Project Proposal - CS377A - Spring 2004

Team member: Jiang Xuan (jxuan@stanford.edu)
Luping May (luping@stanford.edu)
Wilson Chew (wchew@stanford.edu)

[Abstract] Though cell phones have much more users than Internet in many countries, they are mainly used for point-to-point communication. There are a lot of on-line market place on the internet, like eBay.com and Amazon.com. In this project, we will focus on using cell phones, especially via SMS/MMS to create a market place where sellers can send product information and buyers can search for the lowest price with a reasonable quality. After finding the proper product information with the seller's contact information, buyers and sellers can meet each other and finish the transaction. This project is part of the Reuters Digital Vision fellowship project e-Mobilizer which successfully entered the second round of the e-Challenge of 2005.

[Target users] There are a lot of micro-entrepreneurs all over the world who have little access to the market place. While many of them do not know how to use internet and take advantage of the on-line market place, most of them are cell phone users. We are focusing on creating a cell phone market place to help them get a better life.
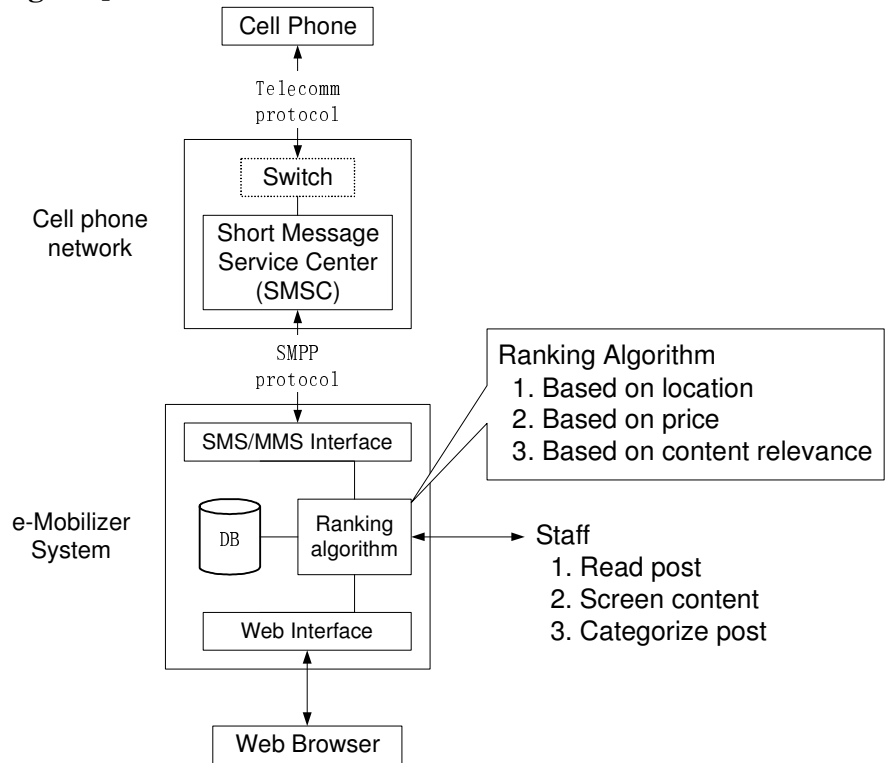
[Research Questions]
1. Why SMS are extremely popular in eastern Asia while the input method is not as convenient as the computer keyboard?
2. What are the possible ways to send product information through common cell phones?
3. How should we design the interface on the cell phone so that people can put in product information easily?
4. How should we organize the product information and provide buyers a friendly interface on cell phones to find the product that he/she might be interested?
5. How should we hide certain information that people might not want to share with others?
6. Provide consistent form-based interface for users to input product information that can be easily ported into a database
7. Might allow users to store certain amount of information so as to provide easy access to frequently used information (similar to shopping card, or inventory)
8. Could allow users to rate or view rates of products including their own products
9. Might be able to use cell phone camera for capturing pictures of products

