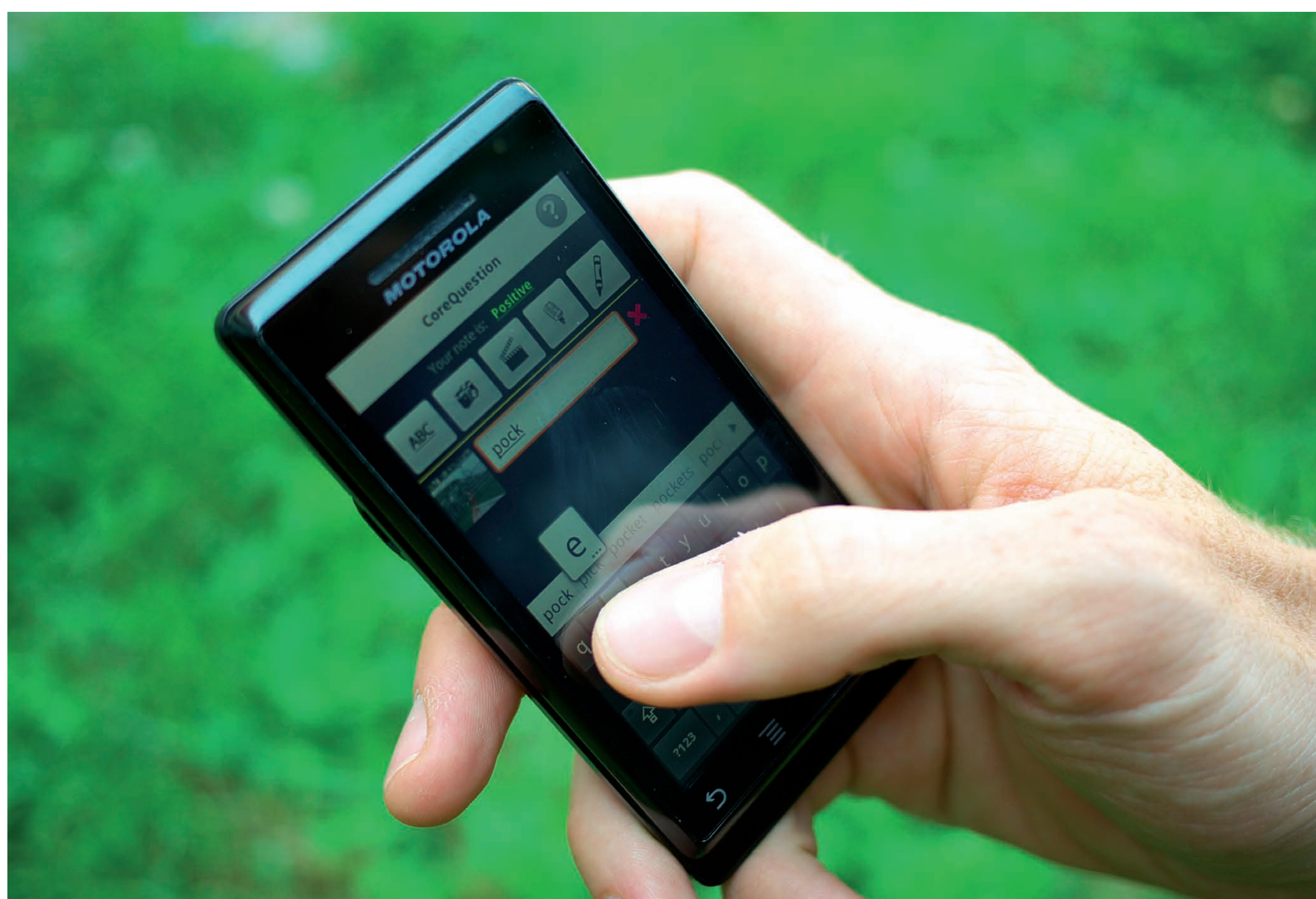# PocketBee
a multi-modal diary for field research

Pocket Bee is a multi-modal diary tool that allows researchers to remotely collect rich and in-depth data in the field. Based on the Android smart phone platform, multiple modalities allow participants to compose notes in the most appropriate and convenient way. Instant network synchronization allows researchers to view and analyze the data on-the-fly while also being able to create new tasks or questionnaires