

CSE651 APPLICATIONS (1credit)

Seminar on Mobile Computing for Informal Economies

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The seminar will meet once a week. It will on two levels. The first level will be based on research in the area of ubiquitous computing, with emphasis on mobile computing. We will look for applications already developed for US markets, for African countries, and Cambodia, India, and China. We are interested in tracing the common trends and explore the differences. We use, the practical and theoretical works of Tapan Parikh (Berkeley)

(<http://people.ischool.berkeley.edu/~parikh/>, <http://ekgaon.com>) concerned development of applications for the Informal Economies India and of Nathan Eagle (MIT) (<http://web.media.mit.edu/~nathan/>, <http://eprom.mit.edu>) concerned the same type of development in Kenya and Ethiopia.

On the second, most important level we will develop our own applications. We are first targeting the Senegalese market because we (Christelle Scharff from Pace University and I) were awarded a grant from NCIIA (National Collegiate of Innovators and Inventors Agency: <http://www.nciia.org/>) entitled 'Sustainable Technology-based Entrepreneurship for the Senegalese Market', (<http://atlantis.seidenberg.pace.edu/wiki/senegal/Home>).

We will collaborate with two Senegalese Universities, NCNW (National Council of Negro Women) (<http://www.ncnw.org>) and an incubator WBC (Women Business Center) located in Saint Louis, Senegal: <http://www.incubator-ncnw.org>. The WBC assists women from the textile, fashion and art and craft sectors in entrepreneurial business development, by providing them with services such as office space, equipment, mentoring, training and facilitating their access to microfinance loans.

APPLICATIONS: We will develop, as a particular case, Mobile Phone applications for businesses connected with the WBC. In general, we will look into development of mobile phone prototypes that target African informal economies. Students will use J2ME, develop prototypes on emulators and install them on their own phones. The prototypes will then be tested in January 2009 with WBC clients. We will be also looking into developing prototypes that are natural language independent because In Africa there is too many languages (400 in Kenia), and we also want to be able to use them in other world countries (India, China). Also often our targeted users are people who are not able to read English, French, or even their native language. We assume that they are able to recognize numbers and know the basic arithmetic, and know how to use simple mobile phones. These prototypes user interfaces must take these constraints into consideration and probably will use only icons, number and signs.