

Usability Research by group voorwielaandrijving

Conny Blach, 4329872
Meike Hopman, 3046710
Tiko Huizinga, 4460898
Olivier Schnitzeler, 3004848

May 2015

Contents

1	Introduction	3
1.1	Test Objectives	3
2	Method	4
2.1	Scenario's	4
2.2	Thinking Aloud Testing	4
2.3	Stimulated Recall Interview	4
3	Results	5
4	Conclusion	6
5	Suggestions	7
6	References	8

1 Introduction

The Stuffinder app helps people to organise and find their stuff on different locations. It is possible to specify the name of two locations where your stuff might be. For example one can choose University and Home. Users can add their stuff to the app and specify the location. The location can be changed when you move some of your stuff to the other location.

The usability of the Stuffinder app will be tested and the findings are combined in this report. The test objectives listed below will be used to test the usability of this app. In Section 2 the method we use will be described. Our method consists of three main parts: scenario's, thinking aloud testing and a stimulated recall interview. We start by describing scenario's that are representative for the user goals of the target audience. These scenario's will be executed using thinking aloud testing. A stimulated recall interview is done to reflect on the execution of the scenario's together with the tester. In Section 3 the results of the test are described and in Section 4 a conclusion is deduced from these results. Section 5 gives an overview of suggestions for further development. The suggestions are based on problems encountered during the test. The problems are classified according to their importance with respect to further development of the app. Four categories are distinguished: show-stoppers, big issues, small issues and cosmetic issues.

1.1 Test Objectives

The test is based on five test objectives known as Withney Quesenbery's 5Es, which are explained below. (W. Quesenbery, 2004)

1. Effective
Is the software useful? Does it help users achieve their goals accurately?
2. Efficient
Can the tasks be done in an acceptable amount of time and/or clicks? Without any assistance.
3. Engaging
How pleasant, satisfying, or interesting is the interface to use?
4. Error tolerant
How well does the app prevent errors and help users recover from any errors that do occur?
5. Easy to learn
Can users get started right away? Does their ability to do tasks improve as they become familiar with the system? Does the system architecture match their mental model for the way they expect the system to work?

Withney Quesenbery points out that these five dimensions of usability are not equally important in every product and for every user. For users of the Stuffinder app the dimensions efficient, effective and engaging are more important than the others. Since the app is only useful when it is effective and the goals can be achieved efficiently in an appealing interface, otherwise users will use other methods (e.g. notes) to remember where their things are. The other dimensions will also be taken into account in this test to give a complete overview the 5Es.

2 Method

An independent test person, who has never seen the app before, is used to perform the test. Four scenario's are declared before the test starts. The test person gets one scenario after another, which he has to solve. Thinking aloud testing is used to make it easier to observe the test person and analyse his thoughts. During the test, audio records are made and notes are taken on what the tester says and does. These data are used to analyse the test later on. After the four scenario's are performed, a stimulated recall is prepared based on the analysis of the thinking aloud testing. A description will follow of the three parts of our test method: scenario's, thinking aloud testing and stimulated recall interview.

2.1 Scenario's

The test is based on the following scenario's. The scenario's are typical actions users want to perform, so they are representative for the user goals of the target audience. The scenario's cover different aspects of the app, to cover as much of the usability as possible. Furthermore, these scenario's are chosen to cover all test objectives that were stated in Section 1.1.

- Scenario 1: use the app to remember that your Glasses are at Home and your Laptop and Phone are at University
- Scenario 2: use the app to rearrange your stuff: you take your Phone Home from University
- Scenario 3: change the name of an item which is already stored at University
- Scenario 4: delete all items which are stored in the app

2.2 Thinking Aloud Testing

The "Think-Aloud Protocol" is a method to gather information from a tester for a product. The tester is supposed to say his thoughts out loud, while testing some specific scenario's, which are given by the reviewers. During the test, everything the tester says and does is recorded and analysed later on. The information, which is gathered from the test, is used to improve the product and make it more user friendly.

2.3 Stimulated Recall Interview

After recording someone who is testing the app, as much information is extracted from the recording as possible. Without the test person being present a few questions are formulated for a stimulated recall interview. Those questions refer to the thinking aloud testing and are about why the test person acted as he did or what his opinion on a certain aspect of the app is. The questions of the stimulated recall interview are listed below.

1. What was your first impression of the app?
2. Was it easy to figure out how to complete the tasks of the different scenario's? And after you had figured that out, were you able to complete the task quickly?
3. What is your opinion on the interface of the app?
4. Would you use the app? Explain why.
5. Was it easy to recover from errors?
6. Did it become easier to use the app as soon as you were familiar with it?

3 Results

The results of the test are described for each of the five test objectives. The results are based on the analysis of the recording and the notes during the thinking aloud testing and the stimulated recall interview. References to the four scenario's and the audio recordings are made where applicable.

1. Effective

During the execution of the tasks in scenario 3 the test person tried to modify the name of the Laptop. He clicked on the suitcase of the Laptop, but he was redirected to the modification screen of the Glasses. At first the test person thought he clicked on the wrong suitcase, so he went back to the overview of suitcases and retried it. The second time he found out that it was not possible to change the name of the Laptop, since the app would always lead him to the modification screen of the Glasses.

