

Game design document

Ants vs Insects

The terminology:

Unit - controllable walking entity

Building - static object in which player can do upgrades and make units

Worker - unit that collects resources from the collectable spots

“Fog of war” - the uncertainty and confusion on a battlefield, or in a strategy game, that arises from a lack of complete information about the enemy's capabilities, location, and intentions

Upgrade - is a permanent improvement researched at a specific building that enhances the capabilities of your units, buildings, or overall economy.

Game idea:

“Ants vs Insects” is a PvP Real Time Strategy game where players are playing as a commander of either Ants army or Insects army. Players start games with a certain number of workers and a main base. The main goal of each player is either to destroy all the opponent's buildings or to make them leave by making unwinnable conditions using army units.

Fighting sides

Ants - united army of all different species of ants.

Insects - united army of all insects other than ants.

Resources

The resources (except the limit resource) are spread across the map on the “expandable spots” near which players can build their additional bases and collect such resources. There are limitations on how much workers can collect the resource concurrently. The workers can collect only a small percent of a resource at a time. After the worker collects the percent of a resource, it needs to deliver that resource to the base and only after that the player receives the resource on their “Resource bank”. Resource spots are also limited by quantity (so for example from one resource spot players can only collect 1000 units of

such resource). After players collect all of the resources from the spot, this resource spot is considered “expired”, and players cannot collect resources from such spots anymore.

The are 3 types of resources:

Main consumable resource - This resource is required to make a unit or build a building, it is the most wide-spread resource across the map.

Secondary consumable resource - This resource can be used to make more advanced units and buildings, there are less spots across the map where the players can collect it.

Supply - This resource is the maximum amount of units barrier that players can make at the moment, the supply can be extended by building the main building or by making units/buildings that extend this limit. Supply itself has a maximum limit which is called “maximum supply”, supply can't be more then such limit, so there is a limitation on how many units can players have during the game.

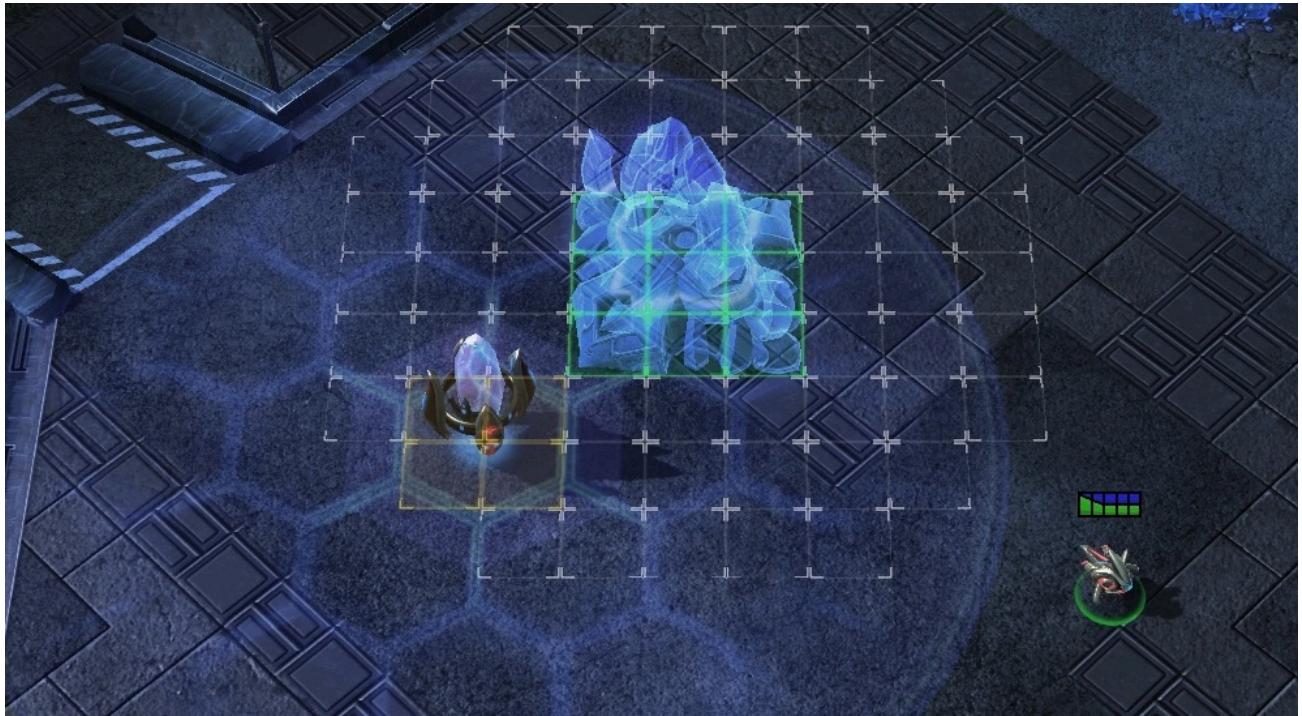
Example of the supply building (Warcraft 3):



