

Social Navigation: Design for Environments to Foster Electronic Marketplace Communities

A Position Paper for Social Navigation Workshop

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VIEWS OF SOCIAL NAVIGATION

There are at least three different perspectives of “social navigation” in the literature which we nominally refer to as: *information foraging*, *place*, and *virtual community*. The first perspective considers social navigation as an information retrieval process akin to information foraging. It is concerned with the creation of digital artifacts like footprints and wear from history of user interactions that can be used later by information foragers. These artifacts help users navigate complex information spaces [Hill et al. 1992, Wexelblat 1999].

The *place* perspective explores how a socially meaningful space (i.e., place) provides awareness cues and activities of others that guide people’s movements in a collaborative space. This perspective examines how social awareness, shared interests, and attractions to crowds and human activity can be fostered by the way the spatial structures encode social information. It provides insights into how social navigation forms a basis for sociality and many means of social interactions [Dourish and Chalmers 1994, Harrison and Dourish 1996].

These first two perspectives of social navigation is based on indirect sharing of information for guiding movements. The *virtual community* perspective focuses on direct sharing of information for all forms of decision making [Dieberger 1997]. Thus, it is concerned with more than just navigational information. As a concept, social navigation is broader than that of being a recommender system based on user profiles or personal preferences. This perspective is explicitly concerned with the social and collaborative aspect of the creation of the social capital, with how the generation of this capital can create a sense of community, and with how “social connotations” of a space can shape the community and social activities like social navigation [Dieberger 1999, Dieberger and Höök 1999,].

INTEREST IN WORKSHOP FOCUS

My interest in social navigation touches on aspects of each of the three perspectives. My earlier research investigated, through a series of studies, the prospects for history-based, user support tools [Lee 1992]. This investigation examined, in part, the uses of one’s interaction history; including for user navigation. It also examined issues of design of history tools and mental and physical effort associated with using history tools. More recently, this interest has shifted to CSCW and how group histories can foster social interactions like social navigation. Here, social navigation encompasses not only the literal notion encapsulated by the *information foraging* perspective but extends to the broader view of social navigation in the *virtual community* perspective (i.e., as more than just navigational information and as fostering online community).

The other more relevant interest in social navigation centers around my current research on new paradigms for collaboration in the realm of electronic marketplaces as exemplified by businesses like eBay [Wolf et al. 1999]. The first part of this research is the design of an online collaborative environment, known as ePlace, that can foster and sustain online communities for eCommerce application domain. Much of this work is concerned with creating a seed of a socially meaningful space which can evolve through the social interactions of its participants. I am exploring a spatially-based social information system that visualizes the people, their activities, and the social interactions at eCommerce web sites. This work shares many of the issues being examined in the *place* perspective. For example, how does the spatial structures of ePlace foster social awareness, shared interests and social interactions? These issues also overlap with the issues being examined in the *virtual community* perspective. In particular, identifying the “social connotations” of a space that influence social activities like social navigation in a

collaborative space and the social navigation activities that can enhance participants sense of being part of a virtual community.

DESIGN APPROACH FOR EPLACE

In developing a conceptual design for a social interaction environment for our electronic marketplace community (ePlace), we have been guided by four design constraints: sociality, spatiality, scalability, and imageability [Jung and Lee 2000].

The *sociality* constraint focuses on encoding social information, activities, and interactions that foster interactions among participants and that create a sense of community.

The *spatiality* constraint makes explicit use of a spatial metaphor to frame the information and activities that reinforces a purposeful context. This constraint is drawn from CSCW analyses of space and actions that have suggested that a space provides a setting where actions unfold [Harrison and Dourish 1996].

The *scalability* constraint is concerned with the development of a spatial representation that can support the numbers of people at an eCommerce site like eBay and can visualize the activities and interactions at such web sites. This constraint mitigates the need to represent all the detail in order to allow the salient information to be presented.

Finally, *imageability* is a notion developed by Kevin Lynch (1960) and is that quality in a representation or physical object which gives it a high probability of evoking a strong image in any given observer. In our context, this guiding constraint is concerned with using a representation for ePlace that facilitates the vivid identification of powerfully structured and highly useful mental images of the social interaction environment (i.e., parseable landscape).

DISCUSSION TOPICS

At the workshop, I would like to participate in discussions such as the following:

- Identifying and characterizing the form and design of spatial representations that can encode social information for catalyzing social interactions like social navigation.
- Exploring other guiding constraints for the development of spatial representations.

- Identifying other forms and examples of social navigation that are the basis of many means of social interactions and ways that the spatial structures visualize and support these interactions.
- Exploring how social navigation can foster and develop a sense of community and how support for social navigation is influenced by notions of place and social connotations.

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