

## **RESEARCH SUMMARY - LIBBY HEMPHILL**

At the broadest level, my research is about communities and technology. My research enriches our understanding of the roles social media play in supporting offline communities. My approach differs from much of current social media research, because I focus on teams and organizations in which people know each other and use technologies to support their activities (e.g. Upcoming!, workplace wikis) rather than on online communities of people who do not know one another offline (e.g. SlashDot, Yahoo! Answers) (see Beenen et al., 2004; Lampe & Resnick, 2004; Preece, 2000; Smith & Kollock, 1999). My work necessarily encompasses studying offline behavior as well online behavior; in order to understand social media use by groups, it helps to understand the nature of a community. My research highlights the situated nature of social media use by offline communities and focuses on how social and technical processes impact community behavior both online and off. A better understanding of behavior in communities using social media enables us to design social media more effectively and to recommend behaviors and tools to make communities more successful.

My most recent work asks, how do faculty and students in a graduate school use a wiki to share information about their community with each other and with the public? What does their use tell us about what it might be important for new community members to learn? How can we use their wiki use behavior to understand how people make decisions about what information to share and what to keep to themselves? Understanding the community provides insights into the way members of those communities interact with one another via social media. My goal is to leverage human and computing resources so that a sociotechnical system can use the skills of humans and benefits of computation to improve collaboration and its supporting technologies. The remainder of this document briefly describes projects in which I have been involved with and ends with an overview of my continuing work.

### **Sharing and Storing Community Knowledge**

In an era when more than half of all doctoral students leave before finishing their degrees and students must compete for increasingly scarce human and financial resources, it's no surprise that students welcome help completing their degree requirements. What is surprising in this instance is that students are not just the primary consumers of the information but are also the primary producers. They share human subjects review applications, books that help them write dissertation proposals, interview protocols, even advice about how to set up an experiment using existing technical resources. We might expect students competing for the same pool of resources to hoard, but in this instance, students are much more collaborative than competitive. Their behavior on the wiki demonstrates this difference, but only by studying the offline community can we really understand why. In this case, it's likely that the collaborative ethic of the school itself permeates the doctoral students. Faculty and students at the school, regardless of whether they use the wiki, recognize and enjoy the collegial atmosphere of the school. Students are well-funded by research and teaching positions and are encouraged by their faculty's examples and instructions to work together to do better research. The wiki is not the reason students share, but it is the social media tool they use to do so.

Another aspect of the wiki example that I find interesting is the near-mashup nature of content created and the potential such behavior indicates. On the wiki, users include data available elsewhere but combine that data in community-specific ways. For instance, one wiki page serves as a marketplace for used textbooks required by courses within the school. That page includes data from the course syllabi, email lists, booksellers, and individual users. Such pages indicate community information needs - in this case, students need to sell their extra books to a small potential market while students in that buying market seek good deals on books and some advance warning of what textbooks they'll need. Such pages also indicate what potentially useful mashups might appear were users able to construct them. New social media that offer and use open APIs such as Yahoo! Pipes, Yahoo! Maps, and Upcoming! make asking such questions - what data sources might users combine for their communities if they could do it themselves? - possible.

## Facilitating Ad Hoc Ridesharing

I was part of the original RideNow team at the University of Michigan. Our goal was to facilitate ad hoc ridesharing in Ann Arbor and to develop technologies that could be used to do the same in other communities. Cars in the U.S. can comfortably seat four or five people but rarely carry more than one (Tra, 2004). Filling some of those seats would create tremendous benefits for both individuals and society as a whole. Riders and drivers would have convenient travel and the possibility of pleasant conversation. Society would benefit from reduced emissions and road congestion. However, barriers to ridesharing include 1) coordination problems, 2) risks of riding with strangers, and 3) mismatch in cost and benefit for riders and drivers.

We designed a service, called RideNow, that approached the problem of ridesharing by capitalizing on the benefits of incremental and localized design. Our system avoids the costs of overengineering by allowing incremental changes to occur. For example, the first instance of the system was rather bare bones - it offered free text fields that allowed users to decide how to specify ride information. Later versions of the system offered structured fields based on the behavior users exhibited in the first system. For example, the second generation of RideNow can parse dates such as "next Friday" rather than requiring a user to enter a specific date. The system also capitalizes on the benefits of nuance and ambiguity afforded by localized design. For example, RideNow's data fields allow users to enter information such as "after the faculty meeting." Our goal with RideNow was to design a system that allowed a well-established community to use personalized, situated software (Shirky, 2004) and that remained flexible enough to be adopted by other communities.

## Continuing Research

My future work will extend my interest in studying communities and designing/building software to facilitate their collaborative activities. It is important to me to have a close connection between field research and system design. As social computing tools become more prevalent and the distance between developer and user diminishes, opportunities to improve both development and use abound. I look forward to asking question such as, how can we make powerful mashup tools such as Yahoo! Pipes usable by non-developers? What would users do with such technologies if they could use them? How would users tailor the content of their mashups and contributions to specific community audiences? I have seen users embrace flexible, situated technologies such as ridesharing systems and wikis, and I believe there is great promise for end-user development of social computing technologies. Issues such as community building and information sharing generalize regardless of the community being studied, and I look forward to the opportunity to study social computing and larger, distributed offline communities such as political movements and distributed work teams.

## References

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