

Project Gibbonga Maintenance Plan

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Our maintenance plan consists of several parts. These include: hiring more staff to help further develop the game beyond its current state; getting Gibbonga ported to all the consoles like the Nintendo Switch, Playstation 4, and Xbox One; finishing the product backlog by adding the new features that we did not have time for; and adding new features that the audience we hope to build may want to add. To really cut costs on our project we plan to have all of our teams work independently by not renting an office space and allowing all of our future employees to work from home. All of our code will be open sourced for modding purposes so there will be no need to keep anything super secret.

To start our first year of development we will need to hire a crack team of developers, coders, and artists to really get our game up and running. We plan to hire at least one audio professional to get our own music so we are not using open source music anymore. On average, these professionals cost about \$95,682 per year to hire. Next up are some more programmers. We are mostly looking to hire someone to consult with us so that we can keep doing our own programming. This type of consultant typically costs around \$78,000 per year to hire. We are also going to need some artists to really give us some enemy variety also so we can stop using open source designs. They are typically around \$74,349 per year. We also would like to hire some game designers in order to give us some cool new enemy attacks and movements. These designers typically earn approximately \$73,864 per year. Lastly, we will need to hire some quality assurance professionals because our friends and family cannot hit every edge case we have for our project. These professionals are typically going to be making about \$54,833 per year.

Now that our crack team is assembled, we will need to get them to work porting our game to as many platforms as possible so we can accrue more money to expand the game with. First order of business is porting it to the Playstation 4. To port to the Playstation 4 we will need to first apply to the Sony Partners Program. If we are accepted we hope to have a fully functional port of Gibbonga on the Playstation Store by March of 2019 assuming the application process takes 4 weeks to hear back. We will have the game priced the same as our Steam launch. Next up is Xbox One. Once again the first objective is to file an application. Once accepted we will be given some development kits that we will use to port our game over to Xbox Live. We will hopefully have this port done at around the same time as our Playstation 4 port with a similar price. Our last port will focus on the Nintendo Switch. Again, the first step will be to get an application filled out. Once we are accepted we hope to have the game ported by April of 2019 because of the more awkward controls and the larger variety of controllers we have to map onto the Switch. However, the price will stay the same at \$5.

Once the game has been ported to every current generation console the next thing on our list will be addressing updates. We still have features on the project backlog that never got implemented into the final project. One feature that we are hoping to implement is the addition of bosses. Due to time constraints, we were never able to add this feature to the game. Currently, we have several ideas for bosses that would add a fun challenge to the game. The first boss type we hope to add would be a large spaceship. It would cover most of the top portion of the screen, have a very large amount of health, and have the ability to shoot at the player from multiple points on the screen simultaneously. The second type of boss would actually be a tandem of smaller ships. This ships would move around faster than standards ships making them harder to

hit. Additionally, they would also take more than one hit to kill to add a little more challenge for the player. Another boss type that we hope to add would be a boss ship that couldn't be damaged like a normal enemy. Instead, different areas of the boss ship would become exposed after the player has survived a set amount of time. This would require that the player be more precise when shooting in order to hit these vulnerable areas on the boss ship. These bosses would hopefully be implemented by June or July of 2019 as we are looking to get the game ported to all the consoles first.

The next feature we also want to add is a leaderboard. This would require us to start and maintain a server to house the leaderboard. This extra hardware would require a place to store the server and a system administrator to maintain it. To keep costs down we could house it in a storage facility for around \$54 a month. A system administrator, on the other hand, is going to be quite expensive, averaging around \$60,440 per year. The leaderboard and all of its accompanying infrastructure would hopefully be filled out around October of 2019 because of all the extra hardware and hiring that we would have to do.

Another feature we hope to add to the game is the addition of difficulty levels. Not only would this be a good pairing with the addition of leaderboards, but would also add replayability to the game. There are several ways in which difficulty could be changed in order to make the game easier or harder. One way to affect the difficulty would be to change the speed of the enemy ships. By making the enemies faster, the player will have less time to eliminate all of them before they make contact and cause the player to lose. Conversely, slower enemies would make the game easier for the player. The next difficulty change would be increasing or decreasing the player's starting health. With more health the player can be hit more times before

losing, and the opposite is true for less health. The next difficulty change would be increasing or decreasing the maximum amount of shots the player can make. Currently, the game is set to allow no more than five shots to be on screen at one time from the player. By lowering this number the game gets harder because the player has to be more accurate when shooting. By increasing this number the game is easier as the player can shoot more often with less consequence for each missed shot.

The last feature we currently have planned would be the addition of power-ups. These power-ups would add more variety to the gameplay and also make the game more interesting. Some power-ups we have currently considered include increasing the player speed, allowing the player to shoot bombs, and giving the player a shield. The power-ups will work in the same way as the health recovery that is in the game. The power-ups will fall from the top of the screen at random intervals and will be represented by different icons to differentiate which ability is being activated. In order to keep the game from becoming too easy, the player will only be able to have one power-up active at a time. Each time a player collects a power-up, they will only be able to use it for a set amount of time.

In addition to new features being added, we will need to make other updates to Gibbonga to present a more polished and enjoyable experience for the players. There are several bugs present in the current build of the game that will need to be ironed out. In addition to existing bugs, there are several updates that need to be added to the game. One update would be adding more levels to the game to provide a longer play experience. Another update would be to change the way in which the game is scored. The player gets a point for every enemy ship that is destroyed in the current build of the game. However, this results in the player having the same

final score each time the game is completed because the same number of enemies always spawn and the player never loses any points. The last part we would like to update is the enemy movement. The game has enemies that move in formation with each other but we would also like to add enemies that move randomly on screen as well. The random moving enemies add a challenge and add more gameplay diversity. We originally had random moving enemies but it proved difficult to have them on screen at the same time as the enemies in formation. We should be able to get them added back into the game and have them interwoven with the enemy fleets given more development time.

Lastly, we would like to collect user feedback in order to determine additional features to be built into the game and fixes to bugs we haven't yet found. They are the reason we are making the game and we really are out to make sure they get the best game possible. We are also going to keep the game and all of its resources open source so other people will be free to mod the game as much as they want. In total, for our first year we are looking around a total cost of about \$382,497 to maintain and update our game for at least a year after launch.

## References

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