during an ongoing study. These can also be linked to certain trigger events, such as time and date
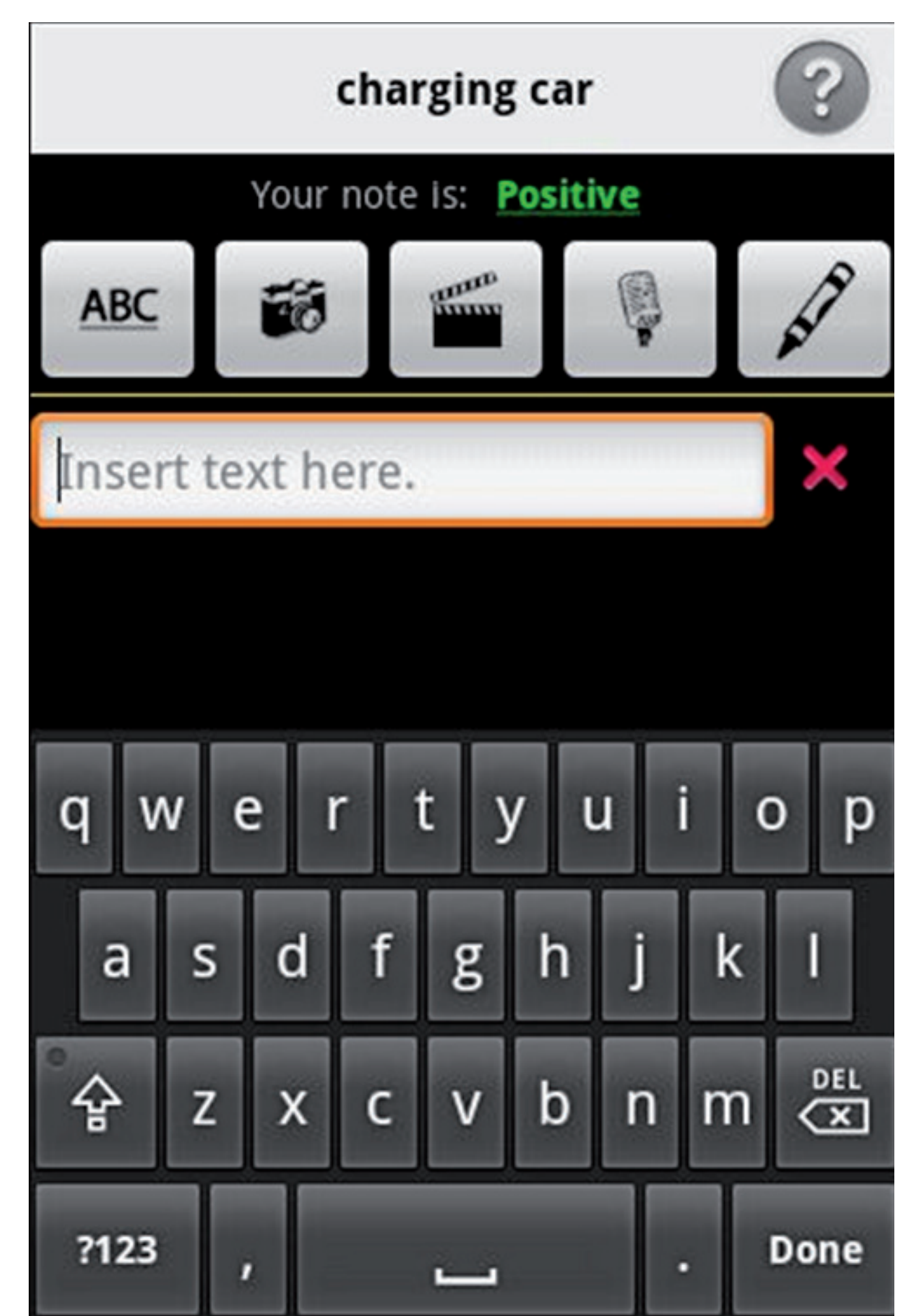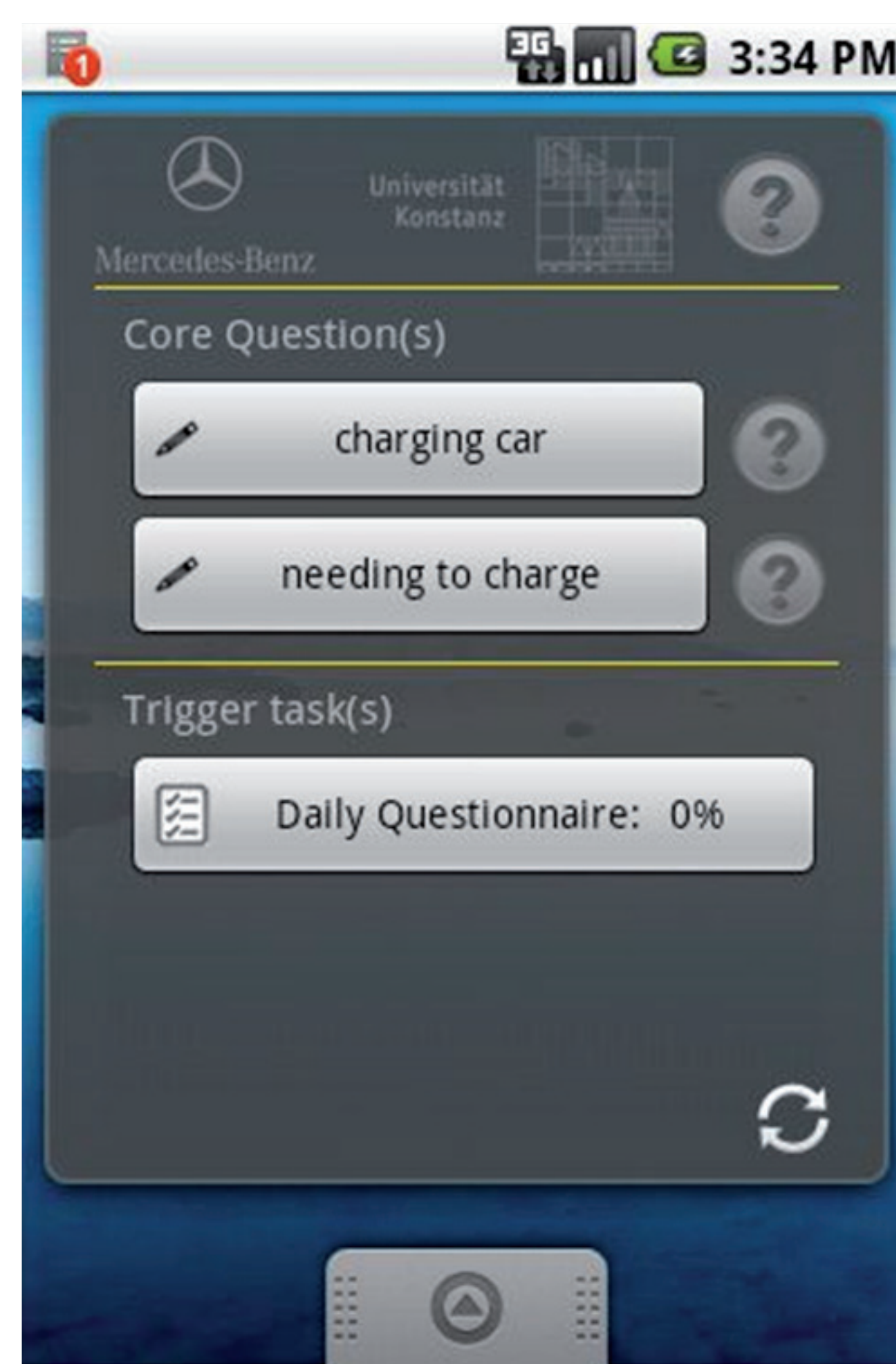
Key features of PocketBee:
- multiple modalities for data recording can be combined: audio, video, photo, drawing, text
- core questions as cognitive triggers for data recording
- automatic synchronization with server
- trigger concept allows also ESM-like functionality
