to hold the adjacent cells connected to the stairs (entry / exit)

Public Member Functions

- **StairEdgeInfo** (int pCellIdA, int pCellIdB)

Public Attributes

- int **CellIdA**
- int **CellIdB**

5.125.1 Detailed Description

Data structure to hold the adjacent cells connected to the stairs (entry / exit)

The documentation for this struct was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Builders/GridDungeonBuilder.cs

5.126 DungeonArchitect.StairInfo Class Reference

Data-structure to hold the stair information in the grid based builder

Public Attributes

- int **OwnerCell**
- int **ConnectedToCell**
- Vector3 **Position**
- Quaternion **Rotation**
- IntVector **IPosition**

5.126.1 Detailed Description

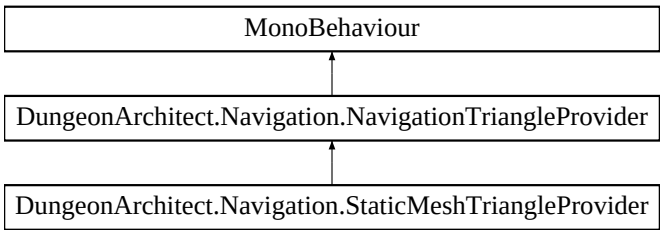
Data-structure to hold the stair information in the grid based builder

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Models/GridDungeonModel.cs

5.127 DungeonArchitect.Navigation.StaticMeshTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.StaticMeshTriangleProvider:



Public Member Functions

- override void **AddNavTriangles** (List< Triangle3 > triangles)

Static Public Member Functions

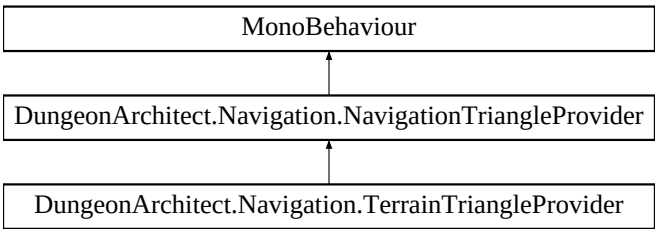
- static void **AddMeshTriangles** (List< Triangle3 > triangles, Mesh mesh, Matrix4x4 transform)
- static void **AddMeshTriangles** (List< Triangle3 > triangles, Vector3[ ] vertices, int[ ] indices, Matrix4x4 transform)

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/TriangleProviders/StaticMeshTriangleProvider.cs

5.128 DungeonArchitect.Navigation.TerrainTriangleProvider Class Reference

Inheritance diagram for DungeonArchitect.Navigation.TerrainTriangleProvider:



Public Member Functions

- override void **AddNavTriangles** (List< Triangle3 > triangles)

Public Attributes

- float **terrainCellSize** = 2

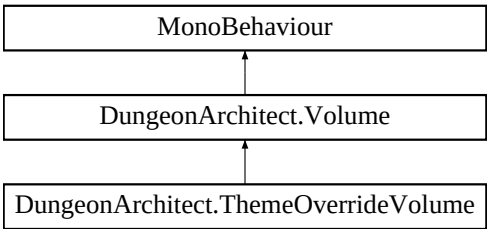
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Navigation/TriangleProviders/TerrainTriangleProvider.cs

5.129 DungeonArchitect.ThemeOverrideVolume Class Reference

Dungeon layout that lies within this volumes bounds picks up the theme set in this volume

Inheritance diagram for DungeonArchitect.ThemeOverrideVolume:



Public Attributes

- Graph **overrideTheme**

Additional Inherited Members

5.129.1 Detailed Description

Dungeon layout that lies within this volumes bounds picks up the theme set in this volume

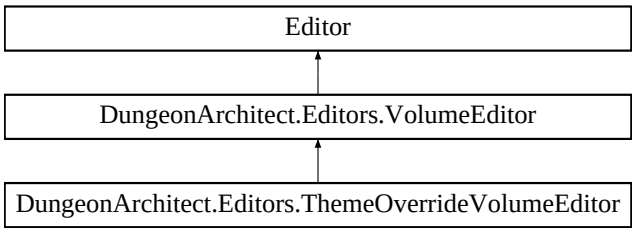
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Volumes/ThemeOverrideVolume.cs

5.130 DungeonArchitect.Editors.ThemeOverrideVolumeEditor Class Reference

Custom property editor for Theme override volumes

Inheritance diagram for DungeonArchitect.Editors.ThemeOverrideVolumeEditor:



Additional Inherited Members

5.130.1 Detailed Description

Custom property editor for Theme override volumes

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Volumes/ThemeOverrideVolumeEditor.cs

5.131 DungeonArchitect.Editors.Timer Class Reference

Ticks every few milli-seconds

Public Member Functions

- delegate void **OnTick** (float elapsedTime)
- void Update (float deltaSeconds)

  Update should be called once per frame

Properties

- float Hertz `[get, set]`

  Ticks per second

Events

- OnTick **Tick**

5.131.1 Detailed Description

Ticks every few milli-seconds

5.131.2 Member Function Documentation

5.131.2.1 void DungeonArchitect.Editors.Timer.Update (float *deltaSeconds*)

Update should be called once per frame

Parameters

deltaSeconds	The frame time between calls

5.131.3 Property Documentation

5.131.3.1 float DungeonArchitect.Editors.Timer.Hertz `[get],[set]`

Ticks per second

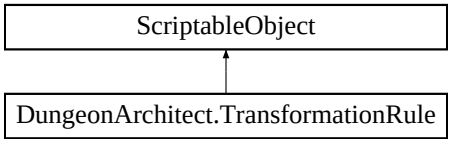
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Utils/Timer.cs

5.132 DungeonArchitect.TransformationRule Class Reference

Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene

Inheritance diagram for DungeonArchitect.TransformationRule:



Public Member Functions

- virtual void GetTransform (PropSocket socket, DungeonModel model, Matrix4x4 propTransform, System.↩ Random random, out Vector3 outPosition, out Quaternion outRotation, out Vector3 outScale)

  Implement this method to provide a transform based on your logic.

5.132.1 Detailed Description

Selector rule allow you to attach selection behavior to decide if a visual node should be inserted into the scene

5.132.2 Member Function Documentation

5.132.2.1 virtual void DungeonArchitect.TransformationRule.GetTransform (PropSocket *socket*, DungeonModel *model*, Matrix4x4 *propTransform*, System.Random *random*, out Vector3 *outPosition*, out Quaternion *outRotation*, out Vector3 *outScale*) [virtual]

Implement this method to provide a transform based on your logic.

Parameters

socket	The marker data structure
model	The dungeon model
propTransform	The combined transform of the visual node that invoked this rule
random	The random stream used by the builder. User this random stream for any randomness for consistancy
outPosition	Set your position offset here
outRotation	Set your rotation offset here
outScale	Set your scale offset here

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Dungeon/Rules/TransformationRule.cs

5.133 DungeonArchitect.Triangulator.Geometry.Triangle Struct Reference

Triangle made from three point indexes

Public Member Functions

- Triangle (int point1, int point2, int point3)

  Initializes a new instance of a triangle

Public Attributes

- int p1

  First vertex index in triangle

- int p2

  Second vertex index in triangle

- int p3

  Third vertex index in triangle

5.133.1 Detailed Description

Triangle made from three point indexes

5.133.2 Constructor & Destructor Documentation

5.133.2.1 DungeonArchitect.Triangulator.Geometry.Triangle.Triangle (int *point1*, int *point2*, int *point3*)

Initializes a new instance of a triangle

Parameters

point1	Vertex 1
point2	Vertex 2
point3	Vertex 3

5.133.3 Member Data Documentation

5.133.3.1 int DungeonArchitect.Triangulator.Geometry.Triangle.p1

First vertex index in triangle

5.133.3.2 int DungeonArchitect.Triangulator.Geometry.Triangle.p2

Second vertex index in triangle

5.133.3.3 int DungeonArchitect.Triangulator.Geometry.Triangle.p3

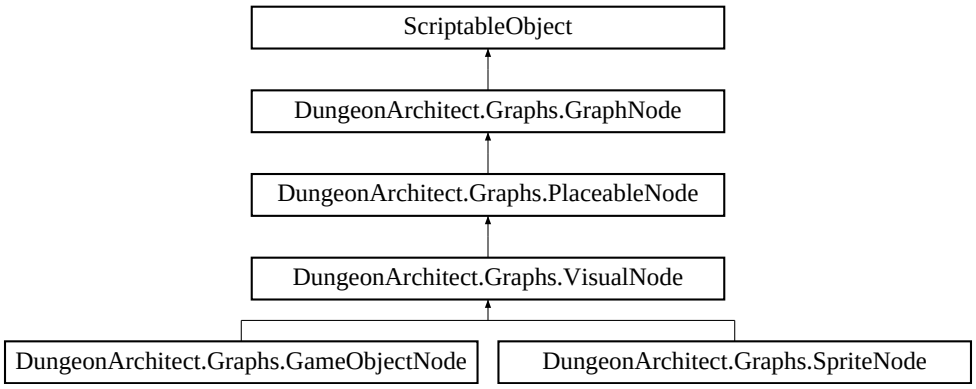
Third vertex index in triangle

The documentation for this struct was generated from the following file:

- github/dungeon-architect-unity/Scripts/Triangulator/Geometry/Triangle.cs

5.134 DungeonArchitect.Graphs.VisualNode Class Reference

Inheritance diagram for DungeonArchitect.Graphs.VisualNode:



Public Member Functions

- override void **Initialize** (string id, Graph graph)
- override void CopyFrom (GraphNode node)

  Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Public Attributes

- bool IsStatic = true

  Indicates if the game object created from this visual node is set to static If you are spawning NPCs or other dynamic objects, uncheck this
- bool affectsNavigation = false

  Indicates of the geometry in this node contributes to the navigation mesh You should enable this only if necessary to improve navmesh generation performance
- bool selectionRuleEnabled = false

  Indicates if the selection rule is enabled. The selection rule will not run if this is disabled
- string selectionRuleClassName

  The class name of the selection rule. Selection rules let you specify behavior logic for selecting your nodes
- bool transformRuleEnabled = false

  Indicates if the transform rule is enabled. The transform rule will not run if this is disabled
- string transformRuleClassName

  The class name of the transformation rule. Transform rules let you specify behavior logic to apply the offset on the nodes

Additional Inherited Members

5.134.1 Member Function Documentation

5.134.1.1 override void DungeonArchitect.Graphs.VisualNode.CopyFrom (GraphNode *node*) [virtual]

Called when the node is copied. The implementations should implement copy here (e.g. deep / shallow copy depending on implementation)

Parameters

node	

Reimplemented from DungeonArchitect.Graphs.PlaceableNode.

5.134.2 Member Data Documentation

5.134.2.1 bool DungeonArchitect.Graphs.VisualNode.affectsNavigation = false

Indicates of the geometry in this node contributes to the navigation mesh You should enable this only if necessary to improve navmesh generation performance

5.134.2.2 bool DungeonArchitect.Graphs.VisualNode.IsStatic = true

Indicates if the game object created from this visual node is set to static If you are spawning NPCs or other dynamic objects, uncheck this

5.134.2.3 string DungeonArchitect.Graphs.VisualNode.selectionRuleClassName

The class name of the selection rule. Selection rules let you specify behavior logic for selecting your nodes

5.134.2.4 bool DungeonArchitect.Graphs.VisualNode.selectionRuleEnabled = false

Indicates if the selection rule is enabled. The selection rule will not run if this is disabled

5.134.2.5 string DungeonArchitect.Graphs.VisualNode.transformRuleClassName

The class name of the transformation rule. Transform rules let you specify behavior logic to apply the offset on the nodes

5.134.2.6 bool DungeonArchitect.Graphs.VisualNode.transformRuleEnabled = false

Indicates if the transform rule is enabled. The transform rule will not run if this is disabled

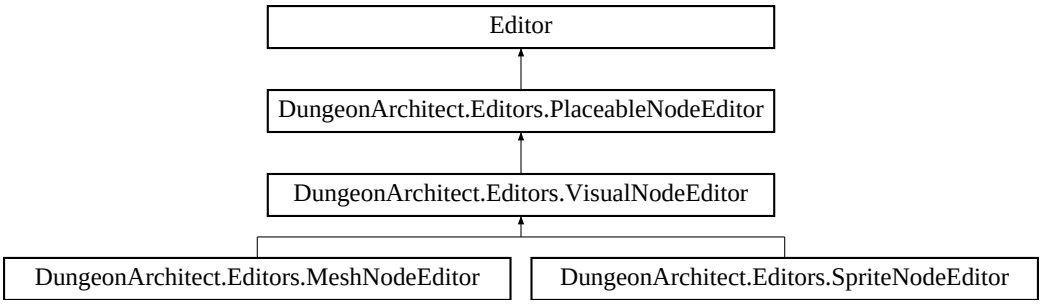
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Graph/ThemeEditor/VisualNode.cs

5.135 DungeonArchitect.Editors.VisualNodeEditor Class Reference

Custom property editor for visual nodes

Inheritance diagram for DungeonArchitect.Editors.VisualNodeEditor:



Public Member Functions

- override void **OnEnable** ()

Protected Member Functions

- override void **DrawPreInspectorGUI** ()
- override void **DrawPostInspectorGUI** ()