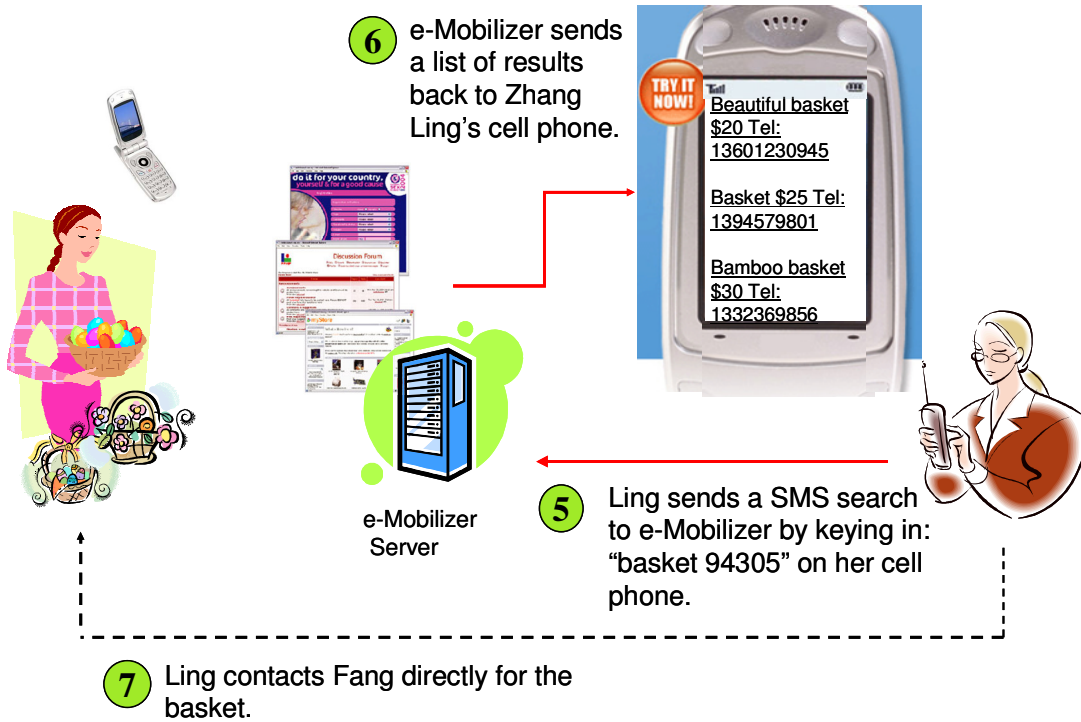**[The deliverable for this quarter]**

1. A prototype or demo about how to send product information and search for products over cell phones, especially how efficient the interface is and how to improve it in the future.
2. User tests

[System Diagram]

```
                        Cell Phone

                      Telecomm
                      protocol

                        Switch
Cell phone
network            Short Message
                  Service Center
                      (SMSC)

                      SMPP                Ranking Algorithm
                    protocol              1. Based on location
                                          2. Based on price
                                          3. Based on content relevance
                  SMS/MMS Interface
e-Mobilizer
System         DB      Ranking           Staff
                      algorithm           1. Read post
                                          2. Screen content
                                          3. Categorize post
                  Web Interface

                  Web Browser
```

[Usage Demo]

① Fang makes beautiful baskets

Beautiful Basket made from abaca,capiz,rattan and metal $20 Fang 13601230945 94305

② Send info to e-Mobilizer with cell phone

③ e-Mobilizer system processes info

e-Mobilizer Server

Beautiful **Basket** made from abaca,capiz,rattan and metal **$20** Fang 13601230945 94305

④ Info posted after approval

6 e-Mobilizer sends a list of results back to Zhang Ling's cell phone.

Beautiful basket $20 Tel: 13601230945

Basket $25 Tel: 1394579801

Bamboo basket $30 Tel: 1332369856

e-Mobilizer Server

5 Ling sends a SMS search to e-Mobilizer by keying in: "basket 94305" on her cell phone.

7 Ling contacts Fang directly for the basket.

[Reference]

[1] A Social History of the Mobile Telephone with a View of its Future, Lacohée H., Wakeford N., Pearson I. BT Technology Journal, Vol. 21, No. 3, pp. 203-211 (July 2003)

[2] Takeout Menu: The Elements of a Nokia Mobile User Interface, Seppo Helle, Johanna Jamstrom, and Topi Koskinen. Mobile Usability, Christian Lindholm, Turkka Keinonen, Harri Kiljander, pp. 46-71