Research Student Monitoring Group
Report 1

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Date of report:	10/11/06
Proposed working title:	Mobile Communities: Awareness and Sense of Place

Abstract of Proposed Research.

There has been a recent explosion of the number of online social networks (OSNs) surfacing on the Internet. The features of these OSNs vary, but have one common similarity: they track networks of people and provide an easier means to communicate and interact with them. A recent trend of OSNs make use of location data to provide services that let people track where their friends are, to help people meet up (e.g. [1], [10]). Researchers are beginning to explore the possibilities of location-aware mobile systems ([8], [4], [5]). Systems of this type, by nature, are inherently filled with one main privacy issue – how do we make sure that your location is only revealed to people you trust? A common solution is to only reveal the location to your manually chosen social group, and to provide controls to only reveal location information when the system is explicitly asked to.

Research in location-aware social systems has thus far only explored applying location information to social groups. The notion of "familiar stranger" shows that recurring co-presence in a place has consequences even with people who have never met [7]. Places act as social filters – people acting individually and collectively, actively structure their environments. This means that places are more familiar and safe to some, but not for others. A feeling of closeness to a place could mediate from people writing content about that place. The system would thrive on a non-moderated information space where opinions and ideas flow across the real world, enabling people to discover the personality of the locations they visit through the people that are linked through those locations.

We can imagine a system that uses proximity detection between users as a means to filter a perpetually fading information space of user generated content. This content could be similar to what people post in blogs, online "diaries" that *often, but not always* contain information about locations [6]. The time of which it appears depends on social significance: the time a person spends in a given place, the number of times weak ties have been found between users sharing that space over time and some kind of popularity measure assigned to that user. Over time, information of people who use a particular location will filter towards a state built up of most valued items.

Why would people write to collectively help socially define a location? My hypothesis, based on results from [2] is that people easily find motivation to provide information for a system if it provides tool for self-advertising. A design of such a system requires a view of the motivation of both suppliers of information and

receivers. On the supplier side, we need people to receive some kind of reward for supplying information. They do so by building up a trust with receivers, leading to an increase of some reputation measure.

Systems like Yahoo! Answers [3] work on the basis that there are many people on the Internet with levels of expertise in certain areas. It is a way of gathering large amounts of opinions by taking advantage of a vast user base. Yahoo! Answers incorporates a points system, with a cash reward system in the works, where rewards are given for good answers, but an article [9] suggests that introducing an ancillary reward "introduces an externality that degrades the value of the community itself". It would be interesting to explore whether this applies to the majority of non-professional content providers.

The boundary between the virtual and physical world is blurred as information on mobile systems are augmented with social context, increasing the relevance of information to a particular place. Some of the questions that my research will solve include the following:

- Does the feeling of belonging to a location increase when we relate more to the people in that location?
- Is user generated content *not* directly related to the location itself useful in increasing the feeling of belonging to a place?
- How do we enrich the definition of a place with information about the people that act within the location?
- Is the creation of user-generated content mainly motivated by reward systems or the satisfaction of sharing useful knowledge?
- What kind of large-scale social dynamics would evolve from increasing the intimacy between a person and the places they spend their time in? Would communities be built around these locations?

References

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Proposed members of the thesis group:

1   Student: Michael Voong
2   Supervisor: Russell Beale
3   RSMG member: John Bullinaria
4   Non-RSMG member: Bezhad Bordbar

Any other members:

Any comments by the student or supervisor:

Bezhad Bordbar has been nominated for Non-RSMG member due to technical knowledge in implementation of distributed systems, which may be useful when designing an experimental framework to test the theories outlined in the abstract in the real world.

Signed (Supervisor):

Signed (Student):

Date: 10/11/06