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|  | **Mobius GCD** |
|  | Master Game Concept Document  Documented by Steven Streeper |

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| **[Table of Contents]** | |  |
| 1. About this document 2. Abstract    1. Objectives    2. Turns and Actions 3. The Mobius Strip    1. Strip features       1. Deposits 4. Phases    1. Firing Phase    2. Management Phase       1. Tank Movement       2. Placing Structures 5. Resources and Purchasing Options    1. Mobucks and allotment    2. Weapons       1. Guided Weapons       2. Static Weapons    3. Structures       1. Bunkers       2. Turrets       3. Walls       4. Tanks       5. Mines 6. Game Balance & Mechanic Explanation 7. Story 8. Further Documentation | ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------  ------------------------ | Page 2  |  |  Page 3  |  |  Page 4  |  |  |  |  |  |  |  Page 5  |  |  Page 6  |  |  |  |  |  Page 7  |  | |

Mobius Game Concept Document

# About this Document

The purpose of this document is to cover the high-level scope of *Mobius* and explain how the game will be played, how the mechanics will function, and to describe what the finished game will function like. This document does not cover the details of feature implementation, granular scope of individual assets, specific numbers, or estimated costs and scope. All of these things are covered in detail in the Game Design Document of Mobius. Similarly, artistic details, visual aesthetics, sound design, soundtrack specifications, animations and visual effects will be covered in the Art Style Guide. This document is meant to be a primer on how *Mobius* is played, why it is enjoyable, and to give an overview of some of its dynamics. Any term in **boldface** has its own section discussing it in greater detail.

Important Note: **You can ignore this entire document if you wish.** The Game Design Document is the Master game document and the Programming Bible. The Art Style Guide is the Art Bible. This is the Game Concept Document: it is the Game Design Bible. It is meant for game designers, and not developers, artists, or other specializations.

# Abstract

*Mobius* (working title) is a quick format hot seat turn-based tank defense game played on a **Mobius strip.** The strip is divided into two halves and the halves are given to two dueling players. Each player controls one tank and has the ability to purchase, fire, and guide weapons from it and other structures he builds using gathered resources.

# Objectives

The game is won by locating, uncovering, and destroying your opponent’s **Package**: a little yellow box that is ideally hidden by your opponent during play. The package is very vulnerable and is easily destroyed when left unprotected. Smart players will quickly learn to protect their package by either hiding it inside their tank or in a protective structure like a **bunker**.

The package is usually destroyed by damage from things like incoming enemy missiles or other weapons, but can also be directly captured by the enemy tank moving on top of it if it is left out in the open. When the package is destroyed or captured, the game immediately ends and the game is won by whoever destroyed or captured the package.

The package may only be moved around via the use of a tank.

Resources in the form of **Mobucks** (working name) are required in order to purchase weaponry and structures, and this is done by securing **deposits** that are scattered about the Mobius strip, although each player does get a small allotment of Mobucks at the start of each round.

# Turns and Actions

Mobius is a turn-based game. Each round consists of two phases: The **Firing Phase** and the **Management Phase**. The phases alternate twice in a round; that is, while player A is in the firing phase, player B is at the same time in management phase. When a player is done in the firing phase, the phases switch. One full cycle of this is called a round.

There is a timer, but that timer has a minimum and maximum time. After the minimum time has passed, the Firing player may fire his weapon. If the maximum time is reached however, the player will be unable to fire.

# 2 The Mobius Strip (The battleground)

A Mobius strip is a mathematical shape that has only one side. To make a model of a Mobius strip, simply take a strip of paper and give it a half-twist. Now imagine a grid overlay over the entire surface of the strip. If you were to stand on the surface of the strip, it would seem like you were standing on a cylinder, or even a flat rectangle. When the camera is zoomed all the way in, this is how the world looks. Expand the view however, and the player sees that the strip is just one inter-connected sheet.

The **tank**’s movements as well as all structures built in the **Management phase** areconstrained to a grid laid over the surface of the Mobius strip. Due to the bending of the strip, some adjustments may be necessary in order to make a Cartesian coordinate system work. A tank cannot drive off the edge of the strip, but missiles can fly around them with no problem.

