

Introduction

This is Unity 3D assets for path finding. Assets will look up a valid path through 2D/3D maze. For this moment project includes **Wave** and **Jump Point** search algorithms. Assets are good for games prototyping, turn based games development, 2D puzzles and any single-floor 3D games. Possible implementations: **Color Lines**, **X-Com**, **Heroes Of Might and Magic** and others.

We are ready to improve product and add more good features. Please share your support to get more features.

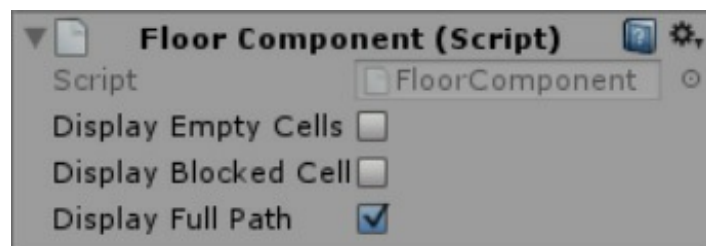
Currently all source code is available on [GitHub](#)

Setup

This chapter contains general information of the assets setup into your Unity 3D project. Full developer flow are next:

- Create `gameObject` which covers full level and add `TerrainComponent`.
- To your units, target objects to be moved, add `UnitComponent`.
- To your obstacles, objects which will block units movements, add `BlockComponent`.

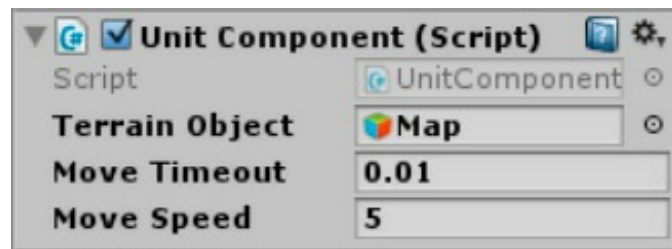
Level



`FloorComponent` is used to initialize your level `gameObject`. This component distributed with compiled assembly. This component has next gizmo settings:

- *Display Empty Cells*. If checked then all not blocked positions will be displayed by green cubes in **scene** viewport.
- *Display Blocked Cells*. If checked then all blocked positions will be displayed by red cubes in **scene** viewport.
- *Display Full Path*. If checked then latest search result will be displayed in **scene** viewport

Unit



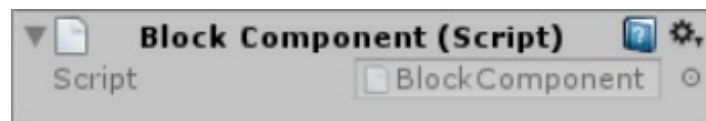
Assets contains `UnitComponent` for setup your units. Currently `UnitComponent` not included into compiled assembly and distributed with assets as separate CSharp file. This component uses `IPathFinderInterface` to register required search algorithm and use it then required:

```
/* Init level by calling .InitMap()
TerrainComponent _map = null;
_map = TerrainObject.GetComponent(typeof(TerrainComponent));
_map.InitMap(Global.PathFinderService, 1);

/* Search valid path from start to end */
var result = Global.PathFinderService.FindPath(_map.Terrain.Id(), start, end, SearchOptions.Maximum);
```

`UnitComponent` implementation is for demo scene and it needs to collect the coins placed around the level.

Obstacles



Assets contains `BlockComponent` and `AutoBlockComponent`. This components are compiled and distributed with assembly.

`BlockComponent` is used for small obstacles with 1x1 size. This component should be used for such `gameObjects` like: rocks, trees, barrels and others.

`AutoBlockComponent` is used for obstacles with complex shape. This component should be used with non-trivial `gameObjects`.
