Mobile system to support collaborative ethnography

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The methods of field research are useful in several aspects of the assessment of human-computer interaction (HCI) and the interaction of working teams in organizations. These aspects include, among others, the collection of requirements of users/systems and the analysis of the activity of workers in complex environments, being helpful for the extraction of tacit knowledge and for the group's practical skill. Aiming to elicit this team knowledge [1], methods of analysis of cognitive work (Cognitive Task Analysis or CTA), like an interview, an observation and/or ethnography, can be used.

This work will present the prototype of a mobile application for collaborative ethnography. The proposed prototype has the intent to expand the use of mobile collaborative applications in these studies.

With the increasing complexity of organizational tasks, whose outcome is a work specialization, it becomes evident that people do not work alone by themselves, rather in multidisciplinary work teams [2]. It is perceived that, in addition to the need to observe these teams, the act of observation in itself must be performed by a group of analysts.

The development of the prototype of the mobile application for a collaborative ethnography was performed within a Xcode programming environment, for iOS devices (iPhone/iPad).

In the preparation stage, the users can conduct the registering of actors, artifacts and terminologies. The terminologies will be part of a glossary which may be consulted during the ethnographic study. The glossary is the element that observers can use in order to identify terms and jargon commonly used in complex work environments. The actors and artifacts will be used to quickly register the interactions, during the capture stage of the field study.

Figure 1 shows the main screen of the application. The main screen enlists all the ethnographies already carried out, whereas new ethnographies can be created by touching the add (+) button at the top of the screen.
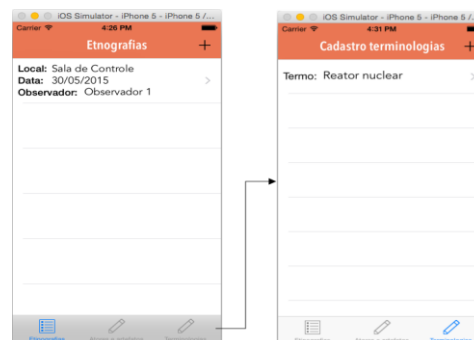

Figure 1. Main screen and registration screen of terminologies.

This button gives access to the screen of creation and registration of field studies (Figure 2), where one can register study-related information (name of the observer, location and date). On this screen, one can also add new notes and interactions by tapping the corresponding button, already during the capture stage. All notes and interactions are captured with their recording time. And it is also possible to send emails with ethnography data.

Figure 2. Screen of ethnographic study and communication.

The use of mobile devices such as the *groupware* tool to support collaborative ethnography should streamline the collaboration and interaction before, during and after data collection, in order to identify the cognitive requirements with less effort.

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