



# LongShot Studio

Trajectory

Request for Proposal

Version 1.0

## Document History

Version	When	Who	What
1.0	February 12, 2020	Max Icardo, Yingruo Liu, Noah Mammen, Kiran Pelluri, Blake Rude, and Lucas Thoms	Initial Drafting

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## 1.0 Problem description / opportunity / expression of need

Over the last 30 years, game development technology has advanced exponentially. Games that once took years to build can now be created in weeks. This gives developers today a unique opportunity to reimagine the games that generations grew up playing. Besides giving players warm, fuzzy feelings of nostalgia, a modern interpretation of a classic game can take its original creators' ideas to the next level.

Long Shot Studio is seeking proposals to do exactly that. In the early 1990s, DOS users were introduced to the 2-dimensional, turn-based strategy game *Scorched Earth*. Through the 2000s, that game found wide reach as a Flash game on the Internet. During those decades, little has changed except the platform. It's time to reinvigorate this time-honored classic with real-time competition in 3D. Users will be challenged by the strategy of the game, enhanced by realistic physics, as well as the skill involved in firing weapons faster than their opponents. This exciting game will introduce players of all ages to the next generation of strategic warfare.

## 2.0 Project Objectives

The objective of Trajectory is to destroy the enemy before they destroy the player. The player will take control of an avatar in third person and will have a set of weapons with which to attack the enemy. The player must load their weapons and fire use them to destroy the enemy's weapons and win the game.

- AI/Enemy
  - Player battles AI in single player
  - If hit with projectile, dies and takes time to respawn
  - Intermittently attacks player with increased accuracy as time progresses
  - Varying difficulty i.e. easy, medium, hard
- Player
  - Can move in a limited area on map that contains player weapons (castle, boat, etc.)
  - Loads and fires available weaponry
  - Can die if hit by enemy projectile, then takes time to respawn
  - Player can pick up and load ammo into weaponry on map to fire
  - Third person view

- Menu/UI
  - Selects between single player, multiplayer, or free play
  - Single player has selectable difficulty
  - Help screen to provide controls and gameplay instructions
  - UI consists of currently held ammo type, health, elapsed time
  - Toggleable audio
- Audio
  - Themed music
  - Toggle audio (Music/SFX)
  - SFX for weapons firing, loading weapons, environment, projectile impact
- Levels
  - Game consists of three scenarios
  - Each scenario will have different weapons and ammo available that coincides with the setting of the scenario
  - Setting examples include pirates, medieval, space, underwater, etc.
- Multiplayer
  - Selectable from menu screen
  - LAN connection attempts to connect two users in the area to each other to participate in a multiplayer battle
  - Multiplayer battles consist of two players on equal starting footing
- Weapons
  - Weapons are level based
    - Medieval, for example, could have catapults and trebuchets
  - Weapons need to be loaded by player and have cooldown times after being fired
- Free Play
  - Free play mode lets players experiment with the weapons for the three scenarios
  - Free play has no objective just having fun with weapons and mechanics
- Dynamic Camera
  - Camera will follow the weapons projectiles as they are fired at enemy base
  - Camera should linger on impact site for a few seconds to assess damage before snapping back to third person camera view

### 3.0 Current system(s) – if any / similar systems

There are a multitude of systems that have similar gameplay to the project. These are largely based in 2D platforms. Trajectory will have features similar to the system below, but it will be in a 3D setting.

- *Scorched Earth*
  - 2D platformer game that features artillery warfare between two opponents.
  - Players can choose their weapon.
  - Players can change the distance and trajectory of their attacks.
  - Player attacks can be affected by environmental conditions.
  - The game is over when a player's health reaches 0.

### 4.0 Intended users and their basic interaction with the system

- Users
  - Players ranging from those who enjoy skill-based gameplay to something relaxed to pass the time.
- Uses
  - Keyboard and mouse to control player in-game.
  - Recreational use for enjoyment and to pass time.
  - Competitive use between two players when multiplayer is in use.
  - Single player use against AI.
  - Multiplayer use against a friend / competitor.

### 5.0 Known interactions with other systems within or outside of the client organization.

- Software distribution store
  - Apple App Store
  - Google Play Store
- User's device
  - PC
  - Mobile phone
- Another player's device over network connection

## 6.0 Known constraints to development

- Game must be implemented in Unity and C#.
- Game must be 3D.
- The development timeframe is limited by the final deadline.

## 7.0 Project Schedule

Date	Description
February 13, 2020	SA demos
February 20, 2020	Code repository chosen
February 27, 2020	A minimum viable product including skeleton code
March 5, 2020	Initial test plan
March 26, 2020	Code should look mostly like a video game with some features missing
April 30, 2020	Post-mortem Analysis
May 7, 2020	Final Presentation

## 8.0 How to Submit Proposals

All proposals must be submitted via email to [proposals@longshot.studio](mailto:proposals@longshot.studio). Once the proposal is received, a confirmation email will be sent to your email account. If you have any questions, please contact Lucas Thoms at 000 000 0000.

## 9.0 Dates

Proposals must be submitted on Feb 12, 2020 by 4:00 am Pacific Standard Time. Final decisions will be made on Feb 19, 2020 by 4:00 am Pacific Standard Time.

## 10.0 Glossary of terms

**2D:** Two-Dimensional World

**3D:** Three-Dimensional World

**LAN:** Local Area Network, used for multiplayer gaming

**Real time gameplay:** Both players play at the same time.

**SFX:** Sound Effects. Sounds that occur in relation to the player's action.

**UI:** User Interface. Visual display of the game status during gameplay.

**AI:** Artificial Intelligence