

Sprint Retrospective #6

Computer Games Contextproject 2015-2016
Course TI2806, Delft University of Technology

Group PixelPerfect

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| User story | Task | Responsible | Assignee | Estimated Effort (hours) | Actual Effort (hours) | Done | Pull-Request ID | Notes | Priority | Priority Motivation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|--------------------------|-----------------------|------|------------------------------|----------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| As a stakeholder, an assessor or a contributor, I would like to improve the organisation of the project so that I have a better overview of the tasks that need to be done and things that can be improved. | Write and hand-in Sprint 7 Backlog. (Due 3/6) | Jesse | Everyone | 2 | 2 | yes | N/A | | A | This is an important, graded deliverable document. |
| | Write and hand-in Sprint 6 Retrospective. (Due 3/6) | Jesse | Everyone | 2 | 2 | yes | N/A | | A | This is an important, graded deliverable document. |
| | Update the Architecture Design document. | Jesse | David | 2 | 3 | yes | N/A | | A | This is an important, graded deliverable document. |
| | Update the UML class diagrams to be included in the Architecture Design document. | Jesse | Jesse | 2 | | | | | A | This is an important, graded deliverable document. |
| | Attend Sprint 5 Review Meeting with Teaching Assistents. | Everyone | Everyone | 0.5 | 0.5 | yes | N/A | | A | This meeting is mandatory. Furthermore it allows us to demo our product and gather useful feedback from our stakeholders, so this is crucial. |
| As a developer, I would like to be up to date with the project so that I can decide what requires my attention. | Organize and participate in a Sprint Planning Meeting. (Mon 30/5) | David | Everyone | 1 | 1 | yes | N/A | | A | Very useful way to get everyone on the right track for the sprint, crucial to our development process. |
| | Organize and participate in daily scrum / stand-up meetings every working day of the sprint. | David | Everyone | 1.5 | 1.5 | yes | N/A | | A | Synchronizing collective effort is necessary to prevent redundant effort and make sure everyone works according to plan. |
| As a developer, I would like to make sure my personal knowledge as well as the common understanding amongst the team members of the technology we are dealing with is update, so that I may contribute more effectively and understand what is going on with the product development. | Study the documentation for the jMonkeyEngine for intermediate and advanced users. | Wouter | David | 4 | 3 | yes | N/A | | B | We work with the jMonkeyEngine framework quite extensively, so knowing our way around in it is important. |
| | | | Dmitry | | 2.5 | | | | | |
| | | | Floris | | 0.5 | | | | | |
| | | | Jesse | | 0 | | | | | |
| | | | Wouter | | 3 | | | | | |
| | Study the documentation provided with the library that functions as an interface between the jMonkeyEngine and the Oculus Rift. | David | David | 2 | 0 | no | N/A | | B | Making the game playable with the Oculus is a strict customer's requirement. In order to make this realizable we need to know how to use the library. |
| | | | Dmitry | | 0 | | | | | |
| | | | Floris | | 0 | | | | | |
| | | | Jesse | | 0 | | | | | |
| | | | Wouter | | 0 | | | | | |
| | Get familiar (again) with Blender to prepare for the modelling / rigging / skinning / texture mapping that will have to been done in the upcoming sprints. | Wouter | David | 3 | 1 | yes | | Tried export differently and change meshes so they might import correctly | E | Getting models of good quality in the game would be nice, but is definitely not important. Getting the game to function properly is far more important than aesthetics. |
| | | | Wouter | 3 | 2 | | | | | |
| | | | Jesse | 1 | 0 | | | | | |
| | Study the documentation provided for Android development. | Jesse | David | 2 | 5 | yes | N/A | | A | We still need to implement some new features in the Android application demanding more knowledge of the SDK. These features are crucial to the gameplay, therefore we should continue studying the documentation carefully. |
| | | | Dmitry | | 2 | | | | | |
| | | | Floris | | 2 | | | | | |
| | | | Jesse | | 1 | | | | | |
| | | | Wouter | | 5 | | | | | |