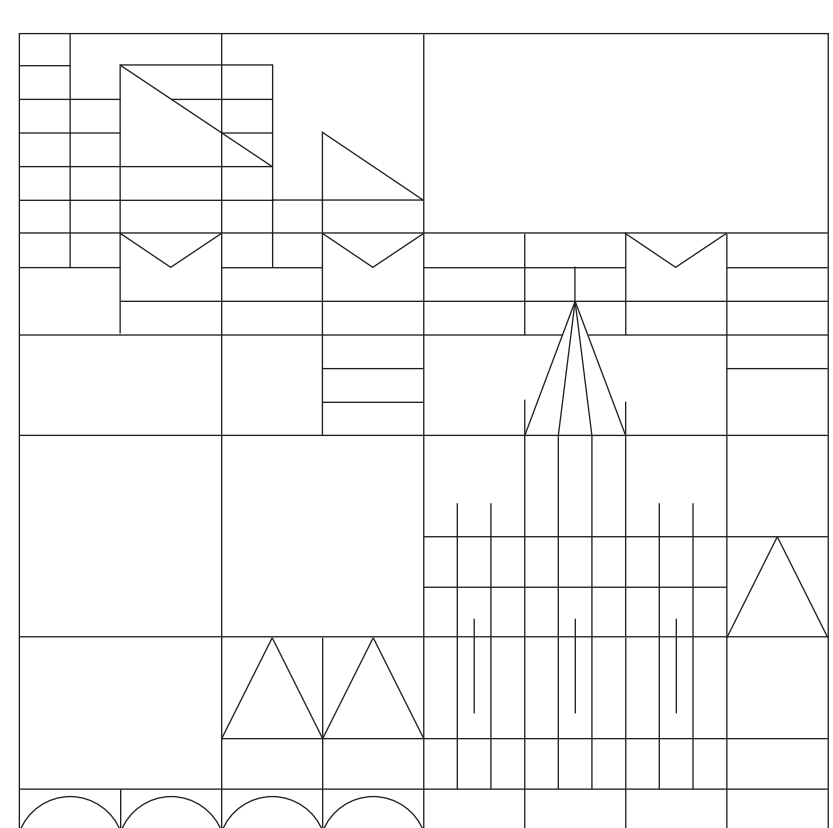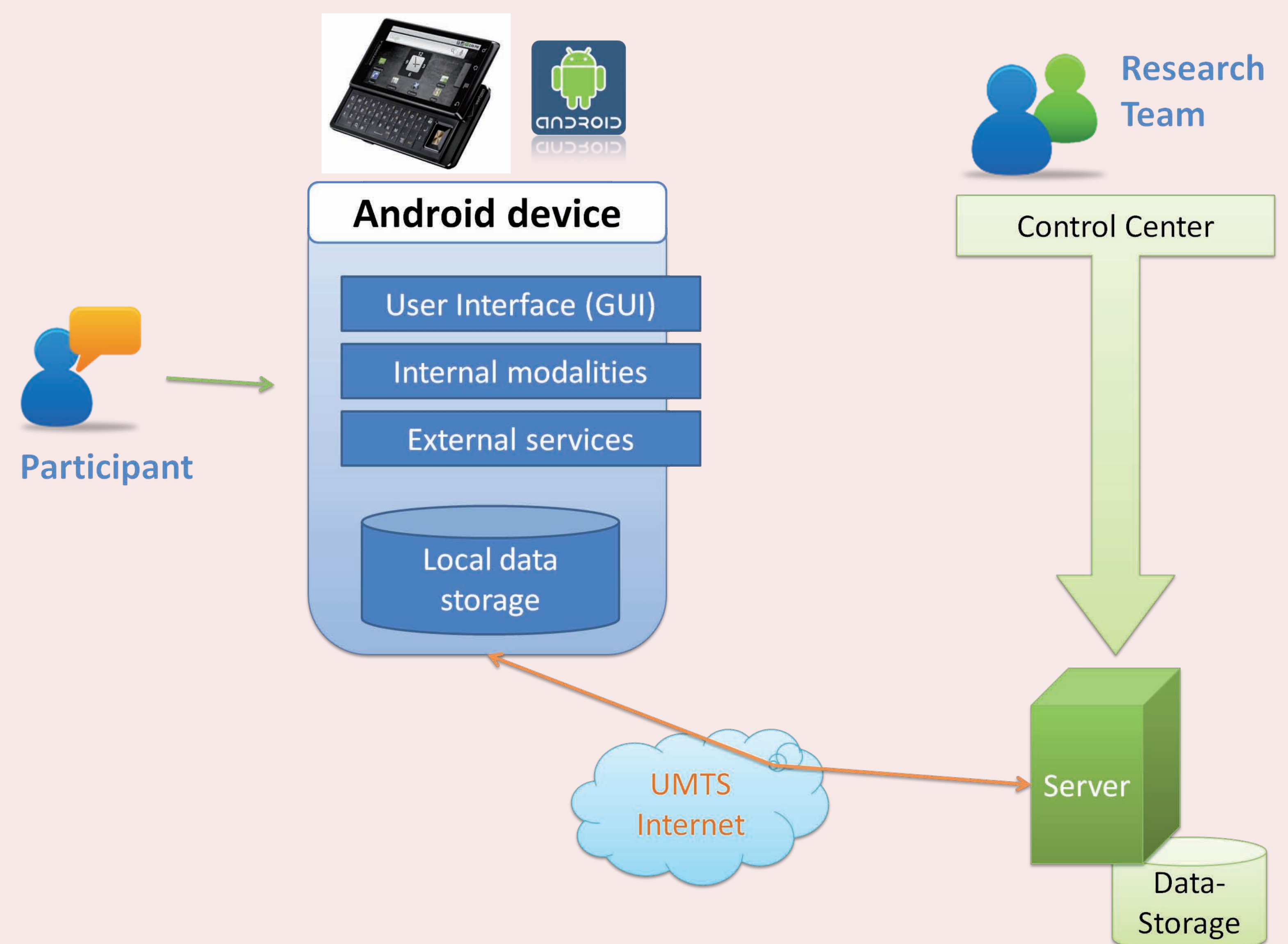- compatible with Android OS

Research Activities

Our research does not only focus on an easy to use tool. Instead, we are interested in finding out how PocketBee can be utilized to maintain motivation, improve compliance, and reduce drop-out rates of diary studies by establishing a closer bonding between researcher and participant. We are also exploring different UI concepts to make the data-gathering process as convenient and efficient as possible.

The PocketBee system architecture

Pocket Bee is a distributed system including a mobile device (the bee), a server (the hive), and a control center for remote access to the server. The researcher can both setup a study and manage multiple projects within the control center without having to touch the mobile device and during runtime of the study. The client automatically asks for any updates available (e.g. new or modified tasks) and the server responds accordingly. The server hosts a MySQL database and a web server. All communications are handled via PHP scripts. Currently we support time-based triggers for tasks and questionnaires which can be specified in the control center similar to setting up events in a calendar application (e.g. daily questionnaire from 6:00 to 9:00). Thereby, PocketBee allows the researcher nearly endless possibilities to create ESM-like events and triggers for both automatic as well as manual data gathering.

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