



Better Tower Defense

JACOB DUFAULT

SPONSOR: DR. BERNHARD

Motivation – Why?

- ▶ Lack of modern and *fun* tower defense games designed for LAN style multiplayer
- ▶ Major gameplay problems with current tower defense games
- ▶ Avenue to pioneer new implementation techniques and game design ideas

Goals

- ▶ Provide a playable game with multiplayer
- ▶ Multiple different game styles; support co-op and vs modes
- ▶ Implement a number of interesting features

Technical Challenges

- ▶ Overpowering content? Engine discovers this and scales difficulty
- ▶ Waiting – innovate in the game's economy, give players something to do while waiting for kills
 - ▶ Speedup is not valid – it's multiplayer!
 - ▶ Prevents snowballing in multiplayer as compared to classic implementation
- ▶ Effect system: towers apply *effects* to units; the effect of effects are dependent upon which effects are on the unit
- ▶ Novel implementation – taking concepts from functional programming

Timeline – September 30th

- ▶ Requirements document
- ▶ Design document
- ▶ Test plan
- ▶ Implement Entity system
- ▶ Implement networking model; local host discovery and connection; connect to arbitrary IP address (w/o NAT punch through)
- ▶ Implement unit spawning and waves

Timeline – October 28th

- ▶ Implement locomotion (aka how units move themselves in the world – NOT path finding)
- ▶ Implement effect system
- ▶ Implement building placement and tower definitions

Timeline – November 25th

- ▶ Implement resource system
- ▶ Implement power system (ties into the effect system)
- ▶ Implement different level types (endless, waves, attack)

Timeline – Next Semester

- ▶ Content generation; will require some refactoring of previously implemented systems
- ▶ Dynamic difficulty

Questions?

- ▶ More details in the project plan document
- ▶ Questions?