

MeteorFire - Prototype

Prototype Game Design Document

Team Thunderclap

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Contents

1. Genre
2. System Requirements
3. Game Mechanics
 - a. Goal
 - b. Gameplay
 - c. Game Mechanics
4. Story
5. Controls & UI
6. Monetization
7. Replayability
8. Sequel
9. Inspirations
10. Required Assets

Team Thunderclap Members

- Core Team
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1. Genre

Meteorfire is a topdown, arcade-style, PVE, single player, defense game with MOBA elements.

2. System Requirements

Any computer running Windows 10 should be able to run Meteorfire.

3. Game Mechanics

a. Goal

The goal of Meteorfire is to survive as long as possible against waves of hostile enemies and score a high score. The high scores are organized by killscore, followed by net gold collected during gameplay.

b. Gameplay

Gameplay is divided into alternating periods, daytime and nighttime. During the daytime the player is free to build their base, repair broken structures, and purchase upgrades. During the nighttime enemies spawn and relentlessly attack the player's base. The game ends when the base is destroyed. When the player dies there's a wait time before they respawn.

When the player kills an enemy, they gain gold and experience. The gold can be spent on a variety of upgrades. As the player gains experience, eventually they level up, which grants them additional health and bonus gold. As the player kills enemies, the enemies grow more threatening, occasionally even sending powerful boss units siege the base with.

There are 3 types of guns the player can use, additionally there are 8 special abilities that the player can choose between. The player can always switch between gun types, however, the player can only customize their abilities during the daytime. There are 2 types of defensive structures to build, walls and turrets. Enemies attack and destroy structures as they attack the player's base. Building and repairing structures costs gold.

c. Game Mechanics

There is only 1 enemy type (aside from bosses, which are each unique). Enemies spawn from far away and move inwards, towards the player's base.

The enemies collectively gain experience similarly to how the player does, and as such the enemies “level up” over time as well. This level is tracked by an EnemyController object that manages the randomized features about how the waves spawn.

If a turret kills an enemy it counts the same as if the player killed the enemy, however less experience is awarded. When an enemy dies there’s a chance they will drop a pickup item, either a health globe or bonus gold. Stronger enemies yield more gold and experience.

After each level up the player’s maximum health increases and the player gains bonus gold. This bonus gold increases by level. At the start of the game the player has only 2 slots to assign abilities to, and the only way to increase this maximum is by levelling up (up to a maximum of 4).

Upgrades are divided into three tiers. Unlocking the third tier of an upgrade grants special upgrades. However, the higher tier upgrades cost exponentially more gold.

Walls are passive, tough, and impede all movement (even the player’s own movement). Turrets automatically target and attack nearby enemies and only impede enemy movement. The player can only interact with structures they can see on screen.

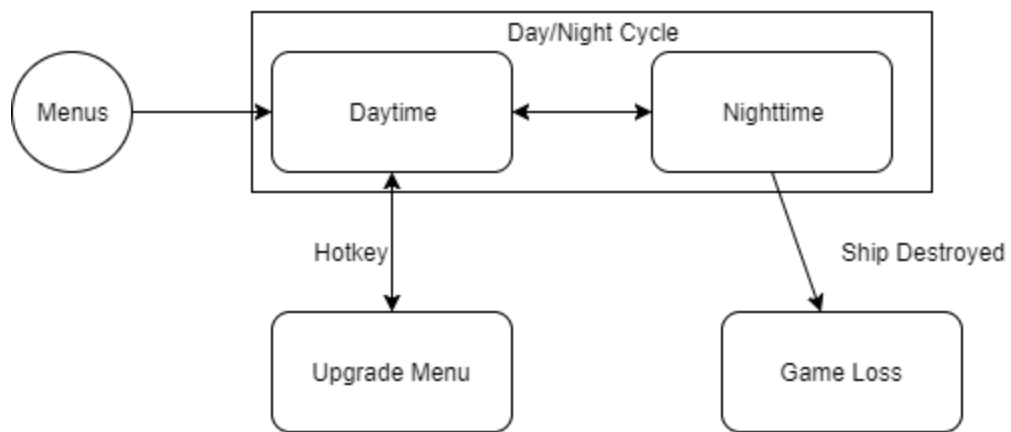
Player Abilities

Blink	Instantantly teleport a short distance
Haste	Gain increased movespeed and fire rate
Big Bolt	Damage all enemies in a large line
Miasma	Create a zone that damages and slows enemies
Rejuvenation	Instantly restore health
Judgement	Stun all nearby enemies
Force Pulse	Damage and push back enemies in a cone
Hypershield	Become invulnerable to damage

