Better Tower Defense

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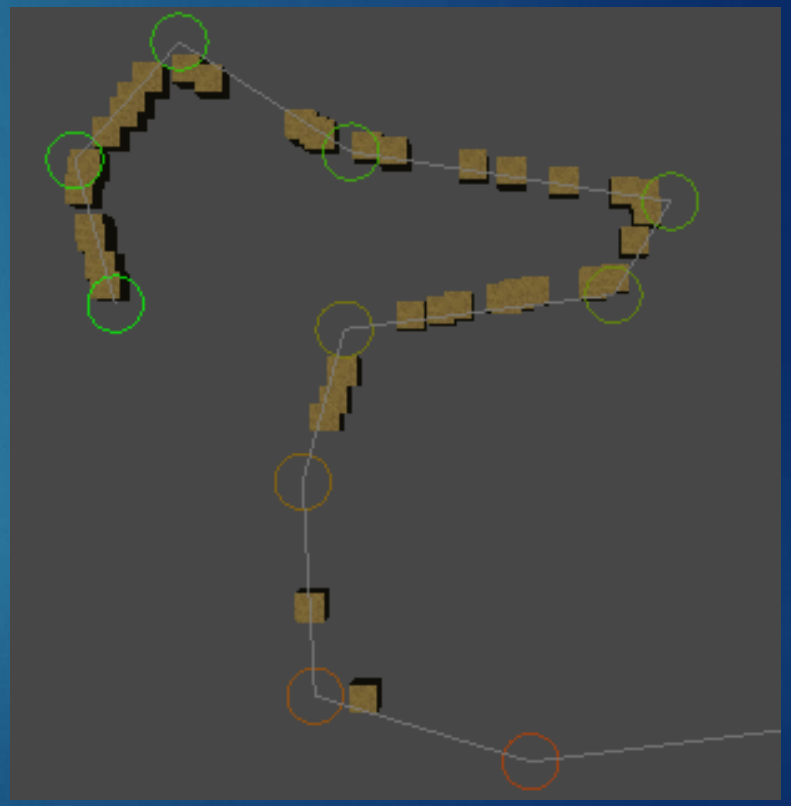
Milestone 2 Progress

- Locomotion (navigating between two nodes on a graph, not finding the nodes to navigate)
- Effects
- Tower placement

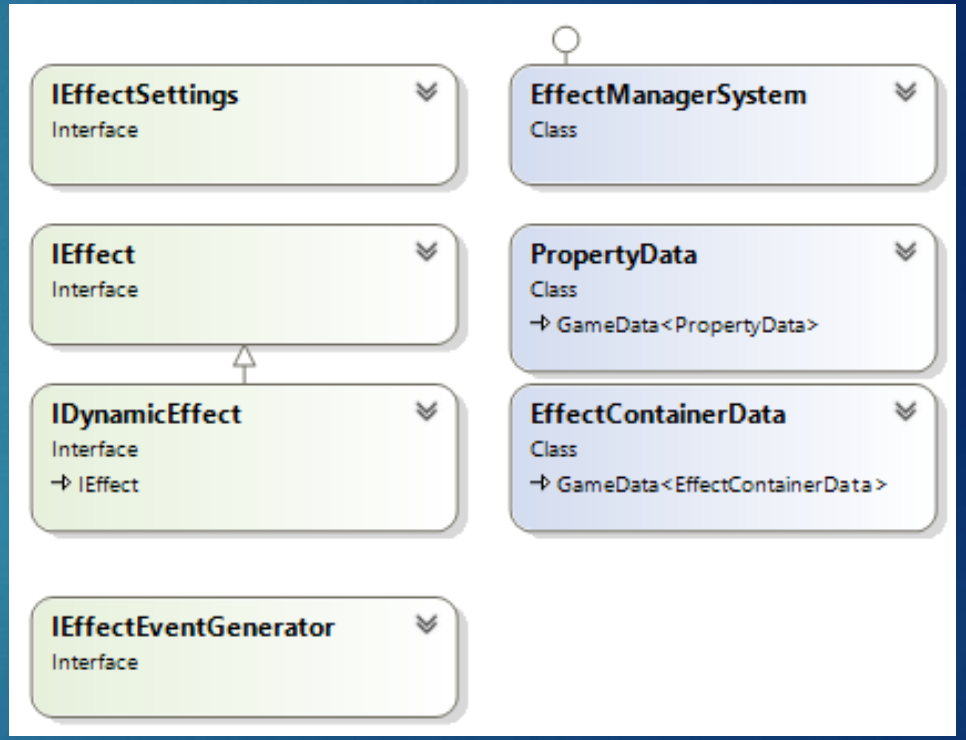
Locomotion

- Current implementation works well and is fast
- Approach distance: how far away from the node until we have "passed it"
- Algorithm:
  - Calculate normalized direction vector from current position to next node
  - Update position by dir*speed
  - Check to see if we are close enough to the next node to move to the next one
- Easily extendable for boids-like approach; direction vector is the applied force