The grid

All maps are divided into little squares which form the grid. Each unit and building has its own grid size (i.e ant soldier is 1x1 grid size, hive is 4x4 grid size). The path can be blocked either by making a building or blocked by a unit.

Example of the building grid mechanic in sc2:



Buildings

The buildings have armor, health points and in case of defensible buildings attack. All buildings are considered "heavyweight" which means that units with "vs heavyweight" attack type deal more damage to them.

When players start a game, they have at least one building, which is the "main base building". The "main base building" is the type of building into which workers bring the resources and where additional workers can be created.

The buildings are divided into categories:

"Producing buildings" - buildings where units can be created.

"Upgradable buildings" - buildings where upgrades can be learned.

"Defence buildings" - buildings which can attack and their point is to provide static defence mechanisms to the players.

"Supply buildings" - buildings that extend the supply limit.

Units

Units can have different attack types:

"Ground-ground" - units with such attack type only can attack units that walk on earth (only

grounded units)

“Ground-Air” - units with this attack type can attack both flying and walking units.

“Air-air” - units with such attack type attack only flying or huge units.

Units have a base attack damage and the base attack interval. Both of these attributes may be improved by learning upgrades in “upgrade” buildings.

Units may unlock/remove attack types, attributes, casting spells by learning specific upgrades in the “upgrade buildings”.

Units can have different armor attributes:

“Lightweight” - receive additional damage from units with attack type “vs lightweight”

“Heavyweight” - receive additional damage from units with attack type “vs heavyweight”

“Non-bonusable” or “Middleweight” - such units do not receive bonus damage from units with attack types “vs lightweight” and “vs heavyweight”

Based on armor attributes, units have additional bonus damage versus units of such armor.

The units are divided into 3 categories:

Workers – the units who collect the resources and build the buildings

Battle units – the units who can deal physical damage to the opponent’s units and/or buildings, the battle units also are divided into categories:

Melee units – they fight in close range

Range units – they fight from a certain distance

Caster units – units that have an ability/abilities for dealing damage to enemy’s units or provide buff to allies units (AOE spells, heal, abilities to increase attack speed of the allies units and etc.)

Support units - units whose purpose is not to fight, but rather to provide additional movement/scout possibilities to the army.

Units also have unique attributes that provides them advantages in the battlefield, here is the list of such attributes:

Flying attributes – units with such attribute ignore the map landscape by flying over it

Huge units – units with such attribute ignore the high grounds by walking over them

Hiding units - units that can become invisible and the opponent's army can't see them until there is a "spotter" unit that can unhide them.

The units are divided based on their strength in 3 tiers:

Tier 1: Cheap and weak units that are used to do pressure on the opponent or defence,

The players can create them basically almost from the start of the game.

Example: Bug (Insects) vs Ant-soldier (Ants)



Tier 2: Medium cost units that are more effective than Tier 1 units, on that tier units with active abilities will appear (casters), flying units and units that make splash damage.

To make tier 2 units a player is required to build additional buildings that unlock the possibility to make such units.

Example: Flying ant (Ants) vs Mantis (Insects)



Tier 3: Really expensive and highly effective units will appear here, these are the late-game units that can only be made using the latest technology buildings of races.

