Better Tower Defense – Test

Jacob Dufault

Entity System

- Creating a new entity
- Removing an entity
- Adding data to a preexisting entity
- Adding data and then destroying the entity before an update loop runs
- Destroying an entity and removing data from it
- Modifying data twice

Networking

- Connect to an invalid ip, ie, "hi there"
- Connect to a valid ip, ie, "localhost"
- Require a password
- Enter an invalid password

Unit Spawning

- Spawn multiple enemies at the same time
- Spawn an enemy and then destroy it

Locomotion

- Move to a location where there is a densely populated region in front of us
- Follow a path that crosses over itself (eg, in terms of graph navigation, it is not optimal)
- Follow a sparse region (navigate between two nodes; base case)

Effects

- Same effect applied twice
- N effects applied, where N is a very large number
- Adding an effect to a dead unit
- Effects removed after K seconds
- Effects added to a region; successfully applied to units within that region and units entering/leaving the region
- Results correctly determined based on the combination of effects
- Effects canceling each-other out

Building Placement

- Can place buildings
- Cannot place buildings in invalid locations
- Cannot block monster path to the end via building placement

Resources

- Cannot build, research, or use a power without minimum resources required
- Resources gained over time

Power System
- Successfully able to apply to a region
- Successfully able to apply to a specific target
- Successfully reduces available resources
- Unavailable until certain events have happened or when required resources are not available

Level Types
- Loaded correctly
- End-game mechanics work as expected
- Gameplay works as expected
- Enemies / allies remain consistent

Dynamic Difficulty
- Difficulty successfully increased based on a number of statistics
- Statistics collected correctly
- Difficulty able to scale down or up
  - But not scale down below a minimum base difficulty