**Tower Defence**

*Game Design Document*

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Last updated: Peter Granlund 2015-10-14

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*Game Design*

## **Summary**

<Sum up your game idea in 2 sentences. A kind of elevator pitch. Keep it simple!>

Play tower defence with your friends on the big screen. you only need your phone!

Survive the longest and win.

Peter Granlund 2015-10-14

Changed By <person> <Date>

## **Gameplay**

<What should the gameplay be like? What is the goal of the game, and what kind of obstacles are in the way? What tactics should the player use to overcome them?>

As the enemy tries to attack your base. Build towers to kill them before they arrive. The enemies will drop cash so if you kill them you’ll get to build more towers.

Peter Granlund 2015-10-14

Changed By <person> <Date>

## **Mindset**

<What kind of mindset do you want to provoke in the player? Do you want them to feel powerful, or weak? Adventurous, or nervous? Hurried, or calm? How do you intend to provoke those emotions?>

This game will have a calm feel to it when it is going well but a stressful or distressing feeling when you are losing.

Peter Granlund 2015-10-14

Changed By <person> <Date>

*Technical*

## **Screens**

<

1. Title Screen
   1. Options
2. Level Select
3. Game
   1. Inventory
   2. Assessment / Next Level
4. End Credits

*(example)*

>

Game

1. Game (the lobby and stuff is outside the game)
2. Main screen (shared)
3. Tablet screen

* Background
* Tower choosing menu

Peter Granlund 2015-10-14

Changed By <person> <Date>

## **Controls**

<How will the player interact with the game? Will they be able to choose the controls? What kind of in-game events are they going to be able to trigger, and how? (e.g. pressing buttons, opening doors, etc.)>

The game will be played using an android mobile phone. The player will interact with the game by placing towers on the map. This can be done by opening a menu on the phone and choosing a tower from it and then by looking on the Main screen(shared screen) and moving fingers on the mobile screen navigate to the desired place and then taping the screen to place it. Towers can only be placed in the player's own area.

Peter Granlund 2015-10-14

Changed By <person> <Date>

## **Mechanics**

<Are there any interesting mechanics? If so, how are you going to accomplish them? Physics, algorithms, etc.>

Placing towers is the main mechanic of the game. Desirably there would also be interaction mechanics such as ex. a cooldown based ability that hampers an opponent for a short period, maybe disabling the opponent's towers for 3 seconds.

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Changed By <person> <Date>

*Level Design*

*(Note : These sections can safely be skipped if they’re not relevant, or you’d rather go about it another way. For most games, at least one of them should be useful. But I’ll understand if you don’t want to use them. It’ll only hurt my feelings a little bit.)*

## **Themes**

<

1. Forest
   1. Mood
      1. Dark, calm, foreboding
   2. Objects
      1. *Ambient*
         1. Fireflies
         2. Beams of moonlight
         3. Tall grass
      2. *Interactive*
         1. Wolves
         2. Goblins
         3. Rocks
2. Castle
   1. Mood
      1. Dangerous, tense, active
   2. Objects
      1. *Ambient*
         1. Rodents
         2. Torches
         3. Suits of armor
      2. *Interactive*
         1. Guards
         2. Giant rats
         3. Chests

>

Space??!? aliens?!?

Peter Granlund 2015-10-14

Changed By <person> <Date>

## **Game Flow**

1. Player starts in forest
2. Pond to the left, must move right
3. To the right is a hill, player jumps to traverse it (“jump” taught)
4. Player encounters castle - door’s shut and locked
5. There’s a window within jump height, and a rock on the ground
6. Player picks up rock and throws at glass (“throw” taught)
7. … etc.

*(example)*

1. The players are looking at a procedurally generated map that is repeated four times. one for each player.
2. The players will now be able to buy and place towers on their respective area.
3. After a short time enemies will start appearing in one end of each player’s map.
4. Each enemy will immediately start walking to the end after being spawned.
5. When a number of enemies have spawned(called wave) there will be a delay for a while before the next wave will start with different enemies.
6. If enough enemies make it all the way to the end. That player will lose the game. No more enemies will spawn for that player and will also be unable to place towers.
7. The game ends when there is only one player left. That player will be crowned the winner of the game.

Peter Granlund 2015-10-14

Changed By <person> <Date>

*Development*

## **Abstract Classes / Components**

<

1. BasePhysics
   1. BasePlayer
   2. BaseEnemy
   3. BaseObject
2. BaseObstacle
3. BaseInteractable

>

Kamil får skriva här!!

1. BaseTile
2. BaseObject
3. BaseTower
4. BaseEnemy
5. BaseProjectile

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Changed By <person> <Date>

## **Derived Classes / Component Compositions**

1. BasePlayer
   1. PlayerMain
   2. PlayerUnlockable
2. BaseEnemy
   1. EnemyWolf
   2. EnemyGoblin
   3. EnemyGuard (may drop key)
   4. EnemyGiantRat
   5. EnemyPrisoner
3. BaseObject
   1. ObjectRock (pick-up-able, throwable)
   2. ObjectChest (pick-up-able, throwable, spits gold coins with key)
   3. ObjectGoldCoin (cha-ching!)
   4. ObjectKey (pick-up-able, throwable)
4. BaseObstacle
   1. ObstacleWindow (destroyed with rock)
   2. ObstacleWall
   3. ObstacleGate (watches to see if certain buttons are pressed)
5. BaseInteractable
   1. InteractableButton

*(example)*

*Graphics*

## **Style Attributes**

<What kinds of colors will you be using? Do you have a limited palette to work with? A post-processed HSV map/image? Consistency is key for immersion.

