Maintenance Plan

bits please

Flat Earth Space Program

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Introduction

BitsPlease, LLC needs to focus its efforts on ensuring that the consumer enjoys Flat Earth Space Program in order to drive sales and keep the company afloat until it can develop and release additional software products. To this end, this report makes several recommendations including:

1. Additional Feature Development
2. Additional User Experience Development
3. Software Marketplace Updates
4. Long Term Development Scope
5. End of Service Support

These recommendations will need to be revisited after the software deploys successfully.

Additional Feature Development

After hearing feedback from our EECS 448 demo, BitsPlease needs to plan to add additional features after deployment to Steam. This is required so BitsPlease, LLC can drive sales after an initial launch and to build the BitsPlease brand. This report lists a laundry list of features with descriptions and estimated development times.

- User Map Editor – Allows any user to create a custom galaxy or universe of celestial bodies from the base official map. This should take ten hours of development time, around an hour for audio effects, and at least five hours of graphical UI work.
- More Accurate Celestial Bodies – Includes the creation of nebula, comets, asteroids, gas giants, different types of stars, and other celestial phenomena. This should take at least twenty hours of development time and graphical work
- Different Materials – Be able to make the spaceship out of different materials that have specific strengths and weaknesses to different situations. This includes atmospheric drag, nebula gas interactions, and tensile strength. Including research time, this will take at least forty hours of development time and a similar time for graphical improvements.

- Multiple Spacecraft Deployed – Allows for different spacecraft, for example a space station and a rocket, to be on the map and user controlled at the same time. This implementation eyes the deployment of gateways or refueling depots. Since this would require some planning as to how the UI needs to be altered to allow for this, it should take no less than forty hours of development time and a few graphical UI hours.
- Resource Mining – Allows for resources of different types to be available throughout the map and allows for the player to be able to set up refineries or other mining operations to exploit those resources. This should be focused on making fuel for deployed spacecraft. This should take little development time, probably around ten hours. Graphical work would also take around ten hours to complete.
- Diverse Rocket Components – The list of rocket and spacecraft components would need to severely increase. This include classical rocket parts like different thruster types as well as of yet unadded parts like solar sails. Depending on how far the group wishes to develop new parts, the company could expect to see fifty or more development hours, fifty or more graphical hours, and ten or more sound engineering hours devoted to this task.
- AI Flight Controller – Allows the computer to plot and execute a route defined by the user either during or before launch. Estimated development time for this feature is twenty hours.

The estimated development hours for the product after launch are therefore at least one hundred ninty hours, but likely more. Luckily, the owners of BitsPlease, LLC are its developers and are not payed per hour. The sweat equity involved with inputting one hundred seventy hours into Flat Earth Space Program after launch is a rather large commitment, but the cost savings to BitsPlease will keep it afloat. The same cannot be said for graphical and audio work that the software still needs. The deployment plan stated that the cost for a graphic artist and audio engineer are twenty dollars an hour each [1]. So, for one hundred thirty hours of graphics and ten hours of audio work adds up to a cost of two thousand, eight hundred dollars.

Additional User Experience Development

BitsPlease will need to build a community around Flat Earth Space Program to maximize sales and handle user experience issues as they come up. To this effect, the company should consider hiring a community manager to take direct control over this task. The hourly rate of such a manager is around fifteen to twenty-five dollars an hour. This report expects this person to be working half-time for at least three months. Therefore, the cost of such a person should range from three thousand six hundred dollars to six thousand dollars. The goal of this person is to achieve three main goals:

- Establish a social media presence and attract followers interested in the software.
- Found and nurture an online community (like at Reddit) for the Flat Earth Space Program.
- Serve as first level support for the community after launch.

The company should expect the community manager to creating engaging social media content, a welcoming and interesting online community, and listen to the concerns and comments of BitsPlease customers. This community building includes, but is not limited to, interesting achievements or challenges involving Flat Earth Space Program. Without a strong community to support the company's efforts, it will likely collapse before launching any additional software.

Software Marketplace Updates

This section is a note that the Steam marketplace has several features that can be used to help the community manager build a community around the software. Specifically, the company can place screenshots and trailers for its software on the page. These trailers must be made no later than launch and will include a collaboration between the graphical artist and sound engineer. It is expected that this will cost an additional eight hundred dollars for the two employees to work twenty hours each. The community manager can take these trailers, screenshots, and other information and oversee the layout and content on the Steam page.

Long Term Development Scope

BitsPlease, LLC should not be releasing new updates to Flat Earth Space Program forever. Eventually, the costs for additional development would outweigh any potential benefit. Therefore, any additional features not added during the Additional Feature Development stage of this plan should consider the following points:

- Time after Launch
- Significance of Labor
- Significance of Impact
- Community Input
- Additional Projects

It is vitally important that when the company moves into a long-term support role for Flat Earth Space Program, it limits the number of new features added into the software. Sales will be flat no matter what occurs, so spending additional labor a year or more after launch should be restricted to bug fixes. Of course, the community may demand or suggest changes, but without incentive to continue development it may be cheaper to allow the community to release mods for features they would like to see in the software. In fact, the community manager should plan to set up a section on the website to allow for mods to be downloaded. Ideas that should be left to community mods include:

- Aliens and their Civilizations
- Weapon Systems
- Economic Systems
- Terraforming

The website, as well as the reddit community page, should have places to report bugs found by the community. These bugs should also be fixed by the development team as time permits. If a bug is found several years after purchase, the company should consider whether it is economically sound to spend time fixing that bug by considering the points above. This report recommends against a bug fix approach that priorities patching the software in perpetuality.

Instead, a flexible approach that considers all the factors, including impact of the bug, time to reproduce the bug, time to fix the bug, time bug was found after launch, and development time all play a role as to whether or not a bug should be patched.

End of Service Support

BitsPlease, LLC, should plan on finishing support for the software around one to two years after software sales have flatlined on Steam. At this point, no additional resources should be spent on upgrading or updating the software. This includes bugs found at this point.

However, by virtue of Flat Earth Space Program being sold on Steam, the company does not have to spend time or money taking down its seller's page for the software. Steam will sell the software for its lifetime, which appears to be a much larger time window than the lifetime of Flat Earth Space Program.

At this point, if the company is not producing additional software, the company should become layoff all employees, sell its assets other than Flat Earth Space Program, and enter dormancy. BitsPlease, LLC should continue to exist to hold the intellectual property of the software and to continue to collect any money that the Steam listing may provide. If the company is producing additional software, it should retain all staff and focus ninety-five percent of its efforts on those new projects.

Conclusions

The maintenance of the software product should cost around thee hundred working hours and around ten thousand dollars of additional investment. If the software was priced at ten dollars a copy, it would only take one thousand customers to support this plan of action.

References

[1] BitsPlease Deployment Plan. Thomas Gartman, et al. 2018.

[2] Glassdoor Social Media Manager Salaries. https://www.glassdoor.com/Salaries/social-media-manager-salary-SRCH_KO0,20.htm Pulled 6 December 2018.