Considerations for Long-Term Personal Information Management

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Introduction

Personal information management for "the long term" is a significant challenge. As noted in the description of the theme for this workshop, when dealing with PIM for the long term, people are faced with difficult questions about the future value of information and about how to manage information that is often spread across a variety of media types, devices, applications, and cloud-based services. In this position statement, I outline several observations and discussion points about PIM for the long term (PIM-LT), organized around three questions:

- How is PIM-LT different than PIM-ST?
- What is the role of other people in PIM-LT?
- What are users' goals/motivations for PIM-LT?

How is PIM-LT different than PIM-ST?

In discussing PIM for the long-term, we should consider how it differs from PIM for the short-term (or medium-term), and what aspects may not be so different. Barreau and Nardi (1995) outlined three types of information: ephemeral, working, and archived. How does PIM-LT relate to these notions? Archived information has a clear connection to PIM-LT, but what about working and ephemeral information? How do they relate to notions of PIM-LT? What types of

ephemeral and working information do we want to preserve for the long-term? What types might we not want to preserve? As more information is created and exchanged digitally, what controls can we have about what information can and cannot be preserved?

What is the role of other people in PIM-LT?

Prior work on PIM and GIM (group information management) has noted that people can have influences on each other's PIM, and that people can have roles in relation to each other's PIM (Erickson, 2006; Lutters, Ackerman, & Zhou, 2007; see also Tom Erickson's position paper for this PIM 2016 workshop). Interpersonal influences on our PIM can occur in many different ways. For example:

- In a work context, data that one person manages may be stored on a shared storage system with a fixed capacity, meaning that their PIM behaviors affect the amount of storage available to others.
- One person's sharing and management of information on social media can affect other people's access to the information (e.g., if they delete or re-organize a photo album, or if they unfriend someone).

In the context of PIM for the long-term, the relationship and role(s) of our PIM to other people may have additional dimensions. For example, in some cases, a goal of PIM-LT may be to manage the information in order to pass it along to others (e.g., medical records that I keep about myself may be beneficial to my children or relatives). However, in other cases, PIM may be maintained over the long-term for strictly personal reasons, and the owner may specifically NOT want to make their PIM available to others, even after they pass away. In yet other cases, a person may wish to maintain control of the information for some period of time, but then pass this control to some trusted person if they become less able to manage it (e.g., power of attorney for financial and legal records).

Taken together, these situations suggest the need for mechanisms to allow people to maintain control over their PIM while they are able, and to then be able to have a plan for their PIM as they age, and for after they pass away. Legal and financial sectors have established practices and mechanisms (e.g. wills, trusts, power of attorney), but mechanisms to address these concerns for the long-term management of digital information and online services/accounts are still being developed, debated, and refined.

What are users' goals/motivations?

It is also useful to consider PIM-LT in terms of goals, purposes, and anticipated uses of storing and managing the information for the long term.

Reactive needs

One reason to manage personal information for the long-term is that it can help us react and respond to needs for information that arise throughout our lives. For example, when applying to graduate school, an adult may need to provide documentation about vaccinations they received many years ago as a child. These types of information needs occur in a variety of settings and may involve information that the user has not thought about in many years. To support these, users need to be able to maintain access to their electronic data, and need tools to help them organize, search, and locate items. As noted by Marshall, in

practice, many people's approach to archiving is "benign neglect" (Marshall, 2008a), but tools can be developed and provided to help (Marshall, 2008b).

Proactive Assistance
In contrast to reactive needs, PIM for the long-term also creates opportunities for our PIM to be proactive in trying to help us. Examples include systems that remind us of our PIM (e.g., Facebook showing us posts from 1 year ago today), or systems that remind us of actions we need to take with respect to our PIM (e.g., document retention/deletion schedules). Proactive uses of PIM are an area with many valuable potential applications, but that also require careful consideration so that they are not intrusive.

Memories
Perhaps an obvious motivation for managing PIM for the long term is to preserve documents, communications, pictures, and other artifacts that help people remember different times and events during their lives. Systems and interfaces to help support users with long-term goals to preserve PIM for memories should consider factors such as context, digital preservation, and providing multiple methods and types of metadata that can be used to help retrieve items (e.g., find pictures of a specific relative, but show them to me in the context of the other pictures taken around the same time).

Challenges for PIM-LT?

Two challenges (among many) for long-term PIM are:

Fragmentation – Personal information is often fragmented across devices, applications, services, and storage locations. Fragmentation has long been discussed as a challenge for PIM, and it poses additional challenges for PIM-LT since an underlying goal of PIM-LT to preserve access to information. For data stored in a shoebox or even on a hard-drive, benign neglect may at least achieve some level/probability of access preservation. However, for data stored in online services, users often must take active steps to preserve long-term access to their information or it may be deleted or access lost. For example, some service providers archive or delete accounts after a period of non-use, and in cases where services go out of business, users may have little notice and/or ability to export all their data.

Access Control Sharing and Migration – As noted earlier, users may wish to have periods of time where: 1) they alone control their PIM, 2) they share control with others, 3) they pass control to designated others, and 4) they remove all access or have the data deleted. Users may wish to establish rules or controls that specify when access should change, and also need easy-to-understand mechanisms to specify and modify these rules. These are significant challenges – access controls and data management policies can quickly become complex.

References
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