Embedded project proposal: Survey App

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I. Requirements

- Location based on WiFi fingerprinting
- Absolute (x,y,[y]) in a reference ”coordinate” system
- Semantic positioning (e.g., HS1, ...)
- Cooperation of more than one smart watch

II. Description

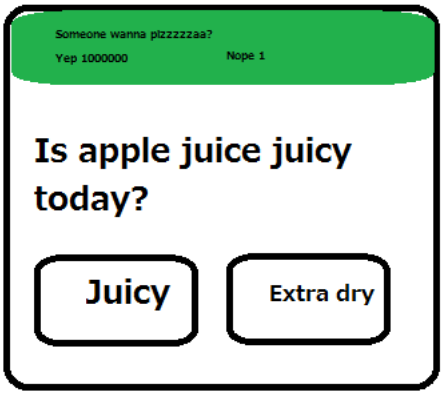
A user is able to start a survey on his smartwatch. Other smartwatch users with the same application near the survey's creating location are able to respond with one answer. The answers are predefined by the creator and are, besides the textual difference, different by color.

III. Purpose

Asking questions to people around to gather information. E.g. The teacher would be able to ask if the students understood the explained topic, or before ordering pizza to generate a collective order. Companies would be able to start surveys about their service or product while people are shopping or eating at their restaurant.

IV. GUI description

The default main interface consists of a white background with a light semi-transparent header. This header contains a status bar which indicates if the application is running correctly and the result of the last survey. A label on the top right corner shows the user count in the near field. On the bottom field a button is provided to start a survey. IV-A



A. Creating a survey

Once a press on the ”create survey” button has been performed, a new activity gains the focus and a survey can be created. For the creating process 3 textboxes are provided. One for the question itself and two for the possible answers. To send the survey one click on the button on the bottom ”send survey” is needed.

B. Answer a survey

On the main screen the white blank space will replaced by the question created. Based on the user, creator or survey attending user, the bottom of the page provides two buttons to answer the question or two textBoxes which shows the current state of the survey. (Number of answers)

V. Technical description

With the provided message queue server and a unique identifier users are able to push and receive data from the server. Based on the project assignment 1.a location matching via. RSSI fingerprinting can be done. With that said, MQS subscriber are able to filter surveys based on their location.