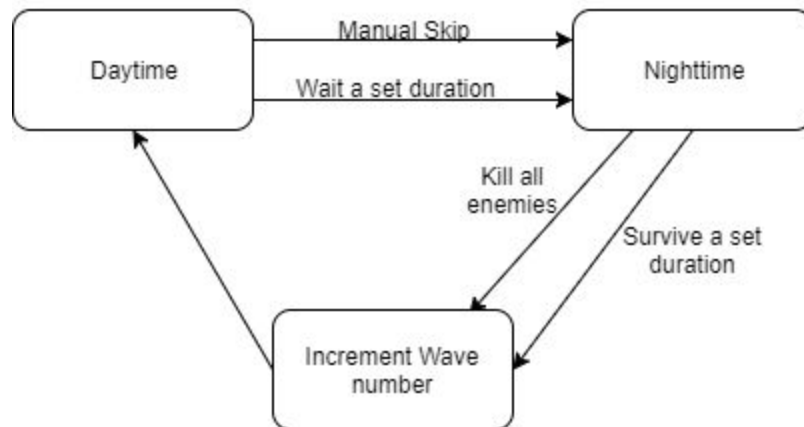
Available Upgrades

	Available at Start	Benefit per upgrade	Level 3 Benefit
Rifle	Yes	Increased damage, accuracy	Automatic Fire
Flamethrower	No	Increased damage, area of effect	Ignites enemies on fire
Grenade Launcher	No	Increased damage, fire range	Grenades stun enemies
Turrets	Yes	Increased health, Damage, Fire Rate	Projectiles explode on contact
Walls	Yes	Increased health, damage resist	Player can pass through walls
Player Armor	Yes	Decreased damage received from attacks	Player regens health over time
Respawn Time	Yes	Reduced respawn delay time	Greatly reduced respawn gold cost
Player Boots	Yes	Increased player movespeed	Player can pass through enemies

Game State Overview



Detailed Day/Night Cycle



4. Story

Ghoster is a lone space adventurer, and unfortunately for them, they crash landed on a meteor. Even worse news is that they are not alone there! The meteor is infested with vicious insects hell-bent on destroying any and all intruders. Can Ghoster survive against the insect hordes? Can Ghoster somehow find a way to escape?



Ghoster Concept Art

5. Controls & UI

Movement is standard 2D WASD controls. Building structures, firing the player's gun, and aiming player abilities are all controlled by the mouse. There are a few additional hotkeys, to cycle between weapons and to open the pause, ability selection, and upgrade menus.

The UI is fairly minimal. There is a bar that displays the player's abilities, their cooldowns, current health, current level/experience, and current gold. There is an indicator that shows which gun is currently selected. Each enemy unit also shows a health bar.

6. Monetization

Meteorfire will be sold on online markets for an expected price of \$5.

7. Replayability

Meteorfire has many viable strategies that can be employed to survive for long periods of time. Because the player is free to play the game in a variety of ways they will be interested in replaying the game to see what the other options are like. The enemy spawn patterns are also semi-randomized so the experience will change with each playthrough. Finally, another reason to replay the game will be the incentive to gain a high score to show off on a leaderboard. All of these reasons, combined with polished production values, will entice a player to play Meteorfire over and over again.

8. Sequel

Meteorfire could have a sequel that has different guns, abilities, enemies, and upgrade types for a fresh, yet similar, experience. No sequel is currently planned, however.