The test person would not use the app himself. The reason was not about the way the app was built, but about the fact that the test person just is not interested in using this kind of functionality. Most of the time he knows where his things are and if not, he does not see that as a big problem.

2. Efficient

When the test person got the instruction to move his Phone from Home to University, he first went to the screen where all his items where listed. He tried editing the item Phone but when he pushed the radio button, which was checked on 'Home', to 'University', suddenly both buttons where checked. That should not have happened. Because the test person did not know if it was saved correctly, he tried another method to move his Phone. The other method to move stuff is by swiping: the main way of rearranging stuff on the app. In the stimulated recall interview he told us that he found it cumbersome to move all the items to the right place while he just wanted to move his Phone.

3. Engaging

When we asked the test person to execute Scenario 1, the first thing he said was "What am I doing? What is going on?". In the interview he mentioned that there were too many buttons and he did not know what they meant. He needed 30 seconds before he even found out where to add new items. When he added the first item he went to the overview of the items and he said: "What is the location? I believe it does not have a location, it is just represented by a white suitcase." It also was not clear for him that he could change the name of the locations, he only found that out during the second scenario. During the stimulated recall interview the test person indicated that the colors where too pale.

4. Error tolerant

During the execution of the tasks in scenario 1 the test person accidentally checked the wrong radio button while choosing a location for his stuff. The test person wanted to correct his mistake, but found out that it is not possible to uncheck a radio button, so he ended up with both radio buttons checked. In scenario 4 the test person found out that pressing only one button would remove the entire content of the app; without any warning message.

During the stimulated recall interview the test person indicated that in general it was easy to correct mistakes, except for the button that deletes all items. Other mistakes could easily be corrected by the modification functionality that is present for the name of items and locations. This enables users to correct their typo's.

5. Easy to learn

During the test the test person seemed to become more familiar with the app. The test person needed less time to figure out which buttons he needed to use to perform the tasks. The user stated that reading the "Help"-page was very useful: "The page is not easy to find, but the content is good". It was not easy to find for the test person, how to change the names of the locations. This was achieved by pushing random buttons to look for this option.

4 Conclusion

The test of the Stuffinder app is based on Whitney Quesenbery's 5Es: Effective, Efficient, Engaging, Error tolerant and Easy to learn. Efficient, effective and engaging are the most important dimensions for users of the Stuffinder app, but a conclusion is drawn on all five dimensions.

Effective

The Stuffinder app is useful, since the main functionality of remembering on which location your things are is implemented correctly. Some remarks can be placed on how accurately this goal is reached, since some bugs were found during the test. Modifying the name of a thing might lead to the modification of a different thing than the one clicked on.

Efficient

Most tasks can be done in an acceptable amount of time and/or clicks; without any assistance. The toolbar has a clear overview of all menu options. There should also be an option to only rearrange one item with the swipe method instead of all items, because this happens quite often, when you take some items to the other place.

Engaging

Although the app has a help function, the test person was overwhelmed by the app in the beginning. It would be better, if the help screen is shown at the first start up of the app, such that the user can understand the functions of all the buttons shown in the toolbar above.

It is not clear what the color of the suitcases mean. Our test person thought that the white suitcases still did not have a location.

Error tolerant

The app gives the user almost always an option to make his mistakes undone. So, for example, if the user gives an item or a location a wrong name, he can easily change it to the name he wants. If the user arranges one item with the swipe method to the wrong location, he has to rearrange all items. An option to just rearrange one item would be good. Also, if the user accidentally deletes all items, there is no option to undo it. A warning before everything is deleted would be helpful.

Easy to learn

Although there is a help page, it was not easy to finish all the scenario's we gave the test person. The test person rather pressed on random buttons to find the option or the function he was looking for. Also the help page was found randomly by the test person. If the help page would be shown at the first start up of the app, the users will learn all the buttons in the toolbar much faster. The help page could also find more easily, if there is a hint at the start up.

5 Suggestions

Suggestions will be given in the form of a problem classification. The problems found during the test are classified according to their importance with respect to the development of the application. Four categories are distinguished: show-stoppers, big issues, small issues and cosmetic issues. Show-stoppers are clearly unacceptable. Big issues have a significant impact on usability. Small issues have lower priority, but do have to be mentioned. Cosmetic issues only have to be solved when it does not take too much effort and time. An overview of the problem classification is given below.

Show-stoppers

- When choosing a location for some stuff, the radio buttons can never be unchecked after they are checked.
- Modifying the name of one of the things will modify the name of a different thing than the one clicked on.

Big issues

- Pressing only one button can (accidentally) remove the entire content of the app; without any warning message.

Small issues

- The "Help"-page is not easy to find, even though the content is good.
- When rearranging one item with the swipe method, the user can only rearrange ALL items.

Cosmetic issues

- The colors are not appealing: a bit too pale.

6 References

W. Quesenbery (2004). Balancing the 5Es: Usability. *Cutter IT Journal*: <http://www.wqusability.com/articles/5es-citj0204.pdf>.