

COMPSCI 345 / SOFTENG 350

Assignment 1: Usability Evaluation

Worth 10% of your final grade

This assignment is due by 4:00pm on Friday 31 March 2017

This is an individual assignment

Aims

The aim of this project is to give you experience in performing a heuristic evaluation of an app, and then planning a usability test for it.

Background

Your task is to evaluate a mobile application (*AT Metro Track My Bus*). Mobile apps are hugely popular, but need a different style of interaction to what would be acceptable on a desktop or laptop machine. We will look to gain experience with that style of interaction in this assignment.



The *AT Metro Track My Bus* app is available for free download in both the Apple iPhone App Store and the Google Play Store. Search for 'AT Metro Track My Bus' to find the app, which will have an icon as shown above. If you do not have your own smartphone we would recommend looking to borrow one from a friend or family member for an hour or two in the first instance. If you have no possibility of borrowing a smartphone then please contact the assignment tutor Md Athar Imtiaz [mimt087@aucklanduni.ac.nz] who will be able to arrange for you to borrow a phone for this assignment.

There are two major parts to this assignment:

1. Evaluating the functionality and usability of the app. To do this you'll identify the functions offered, map out all of the possible interactions for one function of the app, and perform a usability evaluation.
2. Planning (but not conducting) a usability study which could be used to understand how usable a particular population find the app.

Note

We expect this assignment to be presented to a professional standard. You must use consistent formatting, good grammar and spelling, and a professional presentation style. We expect the assignment to be completed individually and periodically check for plagiarism in courses.

Submit

An electronic copy of your report as one pdf file to Canvas by 4:00pm on Friday 31 March. Please name your PDF document using your UPI (e.g., ramo001.pdf).

Questions

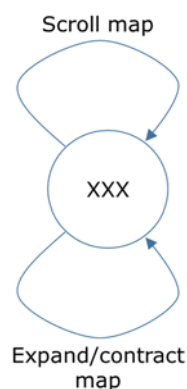
Direct questions about this assignment to the class piazza discussion for Assignment 1 (accessible via Canvas).

You should plan to spend 15 hours on this assignment.

Part One: Evaluating the app

To understand how the app works you need to provide three types of information that can be gathered by using the app and trying out all the functionality on offer.

1. Investigate the functionality of the device. While its aim is to help users identify when a bus is getting close to a stop, what functions have been implemented to achieve this?
List and briefly describe all of the functions of the app e.g.,
Delete a stop – remove the indicated stop from the list of monitored stops
2. Model the flow of control and interactions for the functionality of adding a new stop with a State Transition Network (STN) diagram (see lecture 3). Treat all the finger manipulations used to scroll or expand/contract the map as a single transition, see the example below:



Note: you must use the diagram notation from the lecture – this is taken from Dix et al. pages 548-556 (available in Canvas Readings).

Hint: PowerPoint diagramming is as good as any for preparing your STN.

3. Perform a heuristic evaluation using Nielsen's usability heuristics (see lecture 5 and <http://www.nngroup.com/articles/ten-usability-heuristics/>). Note that some heuristics may not be applicable for this app, note those as N/A. Don't write more than 1,000 words for this part, so one or two paragraphs are sufficient for each of the 10 heuristics.

Part Two: A Usability Test Plan

Write a usability test plan for the app using the template below for what you understand to be the target audience of the app. There is no set word count for this, but a good test plan should come in at around 1,000 words. You are NOT to undertake this testing (that would require ethics approval!), you are ONLY preparing the plan.

Usability Test Plan Template

Product under test

Describe the app and its core functionality.

Test Objectives

Describe the objectives of the usability test.

Participants Required

Describe the number of participants to be recruited and the attributes of the participants you would like to recruit.

Tasks to Undertake

Describe the tasks you will ask participants to perform.

Data Collection

Describe specifically what data you want to collect about each participant and each task. If you choose to have a questionnaire, include it in this section.

Test Procedure

Provide the scripted step-by-step instructions for running the test (imagine someone else will be running the tests for you).

Analysis

Describe how the data collected will be analysed.

Results

Describe how the results will be reported.

Marking Schedule

		Marks																
Part 1: Evaluating the app		40																
Functionality																		
Complete	Have all the functions been identified?	8																
Accurate	Is the scope of each function accurately described?	2																
State Transition Network																		
Accuracy	Are all the states and transitions identified?	12																
Correct syntax	Has the syntax described in lectures been used?	3																
Heuristic evaluation	Have all 10 heuristics been considered and assessed where applicable?	15																
Part 2: Usability test plan		40																
Completeness	Will the test plan meet the objectives described and deliver a valid result? <table><tr><td>Product under test</td><td>2</td></tr><tr><td>Test objectives</td><td>3</td></tr><tr><td>Participants required</td><td>5</td></tr><tr><td>Tasks to undertake</td><td>5</td></tr><tr><td>Data collection</td><td>5</td></tr><tr><td>Test procedure</td><td>5</td></tr><tr><td>Analysis</td><td>5</td></tr><tr><td>Results</td><td>5</td></tr></table>	Product under test	2	Test objectives	3	Participants required	5	Tasks to undertake	5	Data collection	5	Test procedure	5	Analysis	5	Results	5	35
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Results	5																	
Report quality	Is the report well presented, formatted nicely, and with correct spelling and grammar?	5																