Turn Based Strategy Framework

FAQ

Version 2.1

Over the last few years that the Framework is available in Unity Asset Store I got literally thousands of emails from the users. Please keep them coming, I'm always happy to hear from you. Below I collected questions that I get most often. I tried to keep the list and answers as brief as possible. Feel free to contact me if you need more details.

Contents:

1. **Is movement cost supported?**

   Yes, movement cost is supported. The framework uses Dijkstra pathfinding algorithm, so just set MovementCost field on the cell and the system will take it into account when calculating paths.

2. **Are ranged attacks supported?**

   Yes, ranged attacks are supported. Just set AttackRange parameter on your unit to desired value.

3. **Is it possible to have units with special abilities?**

   The Framework version 2.1 introduced a whole new Ability system. Check out the documentation and example scenes to learn more.

4. **Are area of effect attacks available?**

   Area of effect attack is a perfect use case for the Ability system introduced in the Framework version 2.1. The Fireball spell from Example 5 scene is an implementation of such an attack.

5. **Is it possible to create units that take up multiple cells?**

   No, current implementation does not allow it. If you are interested in implementation, look up clearance based pathfinding algorithm.

6. **Is it possible to have multiple units in one cell?**

   No, current implementation does not allow it. Modification required to allow it is minor though. IsCellMovableTo method in Unit class doesn't allow to move to a cell that is occupied by another unit. Just remove this constraint and you will be able to have multiple units in one cell.

7. **Is Fog of War mechanics supported?**

   No, this feature is not available in the framework out of the box. So far I've discussed a few ways to implement it with different users. The basic idea is as follows: store references to cells that are visible by a unit in unit object itself, in EndTurn method in CellGrid script iterate over the units and visible cells to show content of visible cells.

8. **Is it possible to move in 8 directions on square grids?**

   This feature is not included in any of the examples, but the framework is designed in a way that allows to easily add it. You just need to include all 8

neighbouring squares in GetNeighbours method in Square class. Check out Square script for more details.

9. **Can you create fields that have different heights?**

This feature is not included in any of the examples. To add it, start off by creating a cell with 'height' field. Next, override GetNeighbours method in your cell - you want it to return cells that have height difference not greater than 1. Finally, override Equals and GetHashCode methods. Current implementations only take coordinates into account - you need to add 'height' to them.

10. **Is it possible to generate pointy-top style hex grids?**

Grid generator scripts included in the project support flat-top style only. If you want to implement pointy-top style yourself, this is a great resource: https://www.redblobgames.com/grids/hexagons/

11. **Units and obstacles are placed with an offset on runtime. Why is that?**

Make sure that position of parent gameobjects of units, obstacles and cells is set to (0, 0, 0). It is often overlooked and results in objects being displayed with an offset.

12. **How do you spawn units on runtime?**

To include units spawned on runtime in the game simply pass the transform of the new unit to AddUnit method in CellGrid class. It sets up the unit and wires up all of the event handlers.

13. **How do you add / remove cells from the grid manually?**

First of all, you should use one of the map generator scripts to create the cell grid (you could write your own of course). It is not possible to create cell grid by manually creating cells, or adding them to existing cell grids. To create custom shaped grids, you should generate the map with one of the scripts, and then simply delete redundant cells manually. You can also deactivate cells gameobject and activate it during gameplay to create dynamically changing battlefields.

14. **Is it possible to have random maps?**

There are no scripts in the project that generate random map. To add this feature, simply use one of the generator scripts and randomly delete / deactivate cells as explained in previous question.

15. **Is it possible to display path in more sophisticated way?**

No, current implementation does not allow that. The problem is that method that is used to highlight the path, MarkAsPath, does not have reference to other cells that the path consists of. Let's say you would like to show an arrow along the path. To do that, each cell would need to know position of previous and next cell in the path. Therefore, a solution is to add whole path as a parameter to MarkAsPath method.

16. **How would you make units rotate towards next cell while moving?**

Put RotateTowards method in MovementAnimation function in Unit class.

17. **Is it possible to include terrain in the levels?**

The framework was not designed with terrain in mind. It does not contain support for this kind of feature.

18. **Is multiplayer over the internet supported?**

No, the framework does not support multiplayer over the internet.

19. **Does the framework support mobile devices?**

Scenes created with the framework can be deployed to mobile devices, there is no dedicated support for mobile controls in the project though.

20. **Are there any additional learning materials, like video tutorials?**

There are no video tutorials. Project documentation, this FAQ, forum thread and example scenes included in the project are all there is. Feel free to contact me by email if you have any questions.

21. **Is there a forum for the TBSF community?**

I opened a thread on Unity forum at:
https://forum.unity.com/threads/turn-based-strategy-framework.704129/

22. **Am I willing to co-develop your game?**

I am always happy to hear about your projects and will consider joining your team if you make such an offer. Just keep in mind that I already have a full-time job that I can't afford to let go.