Report - Field test

Team 12 - Perseus

1. Field test structure

For conducting the main field test, three teams were assembled to test the app. It was conducted in the CW building, with some players walking around on campus to test location accuracy. A special url-link was used, shared via a QR code, that contained a token, which was then stored on the device. Only players with the given token could make an account during the field test, to keep outsiders out of the game during the field test. Players could give feedback through a Google Forms with a link in the settings to easily to access.

No major gamebreaking bugs came up during the field test, and the server was able to handle the load quite well. Figure 1 shows the server stress around the time of the field test, with the peak reached when all teams were logged in concurrently and sending requests to other players.

Other small field tests were conducted with people outside of the tech-field, mainly to test if the UI was intuitive enough for users of different ages and from different technological backgrounds. Note that the results from section 2 are only from the initial field test.

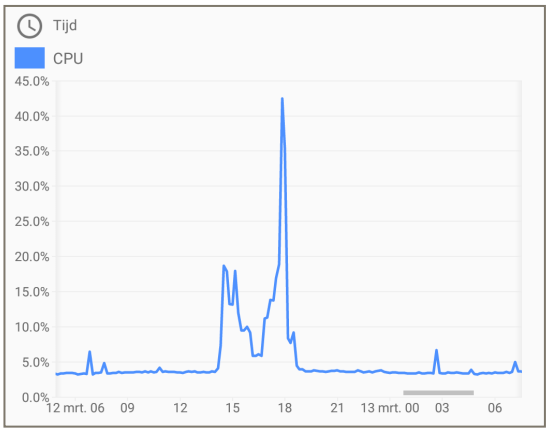

Figure 1: *servers stress during field testing*

2. Google Forms results

User data points out that all users tested the game through Google Chrome on their mobile devices. Location worked correctly for the most part, as seen in figure 2. This shows the results for question: "*How was your location accuracy?*" and "*How accurate were other players displayed?*" (both questions produced the same results). Players could see each other on the in-game map, and their location had an accuracy of around 20 meters, and 50 meters in worst case. However, this could be improved in the near future.

The main problem seemed to be the image capture, where face recognition could take up to a minute. This makes the game experience dramatically different and less enjoyable. Figure 3 shows the duration of the face recognition component that different players experienced.

Other results and comments of the field test state that the UI was pretty intuitive, but a short tutorial is preferred by some to get a head start into the game. The email-verifiation through a code was appreciated and users did not mind the small overhead during sign-up.

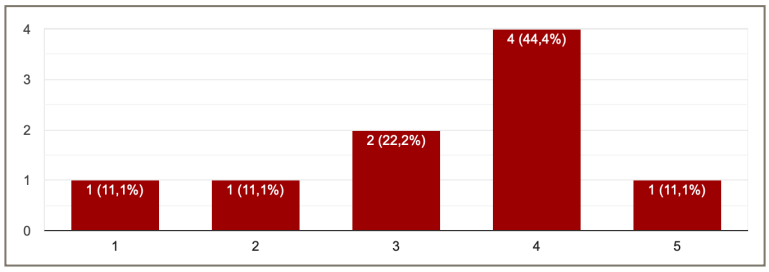

Figure 2: *scoring of location accuracy*

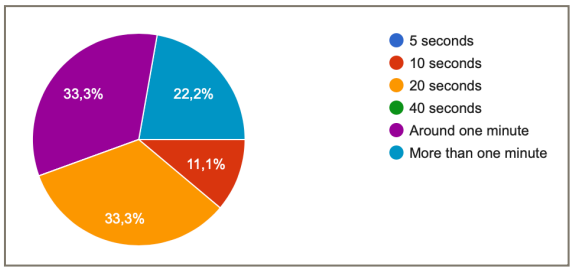

Figure 3: *duration of face detection*

3. Problem handling

We put the problems that arose during the field tests in a pareto chart (figure 4), to see which bugs to tackle first. They are ordered by number of occurences, and each problem is given a weight of severity (e.g. how much they negatively affect the gameplay). The main problem seemed to be the iOS camera, and the duration of face detection. These were assessed by implementing the components to `react-webcam` and `tinyYOLO` respectively, instead of the current libraries `html5-react-component` and `faceAPI.js`.

Other problems and bugs were also addressed quite quickly, and the team is already working on implementing new features, which can then be tested in a second field test in the near future.

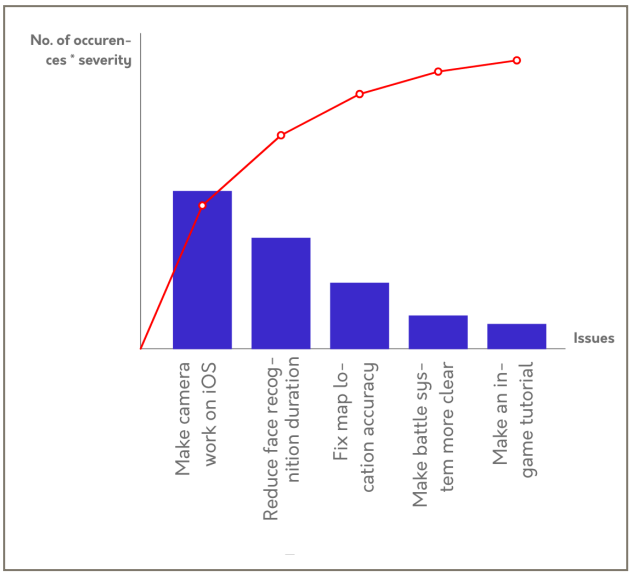

Figure 4: *pareto chart of field test results*