

**ECE 1778 - Creativity and Programming for Mobile Devices**  
**January 2012**  
**Assignment #A1, for Appers**

**Connecting Your Field to the Mobile Devices Field**

The goal of this assignment is for you to gain familiarity with how your field has already leveraged the new capabilities of mobile devices, and to stimulate your thinking about new applications that will either support research in your field, or advance it in some other way.

**1 Describe Your Field**

Write a 250-word description of the goals of your field of research and endeavour, accessibly written for a layperson. If you have an active research activity within that field, describe it as well. You should assume that the reader is not in your field, and so does not know any of the field-specific terms. You can assume that the reader has undergraduate-level understanding of mathematics and computer systems and programming.

The purpose of this work is to prepare you to describe your field to the programmers in the course, in a way that they can understand. This document is due January 17<sup>th</sup>.

**2 Case Study**

Mobile devices have now been available for several years, and the app stores now contain many interesting ideas, undoubtedly many in your field. Go to the App Stores and find the best 5 applications in your field, and give a brief description of each. (100 words each). Choose one of them, preferably one that has some decent complexity to it, including perhaps a backing website, and acquire it, and use it. [This assumes you have a phone you can run it on; talk to the instructor or the TAs if this is not the case, and we will help]. Write a case study of the app, maximum of 1000 words, not including pictures. The case study should contain the following sections:

1. Describe the motivation and goal of the app.
2. Say why you chose this app (why you thought it was good).
3. Describe how it works – using screen shots (for Android you may just have to take a picture of the phone) and a description of what is going on under the hood. Be sure to identify which sensors are being used in the app, and identify how they are being used. Sensors include the microphone, camera, accelerometer, gyroscope, proximity detector, etc.
4. Give 3 suggestions on how the app could be improved.

So, the total word count is  $5 \times 100 + 1000 = 1500$ . Please count the words in your document (not including the cover page) and put the total on the cover page. There will

be a penalty of 1 mark off for every 10 words over the limit. Please calculate the penalty as well, and put that on the cover page.

### **3 To Hand In**

For Part 1: Due by January 17<sup>th</sup>, before class begins. Bring a printed version to class and upload a PDF version to the Blackboard Portal.

For Parts 2: Due January 23<sup>rd</sup>, 6pm. Marked out of 10, 0.5 marks off every hour late.  
What to submit: A PDF document to the Blackboard Portal.