Preparing Students in Africa for Social Entrepreneurship in Mobile Technology: Current and Future Efforts in Senegal

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Africa is the fastest growing mobile phone market in the world. Mobile phone subscribers have risen to more than 200 millions. The role of mobile phones is however still limited by the number and scope of available mobile phone applications – in particular applications specific to the needs of the African market.

An important question to be asked is: Who will develop the mobile phone applications that will have a social impact on the populations of Africa? We believe that African students will play a crucial role but need to be prepared appropriately as software developers/engineers and entrepreneurs to be actors in this promising field. There are currently very few initiatives that focus on exposing African students to mobile technologies and most of them target English-speaking countries (e.g., EPROM http://eprom.mit.edu).

The University of Thiès and the National Council of Negro Women (NCNW) in Senegal (a francophone country) and Pace University and Stony Brook University in the US are currently collaborating together to enable undergraduate computer science students of the University of Thiès to work together on the development of mobile phone applications that will empower women owning traditional businesses in Senegal. In parallel, the students will be educated on the potential and procedures for creating start-ups to commercialize their products.

A model called ICTESen (Information and Communication Technologies Entrepreneurship for Senegal) was established to support these goals. It is based on:

1. Creating a community of students, faculty, practitioners and local associations.
2. Providing the students with skills for mobile application development and entrepreneurship.
3. Applying the acquired knowledge to work on “real projects” for “real clients” to develop “real solutions”.
4. Deploying the solutions to trained clients.
5. Transferring the acquired skills to the creation of start-ups.

The ICTESen model will be implemented at a bootcamp that will take place at the University of Thiès in January 2009. During the bootcamp, the students will develop mobile applications that will empower women owning traditional businesses in Senegal.
phone applications for seven women, the “real clients”, who work in the art, craft, textile and fishery sectors and are incubated by NCNW. Thus, the innovative aspect of our approach is that it focuses on having Senegalese students develop mobile phone applications for Senegalese businesses and making a social impact in their local communities. The needs of the women were assessed in July 2008. The mobile phone software that are considered crucial by the women are accounting software that would permit them to control their sales and spending and make them distinguish private from business spending. One association was interested in educational mobile games for young children.

To increase the chance of having mobile phone applications successfully deployed in Senegal, students from Stony Brook University are currently developing mobile phone applications that will help students in Senegal have more concrete ideas and a starting point for their own applications. Additionally, to ensure commercial quality for the developed applications, students will iteratively improve their prototypes during and after the bootcamp with feedback from stakeholders (e.g., clients), mentors (e.g., industry leaders) and peers (e.g., students in Senegal and the USA). The mobile phone applications will be deployed on phones that will be provided to the women. Students will train the women such that they can use the mobile phone software efficiently. The perception of the usefulness of the mobile phone applications and their impact on the improvement of the lives and businesses of the women will be evaluated through interviews.

This poster presents the project, the ICTESen model, the needs of the women in terms of mobile phone applications, and examples of mobile phone applications to be developed during the bootcamp.

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The wiki of the project is available at http://www.mobilesenegal.com.

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