

Usability review of SingularityChess

404 Not Found

Oussama Danba, Erin van der Veen, Kris Elsinga

June 19, 2015

1 Introduction

In this review we will be reviewing the SingularityChess app by Mèh me läppke. Singularity chess is a variant of chess where the middle of the board contains a so called singularity around which the chess pieces move. As a result of the singularity most pieces make curved moves rather than orthogonal moves, this allows pieces like the castle to circle around the singularity to end up on the other side of the board in one turn.

For the purpose of this review, the goal was to test the app on 4 different criteria:

1. Is the user able to efficiently navigate the app?
2. Does the tutorial provide sufficient information about the app and its game to the user?
3. Is it immediately clear to the user what can and cannot be done?
4. Does the app handle multitasking in a predictable way?

2 Scenarios

To test the previously mentioned criteria, the following scenarios were presented to a set of three test subjects.

For future reference, the main menu looks like this:



1. Find out what singularity chess is and what rules apply to this particular form of chess.

This scenario is designed to be very abstract as this makes it easier to observe what a user who has no experience with the app will do. Asking a user to do a very specific thing can often lead to them trying to figure out what path you want them to take, rather than what goal you want them to reach. The goal of this scenario was to test the ease of navigation and the tutorial. Going to the main menu, where you should be when you start up the app, and pressing on the "Information" button, is the perfect solution.

2. Start up a new game.

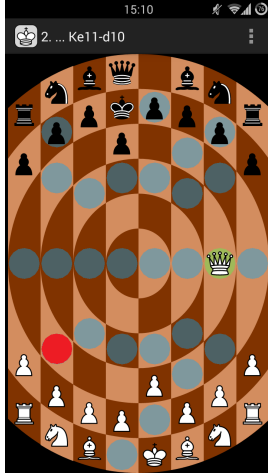
Designed to test the first criterion, this scenario is rather straight forward. Being in the main menu once more and pressing the "New game" button launches a game instance. This scenario is also used to prepare the test subject for the upcoming scenarios.

3. Change the rotation of the chessboard.

After playing a few moves, the users should have noticed that the default rotation of the chessboard is wrong for two people sitting across each other. This is when they are asked to change the rotation of the chessboard to a more suitable one. This scenario was designed to test the first criterion.

4. What path does the queen take to get to this position.

The following position was set up, and the user was asked to show us the path the queen takes to get to the red circle. This scenario was set up to test the third criterion.



5. The user has reached a situation where the game cannot be finished and is thus a draw. How does the user signal to the game that it is a draw?

Intended to test the first criterion. This option should be readily available since it is an important gameplay element.

6. The user is in a hurry and abruptly closes the app. At a later time the user wants to continue playing the game from the same position. How does the user achieve this and does the game preserve the position it was in without the user performing any additional actions?

This scenario is intended to test whether the multitasking in the app has behaviour a user expects from Android apps. Additionally it also tests whether it behaves predictably. Multitasking is a basic feature of Android and users should not have to take additional steps before they can multitask.

3 Method

The testing of the scenarios above was done by three reviewers. One of them handles the recordings and writes down notes about anything they want to ask follow up questions about, another one handles the thinking aloud session and the last one handles the stimulated recall interview. The recordings were used to write this review and the notes were used in the stimulated recall interview.

During the thinking aloud session a test subject is given one of the previously mentioned scenarios which he has to perform. During this session a test subject tells the reviewer what he is thinking when going through the scenarios. If a test subject fails to do so he will be reminded. While describing his thoughts

and his actions it might occur that a test subject isn't able to proceed. If this happens he will be assisted and if necessary he can proceed to the next scenario. Comments from the test subject that are somewhat unclear or warrant further questioning will be written down so that they can be brought up during the stimulated recall interview. When the scenario finishes the next scenario will be given if not all of them have been done yet.

The stimulated recall interview starts by asking the test subject questions about the notes. He is asked why exactly he was not able to do certain tasks or why he did them in a certain way. Additionally the test subject is asked about behaviour the reviewers noticed when the test subject was using the app. While thinking aloud helps to understand why a user does things the way he does them it is often not complete. Very small tasks that a user finds trivial is often not mentioned but does sometimes warrant further questions. At the end the test subject is asked a couple of general questions about the app. These questions are things like "How does the app look?" and "Was the game fun to play?", and are used to get a general impression from the user which is an important aspect as well.

4 Results

The testing of the individual scenarios provided the following results:

Scenario 1. Each of the test subjects was asked if they knew what "castling" and "en passant" were. We used their answers to determine how much experience they had with regular chess. Two of the subjects knew what "castling" was; none of them knew what "en passant" was. All three test subjects started by clicking on the "Information" button which had the following text:

"SingularityChess is a game of chess on a round board. The rules are the same as with regular chess, with a couple of exceptions[sic]. The game will show you where you can and cannot move. Castling is not allowed."

Once there, the first two test subjects understood the text in its entirety. The last asked us what "castling" was. "Wat is rokeren? Ik weet het niet.", translated as "What is castling? I don't know."

In short, all of the test subjects were able to explain what singularity chess is. Although the last seemed more confused after reading the text, than before.

Scenario 2. All of the test subjects had no real issue with this task, showing that the app was easy to navigate. The first scenario confirms this result. "Dan zal ik wel op "Nieuw spel" moeten drukken." which translates to "I guess I'll have to press on "New game".".