What kind of graphic style are you going for? Cartoony? Pixel-y? Cute? How, specifically? Solid, thick outlines with flat hues? Non-black outlines with limited tints/shades? Emphasize smooth curvatures over sharp angles? Describe a set of general rules depicting your style here.

Well-designed feedback, both good (e.g. leveling up) and bad (e.g. being hit), are great for teaching the player how to play through trial and error, instead of scripting a lengthy tutorial. What kind of visual feedback are you going to use to let the player know they’re interacting with something? That they \*can\* interact with something?>

The colors that we will be using will be dark so it fits with the space-theme. The graphic style are going to be in 2D and not so realistic, it will be more “cartoony” but not in a cute way since it will be played in space with aliens. The graphics will be simple and not so detailed because the game will focus more on the gameplay and the functionality instead of the graphics.

The players will be able to see when the towers hit the enemy and the enemies will have health-bars so you can see when the enemy life decreases. The towers will have an animation when it shoots so you can see when it shoots and when it interacts with the enemies.

The player bases will have health which decreases as soon as an enemy enters the base. When the health-bar on the base is on the lowest point, the player loses. The base will not be animated but the players can see it on the life when the health is low.

The game will be tile-based so it will have to be in 2D since the map will randomize the path of the enemies, that is why the map won’t be having so much details in the game. The most important thing is the animation and the graphics of the player-bases, enemies and the towers, the other things which is not important or do have any effect to the game won’t be focused on.

The map will contain of space-rocks, space-tiles to build the map. The background might be just an empty black space with some stars.

Amr Khalil 2015-10-20 (Pictures coming soon)

## **Graphics Needed**

1. Characters
   1. Human-like
      1. Goblin (idle, walking, throwing)
      2. Guard (idle, walking, stabbing)
      3. Prisoner (walking, running)
   2. Other
      1. Wolf (idle, walking, running)
      2. Giant Rat (idle, scurrying)
2. Blocks
   1. Dirt
   2. Dirt/Grass
   3. Stone Block
   4. Stone Bricks
   5. Tiled Floor
   6. Weathered Stone Block
   7. Weathered Stone Bricks
3. Ambient
   1. Tall Grass
   2. Rodent (idle, scurrying)
   3. Torch
   4. Armored Suit
   5. Chains (matching Weathered Stone Bricks)
   6. Blood stains (matching Weathered Stone Bricks)
4. Other
   1. Chest
   2. Door (matching Stone Bricks)
   3. Gate
   4. Button (matching Weathered Stone Bricks)

*(example)*

*(Note : If you’re soloing you might not need to define this part, as you can just use the Derived Classes + Themes section as a reference. It’s up to you.)*

1. Active objects
   1. Projectile

i. projectile 1(Shooting)

ii. projectile 2(Shooting)

* 1. Enemies
     1. Alien 1 (walking, dead)
     2. Enemy 2 (walking, dead)
  2. Tower
     1. Tower 1(idle)
     2. Tower 2 (idle)

1. Blocks
   1. Space tiles?
   2. Space rocks?
2. Ambient
   1. Empty space
3. Other
   1. Shooting cloud(animation)
   2. Door (Matching the space blocks)
   3. Gate
   4. Fence

Peter Granlund 2015-10-14

Changed By Amr Khalil 2015-10-20

*Sounds/Music*

## **Style Attributes**

<Again, consistency is key. Define that consistency here. What kind of instruments do you want to use in your music? Any particular tempo, key? Influences, genre? Mood?

Stylistically, what kind of sound effects are you looking for? Do you want to exaggerate actions with lengthy, cartoony sounds (e.g. mario’s jump), or use just enough to let the player know something happened (e.g. mega man’s landing)? Going for realism? You can use the music style as a bit of a reference too.  
   
 Remember, auditory feedback should stand out from the music and other sound effects so the player hears it well. Volume, panning, and frequency/pitch are all important aspects to consider in both music *and* sounds - so plan accordingly!>

Started by:<name><date>

Changed By <name> <Date>

## **Sounds Needed**

1. Effects
   1. Soft Footsteps (dirt floor)
   2. Sharper Footsteps (stone floor)
   3. Soft Landing (low vertical velocity)
   4. Hard Landing (high vertical velocity)
   5. Glass Breaking
   6. Chest Opening
   7. Door Opening
2. Feedback
   1. Relieved “Ahhhh!” (health)
   2. Shocked “Ooomph!” (attacked)
   3. Happy chime (extra life)
   4. Sad chime (died)

Started by:<name><date>

Changed By <name> <Date>

## **Music Needed**

1. Slow-paced, nerve-racking “forest” track
2. Exciting “castle” track
3. Creepy, slow “dungeon” track
4. Happy ending credits track
5. Rick Astley’s hit #1 single “Never Gonna Give You Up”

*(example)*

*(Note : Again, if you’re soloing you might be able to / want to skip this section. It’s up to you.)*

Started by:<name><date>

Changed By <name> <Date>

*Schedule*

*(what is a schedule, i don’t even. list is good enough, right? if not add some dates i guess)*

1. develop base classes
   1. base entity
      1. base player
      2. base enemy
      3. base block
   2. base app state
      1. game world
      2. menu world
2. develop player and basic block classes
   1. physics / collisions
3. find some smooth controls/physics
4. develop other derived classes
   1. blocks
      1. moving
      2. falling
      3. breaking
      4. cloud
   2. enemies
      1. soldier
      2. rat
      3. etc.
5. design levels
   1. introduce motion/jumping
   2. introduce throwing
   3. mind the pacing, let the player play between lessons
6. design sounds
7. design music

*(example)*

Started by:<name><date>

Changed By <name> <Date>