9. Inspirations

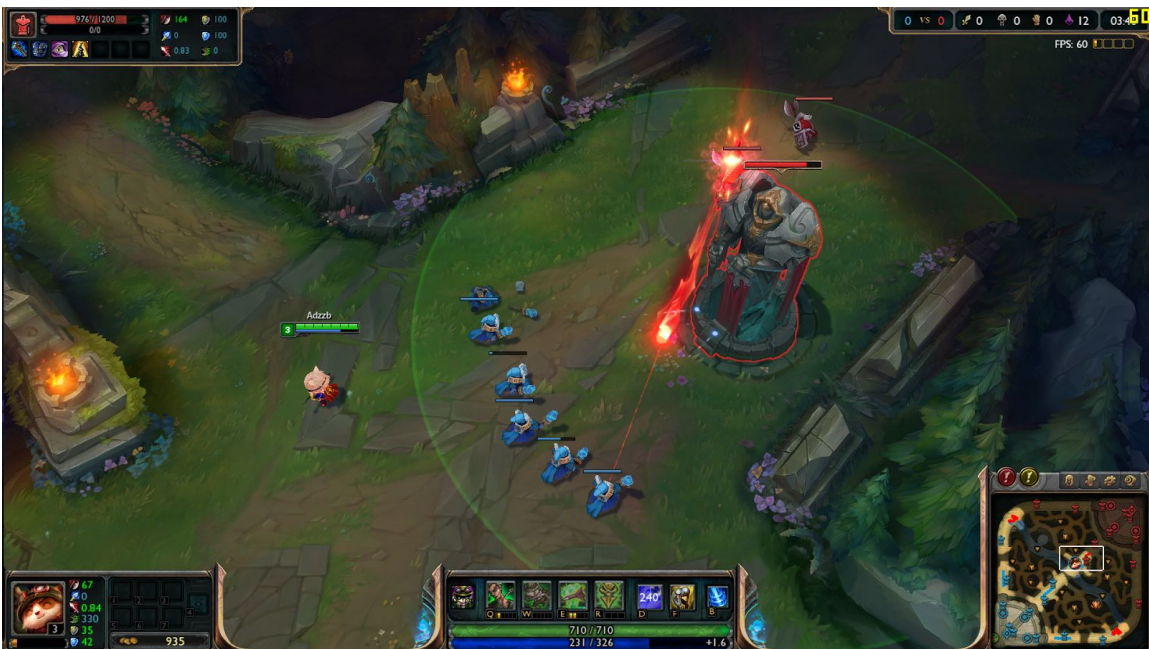
League of Legends

PC MOBA game

This game was the major influence for how the player abilities and money generation operate, additionally it influenced the design of how the waves of enemies attack the player's base.

In this game waves of “minions” spawn to defend your base and attack the opposing team's base. A player character can gain money by killing these minions, but if another minion or a defense tower gets the kill the player gets no money. A player also gains experience if they are near a unit when it dies. We are incorporating both of these elements into Meteorfire, the player gains both money and experience for killing them.

Additionally, in League of Legends players primarily spend their gold on items that increase their combat abilities, some of which grant additional abilities a player can use. These items are stored in a small inventory, the slots of which are automatically assigned hotkeys 1-6. Essentially, a player can buy new abilities for their character mid game, and customize their loadout to suit their preference. We like this sense of customizability and we incorporated very similar mechanics in our own ability system.



Zombs.io

Online Flash Defense game

In Zombs.io a player gathers resources (wood, stone, gold) and uses them to craft defenses and buy upgrades for their base to defend against hordes of zombies which spawn at nighttime. It is a cooperative, server-based game where you can have a team of up to 4 players building and collecting resources. This game is the main influence on how we build our base in Meteorfire.

Zombs.io has many types of resources, however, and there are many types of buildings to build. Meteorfire is simplified in comparison, there is only 1 type of resource (gold) and there are only 2 building types.

Additionally, Zombs.io has a wave-based difficulty system, which we also are incorporating in our game. As the game progresses each wave of enemies that appears increases in difficulty, and you see new enemy types. Meteorfire has fewer enemy types but how they “level up” over the course of the game is conceptually the same.



Resident Evil 4

Console Horror/RPG game

Resident Evil 4 had a robust gun upgrade system. You could find or purchase different gun types (pistol, magnum, tmp, rocket launcher, etc) and each gun had various upgrades you could purchase when you found a salesperson. We like the idea of acquiring and upgrading guns separately, and we incorporated it into Meteorfire.



Starcraft

PC RTS game

Starcraft is iconic in game design. The three-faction system invented by that game has an incredible amount of flavor as science, nature, and magic all fight against each other. We were heavily influenced by the setting of Starcraft in both location and creature types.



10. Required Assets

2D

Unit textures

- Ghoster
- Basic enemy
- Boss enemy (at least 3 varieties)

Environment textures

- Ground/background
- Wall
- Turret

Ability textures

- Big Bolt
- Miasma
- Judgement
- Force Pulse

UI

- TBD based on menu design

Sound

BGM

- Daytime
- Nighttime
- Boss wave

Effects

- Ghoster guns firing
- Turrets firing
- Enemy/Boss attack
- Wall/Turret destruction
- All abilities have a cast sound

Animation

Character Animations

- Ghoster idle
- Ghoster movement
- Enemy movement
- Enemy attacks

- Ghoster death

Player Ability Animations

- Haste, Hypershield Auras
- Miasma Bubbling
- Rejuvenation particles
- Big Bolt, Judgement, Force Pulse cast animations

Structure Animations

- Turret/Wall Destruction
- Game loss