Game Design Document – ProjectRoots (temporary name)

Overview

ProjectRoots is a tower-defence like game where the goal is to defend an invader alien tree from the inhabitants of an invaded planet while planting its roots in it, using guns-like plant-towers built upon the tree's bark. The final aim of the game is to let the roots reach the invaded planet's core, destroying it. The way towers and roots can be built is through a shared resource, the tree's Sap, threatened by the planet's inhabitants that will try to consume it totally coming in waves from both the tree's side.

Aesthetics

To define better; Alien-like vibes, high contract between the plant invader and the invaded planet (ex. Medieval planet)

Theme

Well, roots.

Lore

To define better if not kept simple as the game visually tells.

Game Systems

Game Economics

All the game economics gravitates around the tree's sap. It will increase overtime according to a multiplier that will be increase dynamically together with the number of the bought roots.

- defences: the sap can be used to buy new plant-like towers to defend the tree
- roots: the sap can be used to buy new roots. Every root will contribute dynamically to the sap's generation.
- enemies: an enemy attack will drain some sap.

Root sub-system

- Once a root is bought, it requires some variable time to grow

- Two types of roots
  - Standard Roots: roots that originate from a Main Root and from other Standard Roots. They are not too expensive (their price is variable anyway) and lead to power-ups.
  - Main Roots: wider roots that lead to the center. They will cost way more than standard roots. There will be a short amount of them (maybe 4 or 5). Their contribution to sap's generation is greater than Standard Roots.
- Every root can give birth to N other sub-roots.
- Every root will reach, with all its sub-root-tree, a destination. The main destination will be the planet's core, then we can have some special places (water gaps, rocks, war mist, etc.) that, if reached, will provide a power up the help the player defend the tree.

Power-ups

Power ups are objects that will provide some tactical advantage to the player.

- They are found during root's exploration; they represent endpoints of most of the roots or sub-roots. To get them, it is only required to buy the root that points to it.
- As soon as they are found, they will activate.
- There will be various types of power-ups:
  - Attack buff: towers' attack will increase by a certain percentage;
  - Defence buff: tree's sap maximum quantity will increase;
  - [New Attack slot: the tree will grow finding this power-up
  - [Guns' upgrade]: a type of tower becomes upgradable – see idea 1
- Their type should be recognizable by the player when hidden
- Their effect will last till the end of the match

Defence

Defences

- A defence can be built from a free spot on the tree. It will cost a certain amount of sap.
- A defence will grow instantly
- A defence will attack automatically a target if in range
- A single target can be chosen per time, a new one can be shot only if the previous one dies or gets out of range
- Defences can be upgraded by finding power ups in the roots (see idea 1 anyway).
- Three types of towers:
  - Base – low cost, medium range, low damage, high frequency
  - Heavy – medium cost, low range, high damage, low frequency
  - Long shot – High cost, hight range, low damage, medium frequency
- Towers can be destroyed by the player

Tree

- Tree will have some free spots to build defences on its bark
- It can grow to get more spots by finding power-ups while buying roots
- It can grow to reach a maximum of six spot
- It can grow twice, so 2 spots are added (one left, one right) for each upgrade

Enemies

- Enemies will spawn on both the tree's sides from a spot unseen by the camera.
- They will come in modular waves
- They will walk from the spawn point to the tree base following the planet's shape.
- They will have a certain health, a certain speed, a certain damage
- There will be two ([or three], see idea 3) types of enemies:
    o Rabbit (why? Free ggj points)
        ▪ Low health, high speed, low damage
    o Human barbarian
        ▪ Medium health, medium speed, medium damage
    o [Heavy unit
        ▪ High health, low speed, high damage] (IDEA 3)
- Once the health gets to 0 or lower, a unit will die with no effect on the battle
- Once they reach the base of the tree, they will attack until a tower kills them
- Every attack will drain some sap of the tree.

Endgame

Game lost:

- Tree's sap gets below 0.

Game won:

- Roots have reach the planet's core

GAMEPLAY

Game Loop

- New defences built, upgraded, destroyed (A
- Roots bought (B
- Power-ups found (C

Basic Actions

- Buy Roots
- Build defences
- Upgrade defences
- Destroy defence

Emergent Gameplay

- Wise usage of sap when deciding to build a defence or buy a root
- Choice of root's progression path
- Choice of upgrade to unlock
- Choice of defences' build order
- Choice of defences to upgrade
- Choice of defences to destroy

MORE MATERIAL

IDEAS

1.

The towers are upgradable by touching on them and pay sap. What power-ups can do is provide the chance of upgrade a certain type of tower. Towers are destroyable by the player, freeing the spot they were built on. Destroyed towers will pay back some sap.

WHY? this way, more strategy is added to the game and won't bound a tower to a spot, allowing the player to test and try different towers combinations for the entire game or for a specific wave.

2.

~~The attack slot power-up can become a tree-grower power-up that will unlock new slots.~~

~~WHY? this way, the player is pushed to explore more roots' paths and won't be encouraged to try to reach the bottom from the very beginning.~~

3.

Three type of enemies, light, medium, heavy.

WHY? This way, we can define higher quality waves combining different enemies. (a polish thing I would say).

DRAWBACK: more design complexity

4.

~~Roots will have different price and weight. This difference is highlighted using vfxs and it should be related to roots that lead to a power-up or to the core (a relevant endpoint). These roots will also grow slower. Anyway, they will contribute the most to the tree's sap generation.~~

~~WHY? It will allow the player to choose more wisely the path to take. Since player will see some hidden power-ups under the planet's surface, they might find it difficult to get the right path, this way the'll be helped when choosing it.~~

~~DRAWBACK: more design complexity (balancing with power-ups positions to avoid to let the game become a puzzle)~~

~~ADD: what I was thinking is to let them know about the path without the grow and price maluses. So, no strategy is added, but some guidance is. I would keep the weight for different roots (this weight can be hidden, but maybe the player should know that a root is more valuable than another in terms of sap generation).~~