| As a developer, I would like to have the project organized in a clear and structured manner so that I can increase the efficiency of the development process and to increase the maintainability of the software product. | Enter implementation related tasks of the backlog into the GitHub Issue tracker. | Jesse | David | 1 | 1 | yes | N/A | | B | Since we work with GitHub Issues as our main Issue Tracker, it is important that we can track our backlog items there. (It is not crucial because we still have the original backlog as a reference.) |
| | Distribute main package code over more classes to ensure better responsibility / intelligence distribution. | David | Jesse | 3 | 0 | no | | Will be done in Sprint 8, focus is on features for now. | C | The code works this way, and consists mainly of integrations with the frameworks used. Hard to test and get nice and clean, so refactoring it is not that important. |
| As a developer, I want to know what the game will come to look like, so that I can work synchronized with my colleagues, and to ensure a good understanding of the product to allow for a more effective contribution to the product. | Draw sketches / design mockups of the graphical user interface for mobile devices (2D). | Floris | Wouter | 2 | 1 | yes | | Together we layed out some basic guidelines, after that everyone had the freedom to design their own app | C | Not very important because the implementation does not require very careful planning. However it might be useful to synchronize our thoughts on this matter. |
| As a developer or tester, I would like to ensure a certain quality of the delivered code, so that I can meet the customer's non-functional requirements. | Evaluate the report generated by the static analysis tools and fix the issues that have escaped into the repository during the sprint. | Floris | Wouter | 2 | 0 | yes | N/A | Done by jesse | A | Code Quality is a major part of the rubrics, so making sure to eliminate as many static/dynamic errors is of great importance. |
| | At the end of the sprint do a final refactoring before submitting the code. | David | Jesse | 1 | 4 | yes | N/A | | B | Code Quality is a major part of the rubrics, so making sure to eliminate as many static/dynamic errors is of great importance. We consider refactoring slightly less important than testing and debugging, since it does not necessarily help eliminating defects. |
| | At the end of the sprint, check the test coverage and write a new regressive test suite based on the changes and new classes/methods. | Wouter | Dmitry | 7 | 5 | yes | #245 | | A | Code Quality is a major part of the rubrics, so making sure to eliminate as many static/dynamic errors is of great importance. |
| | Performing active code reviews on all pull requests | Floris | David | 4 | 4 | yes | N/A | | A | Code Reviews help to improve code before merging it into the codebase, allow contributors to keep track of the changes made, increase the extent to which code ownership is shared et cetera. It is crucial for guaranteeing the code will meet some quality requirements. |
| | | | Dmitry | | 4 | | | | | |
| | | | Floris | | 4 | | | | | |
| | | | Jesse | | 4 | | | | | |
| | | | Wouter | | 4 | | | | | |
| | Implement: Android test suites / test cases must be implemented to raise test coverage to an acceptable level, mainly the Android Application Test is of importance. | Floris | Dmitry | 5 | 5 | yes | #245 | | A | Testing is a really important part of the process. |
| As a user fulfilling the captain role, I want to be able to see a World Space Indicator, so that I can easily choose a route in a nice visual way. | Implement: update the visualization of the Captain's Log to be a World Space Indicator instead of a Heads Up Display. | Jesse | David | 5 | 7 | yes | #243, #228 | | C | As long as the information is presented (which is the case), it doesn't really matter how exactly it is visualized for now. However it would be nice to require the captain to look around in the ship to monitor statuses: that is why we use the VR headset. Therefore this would make for an interesting enhancement, but not that important. |
| As a user, I would like to have an interesting gameplay experience by being challenged while solving problems in the game, for this is the main reason I play a video game. | Implement: each Event must be parameterized (e.g. Hostile Alien Spaceship has some coordinates and perhaps a type of armor that should be penetrated). | Dmitry | Jesse | 5 | 14 | yes | #225, #218, #217, #213, #210 | | B | Parameterizing Events boosts experience, making solving Events way more interesting. However we already have a lot of tasks that must happen first, so for this week it is not crucial yet. |

| | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|---------------------------------|------------------------------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| As a player fulfilling the role of captain, I want to see a realistic cockpit | Load a good looking mesh and textures of a spaceship cockpit. | David | Wouter | 4 | 5 | no | See note | No PR as it was never merged since it didnt display correctly on the oculus | B | Improving the scene is important as we still have simple blocks and planes, and a better scene will improve the game's experience. |
| As a player fulfilling the role of captain, I want to be able to "click" buttons and interact with things in the cockpit so that I am able to transition to different states in the game. | Implement: relate head tracking with clicking buttons. | Floris | Jesse | 8 | 0 | no | N/A | No, getting the Oculus working with the new scene was already a lot of trouble. Focus went to gameplay features (mobile minigames). | A | Pressing a button and interaction with the environment using the Oculus Rift is really important for the player. This is also vital for the future progress of the game in general. |
| | Implement: create a main menu for use with the VR headset | Jesse | David | 5 | 0 | no | n/a | Wasn't done, due to changes in the master plan. | A | Having a main menu makes it easier to navigate through the game's options. Also allows a settings and/or credits menu to exist. |
| As a player fulfilling the role of crew member, I want to have minigames to play in order to complete events. | Implement: minigame Fire | Floris | David | 10 | 14 | no | n/a | Mini-game was done, but an overhaul is required due to the new networking system. Will be done next sprint. | A | Necessary for the crew members to have something to do besides click a single button. |
| | Implement: minigame Asteroid Impact | Wouter | Floris | 10 | 12 | yes | #26 | | | |
| | Implement: minigame Coffee Boost | Dmitry | Wouter | 10 | | | #29 | | | |
| | Implement: minigame Plasma Leak | Jesse | Dmitry | 10 | 13 | yes | #30 | | | |
| | Implement: minigame Hostile Ship | David | Jesse | 10 | 1 | no | N/A | Focussed on abstract general minigame architecture and networking rather than implementing a specific one. This minigame will be implemented in sprint 7. | | |
| As a developer, I want to be able to have more roles in the game so that the game can be played with 5 players. | Implement: the role of Janitor. | Wouter | Floris | 1 | 1.5 | yes | #19 | | A | Must be implemented so that the mini-game of the Janitor can be executed. |
| As a player fulfilling the role of captain, I want to be able to hear sounds | Implement a way to play audio files in the game | Floris | Wouter | 2 | 2 | yes | #211 | | C | Will improve the players experience but not essential. |
| As a developer, I want to be able to have every player to play a unique role so that I can nicely distribute mini-games. | Fix bug: whenever someone chooses a role, others cannot choose that role. | Dmitry | Floris | 2 | 2.5 | yes | #19 | | C | The bug fix must be done in order to have the game feature to work. But is not vital for running the program. |
| As a player fulfilling the role of crewplayer, I want to be able to click the Fire button so that I can complete the mini-game. | Fix bug: whenever multiple phones want to complete a Fire event, it fails. | David | Floris | 3 | 1 | yes | #20 | | B | Important for actually playing the game together. |
| As a stakeholder, when meeting with the development team I would like them to be well prepared, so the meeting is worth my time. | Prepare the Software Engineering meeting with the Teaching Assistents and professor Bachelli. | David | Everyone | 2 | 2 | yes | n/a | | B | The meetings are important, but do not necessarily require extensive preparation since we are already on schedule. |
| | Prepare the Interaction Design Feedback Session. | David | Everyone | 3 | 3 | yes | n/a | | B | |
| | | | | | | | | | | |
| Unforseen Tasks | Task | Responsible | Assignee | Estimated Effort (hours) | Actual Effort (hours) | Done | Pull-Request ID | Notes | Priority | Priority Motivation |
| As a developer, I don't want the player to cheat in the game and discover glitches so that the game stays consistent and more accesible. | Refactoring the client to be more user friendly and consistent. | N/A | Floris | N/A | 3 | yes | #22, #24 | | A | We want the app to be consistent and user-friendly at all cost. |
| | Do some research to find out why the imported model didn't get displayed correctly. | | Wouter | N/A | 4 | no | N/A | Still dont know what exactly goes wrong. | | |
| | Refactor entire network messaging subsystem on both client and server, to make validation happen only server-side. This improves maintainability and fixed a major bug. | | Jesse | | 4 | yes | #236, client#27 | | | |
| | Implement a debug heads-up display that shows relevant information on triggering. | | David | N/A | 5 | yes | #243, #228 | | A | App must have a good split between debug and player HUD. |
| | Build a new scene by hand, since loaded model did not display correctly | | Wouter | N/A | 3 | yes | #248 | | | |

2 Problems

- a) The static analysis was not performed correctly, meaning that many static errors would exist in pull requests, leading to irritation among team members. The static errors would be fixed by creating a separate pull request, or by bloating every pull request with multiple extra commits which would only fix minor static errors.
- b) Major refactoring occurred late in the sprint. This caused some peoples work to have encounter a lot of merge conflicts, and it also caused people to lose track of what was happening. An example of this was the fire minigame, which was completed by David, but could not be merged on time due to bugs that arose from the changed android refactoring, which took all the messaging and sent it to the server, which broke the implemented functionality. For most people this was fixed by discussing it with the people who did the refactoring, but it came at the price of a lot of lost time.

3 Adjustments

- a) Static analysis must be performed more accurately among all team members before creating a pull request, to prevent the bloating. All members must also verify that their checkstyle and maven tools are correctly configured.
- b) Refactoring should be done only after a clear discussion and approval is gained from all other team members. This ensures that all team members will not have to radically alter their work due to unforeseen refactoring, and ensures that overall the workflow has less wasted time due to work being changed at the last minute.