The Mobius strip band has a gravitational area of effect that stops after a certain point. When objects, (i.e. weapons) pass out of this field, they drift in whatever direction momentum carries them. It is possible to fire straight up, break the gravitational pull of your side of the strip, float the weapon in space for a bit, then have it re-enter the gravitational pull of another side of the strip and make contact with a base on the far side of the strip.

# 2.1 Strip Features

Players will have half of the strip be their own as territory. By that, it is meant that if the entire grid from earlier were stretched out into a big one-sided rectangle, each player would get exactly half of it split widthwise. A player may move **tanks** onto their opponent’s territory and may fire upon it, but they are only permitted to build **structures** on their own territory. A player cannot gain or lose territory.

# 2.1.1 Deposits

About fourteen squares on the strip are deposits scattered in random locations on the strip, always with an equal number in each player’s territory, and mirrored. That is, while from game-to game the locations of the deposits are random, the distribution for each player is equal to ensure fair play. Deposits can have **mines** built on them in order to create additional **Mobucks**. **Mines** are discussed in section 4.3.1.5.

# 3 Phases

As discussed in **Turns and Actions**, (1.2) there are two phases that each round is made of.

# 3.1 The Firing Phase

The firing phase begins with the player choosing where he shall fire his weapon from. He may select any **turrets** he has constructed in the management phase to fire from, or he may select his **tank**, which functions like a mobile turret. The player then selects which **weapon** (4.2) he will be using. All weapons have a cost associated with them that is paid for in Mobucks. There are two classes of weapons the player will chose from: **guided weapons** (4.2.1)and **static weapons** (4.2.2) both of which are discussed. In addition, if the player chooses a guided weapon, they must select how much fuel to purchase. (See 4.2.1)

# 3.2 The Management Phase

The management phase takes place while the opponent prepares his shot. During this phase, the camera is in a mid-range third person view as the player moves his tank, purchases and places structures, and/or moves his package from or to a tank.

# 3.2.1 Tank Movement

The tank can move up to a set number of squares per round. The tank can only move to an unoccupied square that is in one of the four directions directly adjacent to it. (No diagonal movement) When a player selects a destination for the tank, a temporary flag marks the destination and the tank starts moving there. The flag is visible to both players. This prevents a crafty player in management mode from making the location of his tank unknown to the firing player. Tanks cannot move around the edge of the strip, and instead must access it by going the long way around. Tanks may enter enemy territory.

# 3.2.2 Placing Structures

While in the Management phase a player may at their option place **structures** (4.3) in any square that is within a certain radius of their tank or other structure. Structures can provide a number of benefits to a player that justifies their costs. Structures generally take up one square on the **grid** and cost **Mobucks** to place. The various structures that can be placed are listed at item 4.3: Structures.

# 4 Resources and Purchasing Options

An integral part of the game is utilizing limited resources to best your opponent and outwit their defenses. As such there are plenty of ways to maximize and spend your resources in order to achieve the most “bang” for your Mobuck.

# 4.1 Mobucks

Each player starts out with a set amount of Mobucks, the in-game currency. Players will probably spend most of their currency on weapons, but structures can be effective as well.

# 4.2 Weapons

Weapons are the only way to damage structures, tanks, and ultimately, the opponent’s package. All of them save the **dumb dart** (Check GDD) cost Mobucks to fire.

# 4.2.1 Guided Weapons

Guided weapons are the most common type of weapon. When a player selects a guided weapon from the menu, (a rocket for example) their camera immediately switches to a first-person perspective centered on top of the tank or turret that they selected earlier. Specifics regarding guided weapons are located in the Game Design Document. Two additional GUI elements appear at that point: A “**Fuel**” bar and a mini-map of the surrounding area. The player aims at where they want to fire, then presses a “fire” button to launch the weapon. The opponent is then no longer able to make management choices and is forced into a third-person view of the player’s rocket to watch. The first player’s camera then launches from the turret/tans as if it were attached to the nose of the rocket, and the player guides the rocket forward along its trajectory. The player can control the rocket’s thrust and make minor adjustments to its up, down, left and right direction, but every command input costs fuel from the fuel meter. When the meter runs out, the rocket is no longer powered, can take no input, and cannot fire its engine anymore. (Think of a model rocket in real life) When the rocket makes contact with any solid entity, (usually the ground) it detonates, deals damage, and the player’s firing phase ends. It is now his management phase and the opponent will enter Firing phase.

