From PIM to GIM: Personal Information Management in Group Contexts

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Sharing personal information with a group creates tensions that shape what and how information is shared.

As personal information becomes increasingly digital, it becomes easier to share. Personal information may be shared intentionally, to facilitate an individual end. It may emerge almost unremarked, as input to a routine organizational process. Or it may leak out accidentally, due to inattention or ignorance. However it comes to light, when personal information becomes the province of a group—whether a coterie of intimates, a series of bureaucrats, or a vast and curious public—the ways in which it is used and managed change. As our transition to a digital society continues, and personal information becomes more digital and more mobile, we need to bring research to bear on the interaction between personal information and group contexts, and pay close attention to its implications for the design of information systems.

To begin, note that personal information management plays both instrumental and symbolic roles. Artifacts such as to-do lists, calendars and rolodexes aid their users in efficiently conducting their daily lives. But PIM artifacts also play a symbolic role by shaping the impressions that others form of their users. Thus, the use of a Day-Timer®—available in an array of materials ("an expression of your unique style," according to the Day-Timer Web site)—can help its user appear to be a productive, well organized professional. And, if PIM artifacts are adroitly deployed and achieve their instrumental ends, the user's performance will augment the impression.

Although PIM is often a private activity, personal information is also often created with sharing in mind. A student may take notes to share with an absent friend. Coworkers may share calendars to more easily schedule meetings. At the same time, sharing may lead to problems: the student's notes may be messy and badly organized; the worker's calendar may reveal consistently long lunch dates with another employee. When personal information is shared, it introduces tensions between the instrumental ends for which it is shared and the not necessarily desirable symbolic inferences that it may support.

The tensions that occur as personal information is shared are complex and intertwined. They may feed back and affect norms having to do with the structure and content of what is shared: the student may take more organized notes; the coworker may create counterfeit calendar entries to obscure his activities. More positively, a group may devote effort to structuring information in a shared repository so that it is useful to all. It is this feedback cycle — that sharing information creates tensions that shape what and how information is shared — that makes this area a valuable focus for research attention. I will use the phrase *Group Information Management* (GIM) to refer to PIM as it functions in more public spheres. More specifically: GIM has to do with how personal information

is shared amongst a group, with an emphasis on the norms that underlie that sharing, and the ways in which participants negotiate those norms in response to a variety of tensions.

Many applications are used for GIM, including email, Web pages, and Wikis; however, some fall more squarely into the GIM arena than others. A longstanding example of GIM is the online calendaring genre. When first introduced, online calendaring encountered resistance when users realized that formerly private calendar entries could be used for ends other than scheduling meetings. A more recent GIM genre is that of social networking services such as Orkut, LinkedIn® and Friendster®, that allow their users to post personal profiles and create links to others that signify professional or social ties; these are in turn used for purposes ranging from professional networking to dating. These services raise issues of what users choose to reveal or conceal, how their disclosure of personal information is related to the ends that they hope to achieve, and the ethics of 'counterfeiting' links or conspiring to garner 'inauthentic' recommendations to increase their stature in the system. A third example of GIM is that of patient medical records, which are composed of information generated by multiple people (and devices), and accessed by people from different institutions for purposes ranging from care coordination to insurance billing. This application of GIM raises complex questions of privacy and access and ownership.

To get a broader sense of the issues, consider an overly simple model of GIM: *A person generates information that is shared with a group in support of a task.*

- *A person generates information…* One set of issues has to do with the creation of the to-be-shared information. What information do people choose to share, and why? How do they structure it? What are the various norms that attend sharing, how do they vary according to form, content and task, and how are they negotiated?

- *…that is shared with a group…* Another set of issues has to do with whom the information is shared. How is the audience for the information specified? How does the imagined audience affect the nature of the information shared? How is the information structured so that the group can use it, and through what process is such a shared structure negotiated? What are the consequences of the 'leakage' of information beyond the intended audience? And how might GIM systems be designed to support users in dealing with these issues?

- *…in support of a task.* What happens when shared information turns out to be useful for other tasks that are not in the user's best interests? To what extent is it possible to give users control over uses of their personal information? What sorts of control—awareness of usage, correction of errors, retraction upon completion of the task—is it feasible to provide the information owner?

This already challenging set of issues arises from a model that is far too simple. Contrary to the implications of the simple model, personal information is not always produced voluntarily (credit records), or by a single person (medical records). The groups with which information is shared are rarely static: new people join, established members drop out. Information isn't necessarily shared with identifiable and thus accountable individuals; instead it may be shared with an organization in which different people may enact a single role (a claims processor). Nor is personal information necessarily used for a single task, and the differing nature of tasks—the use of medical records for care

coordination versus insurance billing, for instance—can introduce tensions that may shape the information's content, structure, and how it is categorized, accessed, controlled and used. These, and other complexities, raise many issues beyond those noted above.

As various forms of personal information circulate through the increasingly networked people, groups and institutions that comprise our society, we need to step back and examine the ramifications of GIM and their implications for the design of information systems. Although GIM does not currently exist as a distinct field, it could provide a needed forum for consolidating issues emerging across an increasing number of domains.

Short Biography
Thomas Erickson (http://www.visi.com/~snowfall/) is a Research Staff Member at the IBM T.J. Watson Research Center where he works on designing systems that support network mediated group interaction.

A Slightly Longer Biography
Thomas Erickson (http://www.visi.com/~snowfall/) is a Research Staff Member at the IBM T.J. Watson Research Center where he works on designing systems that support network mediated group interaction. An interaction designer and researcher, his approach to systems design is shaped by work in sociology, rhetoric, architecture and urban design. He has contributed to the design of many products, and authored over 50 publications on topics ranging from personal electronic notebooks and information retrieval systems to pattern languages and virtual community.