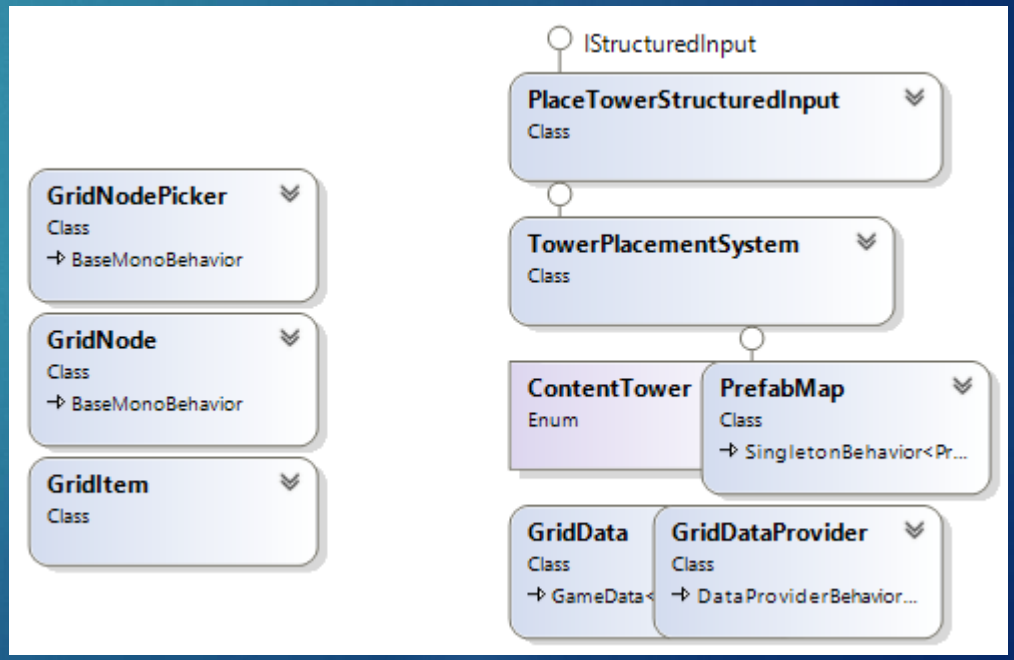
Effects

- Interdependent effects are really two problems:
  - Effects change the properties of a unit (health, armor, etc)
  - Combinations of effects trigger interesting events
- Effects are applied to a set of properties, make changes
- Effect event generators scan through the list of active effects and react to any interesting combinations
  - Keep it DRY with interface based tagging



Tower placement

- Towers placed only on grid nodes
- Not really a classic grid; instead there are regions of the map which have a grid
- Use structured input system for correct network sync behavior



