Distributed and Mobile Systems

Assignment Two

Due Friday 1st May 2015

The purpose of this assignment is to develop a useful Java ME or Android mobile application that incorporates at least two of messaging, Bluetooth, location-based services, and near field communication. You may work in a group of TWO or THREE.

The system should include the following components:

Project Documentation which is a document that describes the software project, its components and features, and brief user documentation so the project can be installed and tested, it should include a UML diagram that shows how the features of the project have been integrated into a useful application in a relevant way. **(10 marks)**

User Interface and Useful Application marks here for user interface and controlling the application making use of touch events, UI components, intents, multiple Activity launching, graphics and overall usefulness of the application. **(10 marks)**

The project should incorporate at least two of the following four services (30 marks maximum + 5 bonus (for impressive features or features not covered in class)):

Messaging Service which utilizes SMS and/or MMS messaging between mobile devices, uses HTTP to communicate with a server, has a servlet that processes the HTTP requests, and session tracking of clients **(15 marks)**

Bluetooth Service where a Bluetooth client locates the Bluetooth servers within range that offer the sought service, allows the user to determine which server to utilize, information is communicated via Bluetooth in both directions between client and server, **(15 marks)**

Location-based Service where a mobile device obtains current location information and user information, uses HTTP to communicate with a server, has a servlet that communicates with an SQL database, HTTP responses are customized for the device location, **(15 marks)**

Near Field Communication where a mobile device can write to and read from an NDEF tag, payment or ticketing information communicated, and information is persisted on device. **(15 marks)**