Mobile and Ubiquitous Computing: Exercise 1

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The Task

Get me coffee!

Write an application which will notify me when I walk close to the Costa in University Centre or the Costa in the Music department.

The broad architecture should be a service which uses the location infrastructure, and an application which displays how far away my latte is.

The service should not have hardwired positions contained in it. When the application starts, it passes to the service a set of locations. The service continuously calculates the distance from each of those locations, and when within 25m it notifies the application. Otherwise the service broadcasts the location every sixty seconds so that the application can display it.

Resources

You will need a working Android development environment of your choice, either the command-line tools I have shown in the lectures or Eclipse if you would rather. You can target any Android device you like, either a simulator or a piece of real hardware, but if you do not have a phone, please tell me.

Submission

Please use canvas to submit a `zip` or `tar` of a project ready to build with "ant debug". I should be able to unpack your submission, `cd` to the top of it and type "ant debug" to build a fresh binary (I will obviously have to change the properties files).

Marking

- 10 marks for basic functionality. source code.

- 5 marks for an efficient location mechanism which avoids draining the battery.

- 5 marks for accuracy.

I will mark generously if anything else interesting is submitted (maps, compasses, whatever).

Deadline

Please submit by noon, Monday 10 March. If it isn't raining, we will take a walk to University Centre on Tuesday.