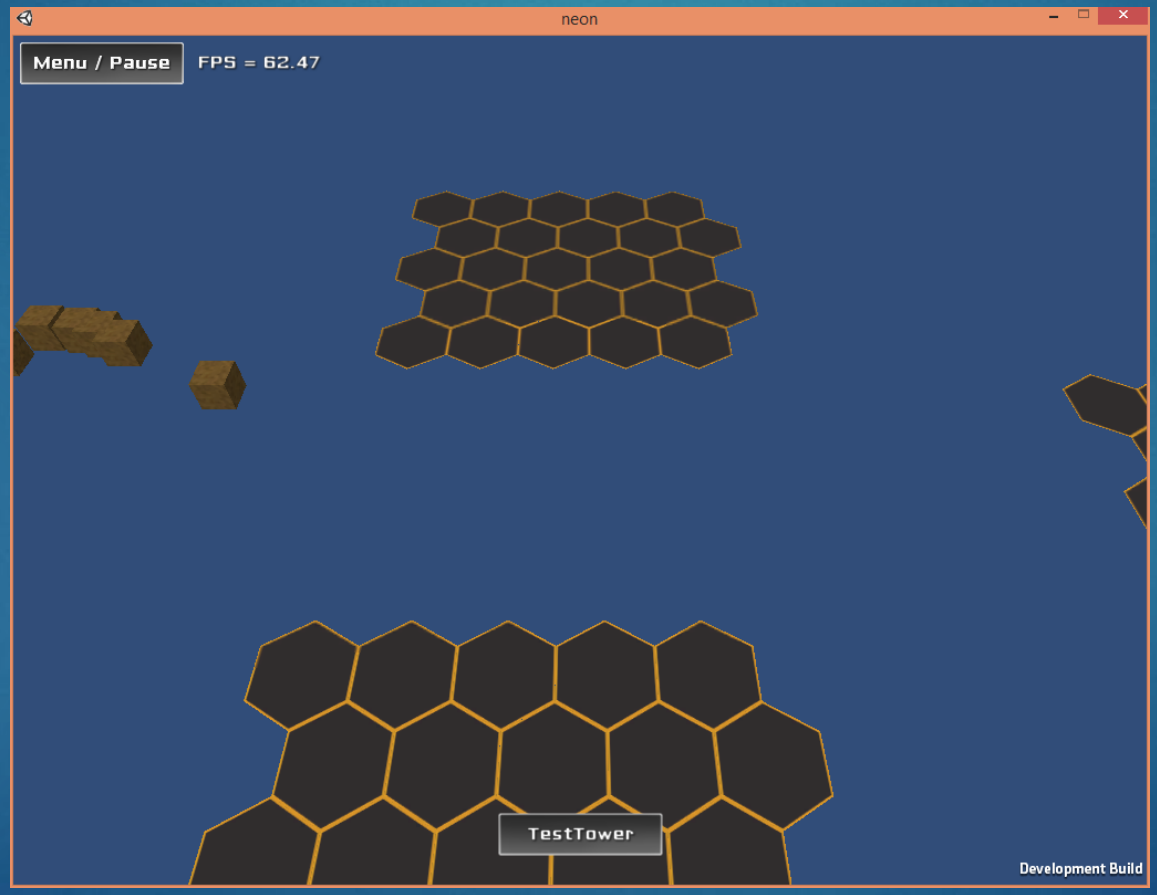
Plan for Next Milestone

- Implement resource system
  - Extends building placement system
  - Per player resources
  - Define relationships among buildings and how resources are gathered
- Implement power system
  - Builds on the effect system
  - Effects that are placed at a specific location
- Implement level types
  - Primarily controls how units are spawned
  - Extends spawning system

Demo & Questions

- Thanks!

Demo Screenshots



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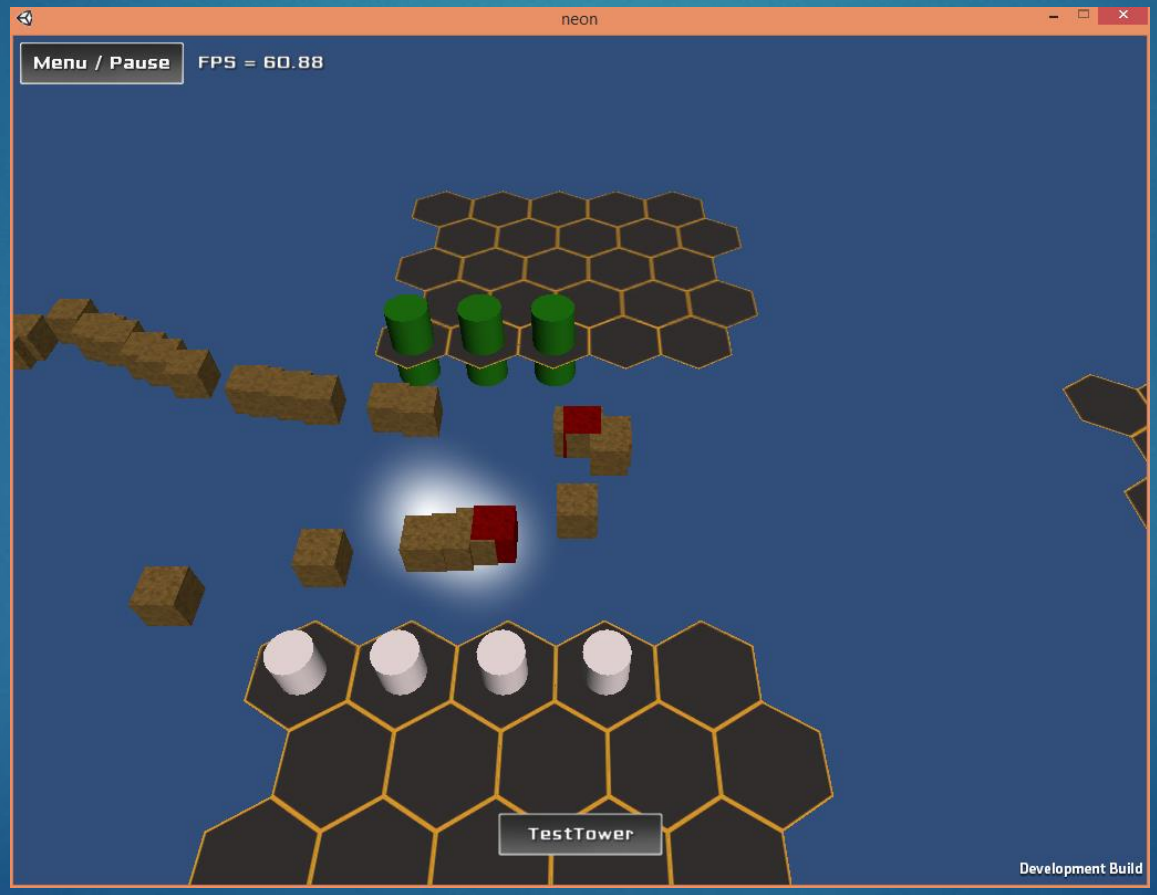