Additional Inherited Members

5.135.1 Detailed Description

Custom property editor for visual nodes

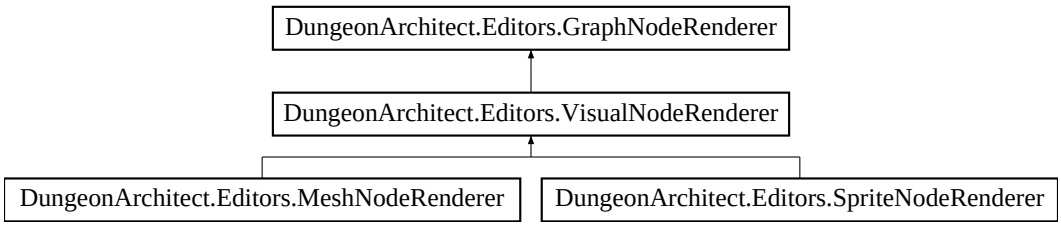
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/VisualNodeEditor.cs

5.136 DungeonArchitect.Editors.VisualNodeRenderer Class Reference

Renders a visual node

Inheritance diagram for DungeonArchitect.Editors.VisualNodeRenderer:



Public Member Functions

- override void **Draw** (GraphRendererContext rendererContext, GraphNode node, GraphCamera camera)

Protected Member Functions

- abstract Object **GetThumbObject** (GraphNode node)

5.136.1 Detailed Description

Renders a visual node

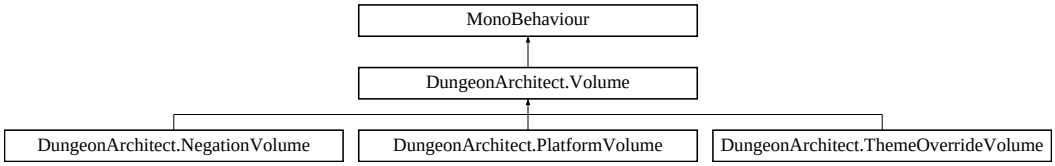
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/ThemeEditor/VisualNodeEditor.cs

5.137 DungeonArchitect.Volume Class Reference

A volume is an abstract representation of space in the world. A volume can be scaled and moved around like any other game object and custom functionality can be added to volumes to influence the dungeon with it's spatial volume

Inheritance diagram for DungeonArchitect.Volume:



Public Member Functions

- Bounds GetBounds ()

  Gets the bounds of the volume
- void GetGridTransform (out IntVector positionGrid, out IntVector scaleGrid)

  Gets the position and scale of the volume in grid space

Public Attributes

- Dungeon **dungeon**
- bool **mode2D** = false

Protected Attributes

- Color **COLOR_WIRE** = Color.yellow
- Color **COLOR_SOLID_DESELECTED** = new Color(1, 1, 0, 0.0f)
- Color **COLOR_SOLID** = new Color(1, 1, 0, 0.1f)

5.137.1 Detailed Description

A volume is an abstract representation of space in the world. A volume can be scaled and moved around like any other game object and custom functionality can be added to volumes to influence the dungeon with it's spatial volume

5.137.2 Member Function Documentation

5.137.2.1 Bounds DungeonArchitect.Volume.GetBounds ( )

Gets the bounds of the volume

Returns

The bounds of the dungeon

5.137.2.2 void DungeonArchitect.Volume.GetGridTransform (out IntVector *positionGrid*, out IntVector *scaleGrid*)

Gets the position and scale of the volume in grid space

Parameters

positionGrid	The grid position (out)

scaleGrid	The grid scale (out)

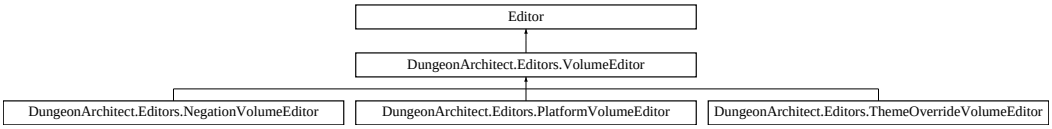
The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Scripts/Volumes/Volume.cs

5.138 DungeonArchitect.Editors.VolumeEditor Class Reference

Custom property editor for volumes game objects

Inheritance diagram for DungeonArchitect.Editors.VolumeEditor:



Public Member Functions

- override void **OnInspectorGUI** ()
- virtual void **OnUpdate** (SceneView sceneView)

Protected Member Functions

- void **OnTransformModified** (Volume volume)

5.138.1 Detailed Description

Custom property editor for volumes game objects

The documentation for this class was generated from the following file:

- github/dungeon-architect-unity/Editor/Volumes/VolumeEditor.cs

Index