Example: Lucanus cervus (Insects) vs Ant's queen (Ants)



The map and vision

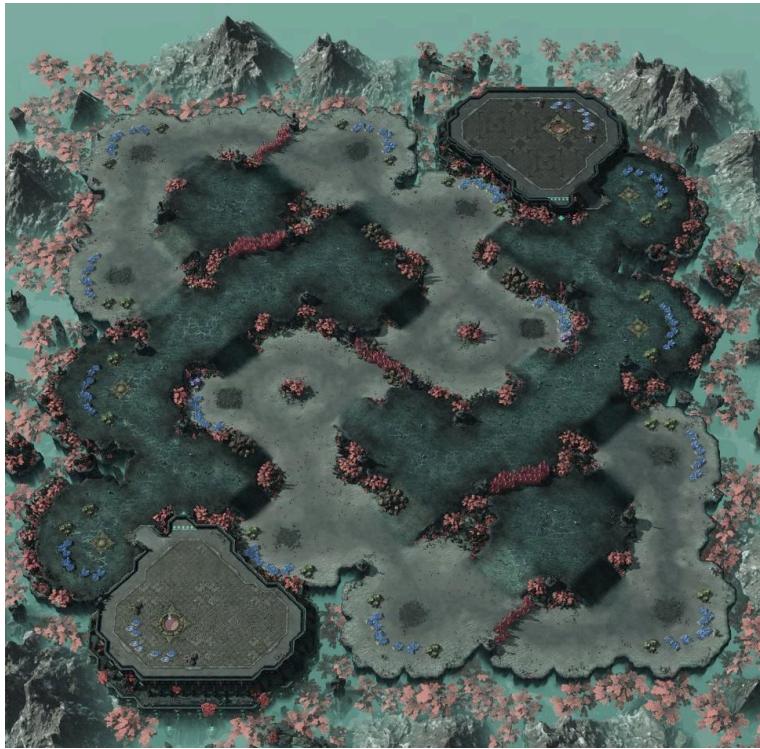
The map itself is not fully visible to the players, the “fog of war” hides it. Players can only see what their units and/or buildings see. The units and buildings have a range of vision. This range is determined from unit/building characteristics.

The playing map contains additional resource spots where players can expand, it is mirrored either on vertical axis or horizontal to provide balance of the game. The map consists of high grounds, ramps (to provide such high grounds) that are unreachable for the ground units spots, breakable constructions that usually block paths on map, vision towers etc.

The maps will have unique events:

Dropping supplies - each x minutes on the map there will be a supply drop, By collecting that supply drop the players can receive a little bit of resources or temporal buffs. It will force players to play more actively and make units (rather than staying on their base to only defend) in order to receive such advantage.

The map is going to look something like this:



HUD

The player's hood consists of a mini map, resource labels, menu, time since match started, and information about the selected building/unit.

There are control groups, by binding units and building to such control groups players will simplify control over their army and base.

Also there are camera bindings, players can bind their camera position to the specific key, so by clicking on those keys players will move their cameras to the position where the camera was when they were binding that camera.

The HUD itself will look something like this:



Multiplayer model

The base game itself is a 1vs1 Player versus Player battle. Players connect to each other and start the game. Although we are thinking about adding such game modes as 2vs2, 3vs3, 4vs4 and Free For All (FFA).

The implementation of the multiplayer model will be a hybrid client-server lockstep model.

Players will send their input commands to each other, and then on each tick each client will execute them. It will be better than replicating the state of each unit on the map. By utilizing this approach, latency and amount of traffic will be reduced significantly.

Input

The players will control their armies using mouse and keyboard. Each active key in the game will have their own unique binding key, players can activate such abilities by pressing the hotkey button or clicking on them using a mouse. The camera will be controlled by utilizing the mouse. The players will have the possibility to rebind each active key using their own desired keyboard layout.

Visual Style

Leave until edited

Sound

Each unit has its own voice lines, attack sounds, abilities sound and dying sound. The maps have their own ambient sound.

Games that influenced the project

The game is mainly influenced by such strategies as StarCraft and WarCraft. Also we think about adding mechanics from MOBA games, such as Dota 2 or League of Legends.