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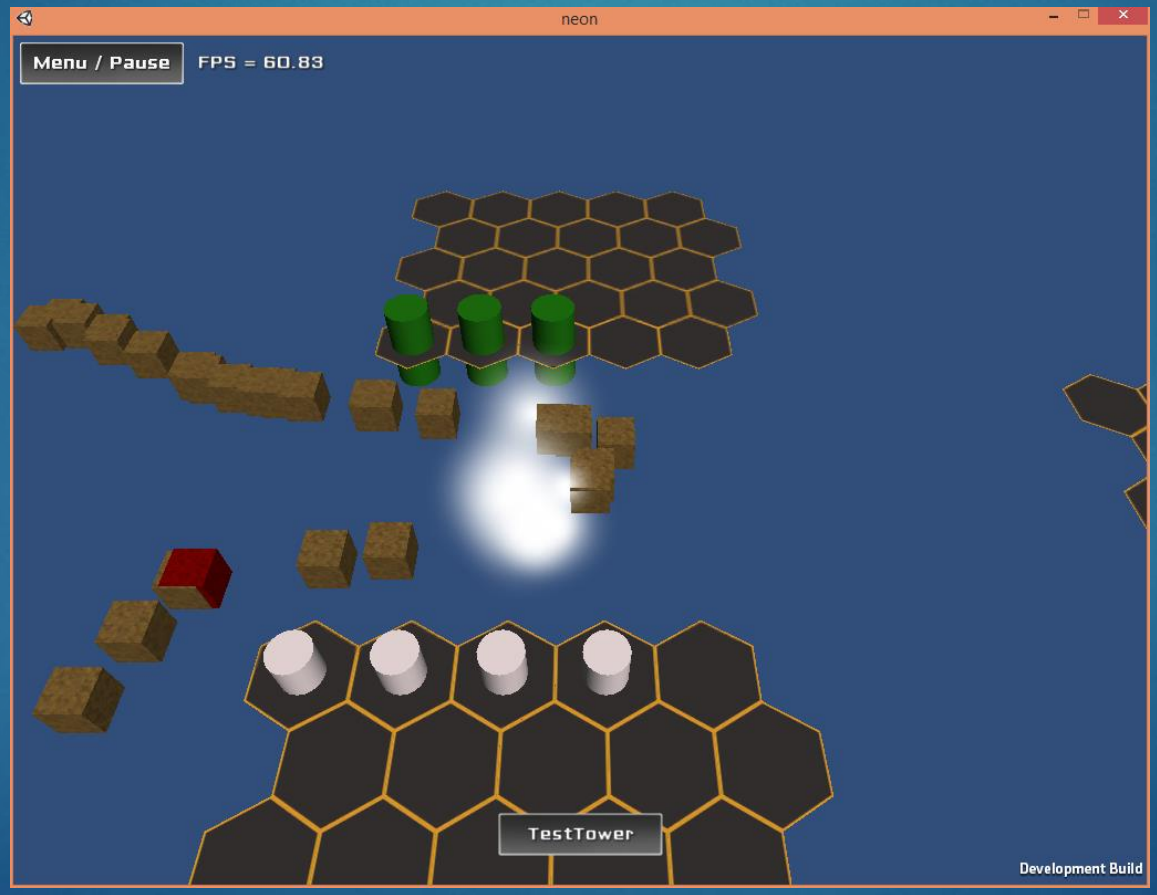

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