# 4.2.2 Static Weapons

Static weapons are so named because the player does not aim them directly. These weapons, when selected, do various specific things. Some glide over the surface of the Mobius strip for a set distance, while some are short-range defensive weapons that need no homing ability, while some are simple grenade launchers that lob a bouncing gernade. All static weapons have a thin blue line showing part of their trajectory, which is another difference from Guided weapons which have no such line. These are generally cheaper than guided weapons.

# 4.3 Structures

Structures are buildings placed by a player as a defensive measure, although the **turret** (4.3.4) can be used as an offensive building. All structures must be built within a certain radius of another already existing structure or tank. If the player’s tank has been destroyed, as well as all other structures, then the player may place a structure in the area immediately surrounding the package, *but not on the package itself.*

# 4.3.1 Bunker

The main unit of defense. Each bunker takes up one square and can withstand a fair amount of damage before being destroyed. The Bunker can accept and protect the package if a tank with the package is next to it. (next to being defined as one of the four surrounding squares) The tank can also move inside the bunker for protection, but the tank cannot shoot when inside of the bunker.

# 4.3.2 Turret

The turret is the offensive unit. It takes up one square. Weakest of all structures, but has the ability to launch all kinds of weapons from the top of its tower. The turret can also hide the package.

# 4.3.3 Wall

Walls help fortify other structures. When surrounding another structure, it takes damage that was meant for the structure itself. Unlike other structures though, when destroyed, it leaves behind **rubble**. A square filled with rubble acts empty for tanks and weapons, but nothing else can be built in that square. Walls cannot hide the package.

# 4.3.4 Tank

Tanks are not structures strictly speaking, but they do follow many of the same rules. A tank can hide and protect the package, as well as launch weaponry. In many ways, it is simply a mobile turret, except that the player may only have one at a time and tanks are much tougher. The only thing tougher than a tank is a bunker.

# 4.3.5 Mine

A mine is a structure that can only be placed on a **Deposit** (2.1.1). These structures are relatively weak, but produce bonus Mobucks that are deposited to the player’s account at the start of every Management phase.

# 5 Mechanic explanation

What follows are little notes that help explain some of the rationale behind some rules in the game.

Fuel limits rocket distance and prevents a player on the far side of a map from easily and cheaply hitting a target on the other side.

Structure placement rules limits prevent players from placing a turret right in the perfect place to bombard an enemy.

The package can be hidden in structures to add an element of deception to the game.

Walls leave behind rubble in order to limit the total health of certain buildings, otherwise bunkers are overpowered.

# 6 Story

This game has a very light story aspect, but it goes like this:

“There once existed in a tiny pocket dimension not too far from the end of your nose two beings named Posis and Negis. They lived together on either side of what they perceived to be a loop. Posis hated Negis. He was always on the other side of his little loop and Posis just felt that Negis was… different. Horribly different. Posis long ago decided that he, being a logical being, was superior to Negis. Negis meanwhile, was on his side thinking exactly the same thoughts about Posis. So Posis and Negis went to war. Unfortunately, whenever Posis made an attack, Negis would think to do the same attack at the same time and their missiles would collide in midair. Every action that one did, the other perfectly mirrored. So they both independently came up with the same idea at the same time: get outside help. That’s where you come in.”

The players will play on behalf of Posis or Negis when fighting. Posis and Negis offer no bonuses or penalties to players, and the players will not even be able to choose who they fight for. It’s a visual thing, mostly.

# 7 Further Documentation

This document is the basis for the Game Design Document in which most of the design question specifics will be answered. Please refer to that paper for further inquiry.