Scenario 3. The test subjects had two ways of approaching this problem. The first was to go back to the main menu and go to the settings menu from there. “Nou, dan ga ik naar instellingen.” which translates to “Well, I’ll just go to settings.”. The other, faster, way is pressing the button in the top right of the screen and going to settings from there. “O, dat komt goed, want ik zag daarnet de instellingen. En die zie ik hier bij het menu toetsje ook weer.” which means “O, no problem, because I just saw the settings menu. And I see it’s here in the menu as well.”. From there finding the settings was easy for all test subjects, although the option names were found to be somewhat confusing. One test subject also wanted to turn the confirmation dialog when making a move off but mentioned that it was unclear whether the confirmation dialog was currently active or not.

Scenario 4. None of our test subjects were able to tell us exactly how the queen was able to reach the red circle. “Zo rechtdoor en dan. Nee. . . Nee, dat zou ik je niet kunnen vertellen.” meaning “Straight like this and then. No. . . No, I wouldn’t be able to tell you.”. While the test subjects did understand the rules they had a very hard time knowing why certain moves were allowed because they often did not think about the possibility that a piece could circle around. This is an inherent trait of singularity chess.

Scenario 5. When the users got this far into the review, most of them had already seen the menu in the top right of the screen and finding the draw option was thus mostly trivial. “Dat zag ik hier al gelijkspel. “I concede, weet je zeker dat je gelijk wilt spelen?” Jazeker.” which translates to “I already saw that, right here. “I concede, are you sure you want a draw?” Definitely.”. Something that is worth mentioning is the fact that all three test subjects moved over the “Exit” button before going to the “Draw” button. They expected the “Draw” button to be below the “New game” button instead of the “Exit” button.

Scenario 6. All test subjects were familiar with Android and its multitasking capabilities but still ran into problems with the app. Two of the test subjects did not follow the scenario exactly and pressed back first before going out of the app while the third one immediately left the app. Switching back to the app was no problem for them. The test subjects pressing back first had no problems going back to their positions but the test subject that left immediately came back with his position being reset. He wanted to try it again and realised that the app did not save his progression if he left immediately instead of going back first. This behaviour was not what the test subject expected and resulted in him losing his position.

Stimulated recall interview One of our concerns was whether the test subjects could tell which colour was allowed to move. During the scenarios we asked them at times whether they could tell which colour was allowed to move. All three subjects were not able to tell and did not find out until the stimulated

recall interview that in the top left corner the little crown icon alternates between black and white. One of the test subjects said: “Waarom kom ik hier nu pas achter?” which translated to “Why didn’t I discover this earlier?”. During the stimulated recall interview we also asked about minor issues such as a button with no text while the phone was in Dutch rather than English which was the not implemented bluetooth button. The test subjects mentioned that they found it confusing. One of the test subjects also mentioned “Al die omklappende stukken.” which means “All those turning pieces.” because he was getting frustrated by the board rotation setting. He had changed this previously but this change did not affect anything. Another issue this test subject mentioned was that he could not tell what rotation setting he was on since it displayed “%s” instead of his choice.

The first general question was: “How does the app look?”. All three of the test subjects responded positively saying that app looked good. Another general question was: “Was the game fun to play?”. This resulted in mixed answers. One of the test subjects did not like regular chess and as a result also did not like singularity chess. The other test subjects said they liked the game even though it was a little confusing for them.

5 Conclusion

We have encountered several problems with the app. First and foremost is the usage of the word castling. While most people who download the app know what chess is, those who don’t can be slightly intimidated by the language used in the existing “tutorial” and the fact that the app expects them to know how to play chess. Secondly, there were two small problems uncovered in the settings menu. The first is the confusing names of the board rotation options, the second is the difficulty with which users are able to tell whether the move confirmation is active or inactive. The third problem is the inherent difficulty of understanding the moves of singularity chess, while the app makes an attempt to resolve this by giving markers, its efforts are insufficient. The next problem is the location of the “Draw” button. The order in which the buttons are placed in the menu is confusing for users. Making them often press the “Exit” button when they wanted to draw the game. The fifth issue that was encountered during the review was the multitasking problem where users could not recover their position when they closed the app abruptly. During normal play, users were often found in a position where they didn’t know whose turn it actually was. While all of these issues are relatively minor and do not make the app impractical to use, they can be found to be annoying at times.

6 Suggestions

While the chess part of the app is near perfect, and has no problems. The user interface requires some attention.

The first problem is one that is solved with relative ease, implement an adequate chess tutorial. This will enable inexperienced users to make use of the app, and will tell experienced chess players what the exact differences are between normal and singularity chess. The second problem should be easy to resolve, rewording the text to be less ambiguous should suffice. The third, however, takes a little more effort to resolve. The suggested solution is drawing arrows instead of the circles that are currently drawn. This will enable users to more easily see what moves are and are not possible. The fourth problem is a minor issue which can be resolved by swapping the “Draw” and “Exit” buttons. The multitasking issue has the highest priority when solving issues, a user should never have to worry about his position being lost if he does not carefully close the app by going to the menu first. The suggested solution to this problem is saving the position every time a player makes a move; a player will be able to leave and load the game whenever he wants because the position will be saved when he makes a move rather than when he goes back to the menu. The problem that a player cannot tell what colour is allowed to play can be resolved relatively easily. Since the board is a cut off oval in a rectangle there is black space around the board on each side. This black space can be filled with a colour such as teal on the side of the board that is allowed to play.