

Personal Information for a World as We Want It to Be

William Jones
The Information School
University of Washington
Seattle, Washington 98195
+1 (206) 616-1995
williamj@u.washington.edu

Information comes to us via our senses. We hear, we see, we touch, we smell, we taste. A recording of this information might be expected to provide a good representation for the past events we have personally experienced. We also send out information to affect the course of future events. We send information in the things we say and write and, even, in the clothes we wear, the gestures we make and the way we “hold” ourselves. This too is personal information.

The position taken here is that personal information management (PIM) needs to be primarily about this outgoing information. What information to send out? And how in order best to influence future events so that the world is more like the way we want it to be?

The position has relevance because impressive advances in devices of data capture and storage – even as these create exciting possibilities for personal digital memories – can easily lead us, researchers and people in general, towards excessive focus on the recording of incoming information and the representation of past events.

The vision of an all-inclusive external recording of a person’s experience goes back over sixty years to the Memex system proposed by Vannevar Bush. This vision seems close to realization with few economic or technical barriers standing in the way. Devices to record are getting smaller, less obtrusive and more ubiquitous. Similarly, devices to store information continue to get smaller, more portable and cheaper even as their capacities continue to increase dramatically. In limited ways, the vision has already been achieved for many people who now have digital archives of personal experience stretching back over years or even decades. A kind of personal digital memory exists, for example, in the gigabytes of email messages many people now have.

Of course, just because we can attempt a high-fidelity recording of the past doesn’t mean we should. Issues of privacy and security arise, for example, since devices that record our lives for our use can also record our activities for inspection by others. Also, record-everything approaches raise issues of attention: How to keep massive amounts of digital data for past experiences from interfering with our access to information needed to complete the current task?

But let’s assume issues of privacy and security can be addressed. Let’s also assume that problems of attention can be addressed – through better search support, for example -- so that the most relevant information attracts our attention first. Certainly then a system that enabled a multi-media recording of personal digital memories – possibly a lifetime’s worth – would be a good thing and would form the centerpiece of a system of PIM, right?

Maybe not. Undeniably, memory for past events needs to influence present and future behavior. We need to learn from our experiences, our successes and failures. But learning is a highly interpretive process that necessarily requires a heavy distillation of prior experience and a selective attention to certain details over others. Learning new ways also frequently requires that we forget, unlearn or at least “disadvantage” previous memories. People learn to ski, for example, by unlearning a natural response to lean backwards when “falling” down the ski slope.

Most people will gain little benefit from a more complete digital recording of past events in their lives even if they have the time to review, which they will not. For the proof of this, we might consider the countless photographs, now increasingly digital, that we take. How many of us ever take the time to look at these photos? And, if we do, what influence have they had? We do use photos of course. We send them to our friends and family. But perhaps the ostensible reason for this – the sharing of memories for past events – is not the primary purpose served. Perhaps we send or share in order to maintain or enhance our relationships with others (“thinking of you... wasn’t that fun?”).

Worse, a recording of incoming information (sights and sounds, anyway) representing past events, can distract from a consideration of what -- for most of us is the more important "half" of our lives -- the future part that is still to be experienced. And impressive advances in technologies of information capture and storage can make us think that PIM is mostly about capture and preservation. What a shame if PIM comes to be seen mostly in this light!

People need PIM for the present and the future. Efforts to improve PIM support should focus first and foremost on ways to help people to represent a world and their lives in this world as they would like them to be. Support should then help people to construct and follow through on plans to make it so. PIM is about the projection of information outward from the person to the world outside in ways that effectively change the course of present and future events. PIM support can let people construct a personal space of information (PSI) which operates both to extend a person's ability to effect change and which also reflects, complements and facilitates the person's internal representations for the world -- as it is and as it *should* be.

These are high-flying ideas so let's make them real with an ordinary example. Consider the following simple progression towards a better, more effective personal space of information involving Alice. Alice gives lots of parties in connection with her consulting business which she has had now for over 30 years and which she runs out of her house. Sometimes parties are last-minute and impromptu.

1. Alice long ago would arrange parties over the phone. She called up each guest, invited them, and -- especially for new guests -- gave directions on how to reach her house (which was not that easy to find).
2. Alice was very happy when email gained widespread use. She could then send out invitations -- even last-minute invitations -- via email which saved a lot of time. Moreover, she created a standard, tested set of directions to her house which she saved as a file to be used repeatedly across parties in attachments to email invitations. She also created various invitation lists (current clients, potential clients, colleagues, etc.) to be used and re-used.
3. Alice now has her own web site with information about her consulting business. The web site includes driving directions to her house. Alice's email invitations now point to the web site. People can go to the web site for driving directions, to find out more about the party and also to note their "regrets" if they are unable to attend. The web site is a 24x7 extension to Alice.

In the near future, the web site will represent Alice in still more ways. The web site might, for example, include pages that tell people how Alice is doing in her battle with cancer. (Alice is happy not to have to repeat the same story of recovery with each new well-meaning friend or family member). The web site may include other pages with information concerning Alice's preferences when she travels (airplane seating preference, hotel and room preferences), emergency medical information, food allergies, etc.

A little farther in the future, Alice will have a PSI in which distinctions between the Web, email and local file storage are mostly irrelevant. The PSI reflects the way Alice thinks about her world -- both as it is now and as Alice would like it to be in the future. Alice makes parts of her PSI public according to *what* (information is involved), *who* (needs to see) and *when/why* (under what circumstances). Public projections of Alice's information can persist as what we today think of as Web pages and projections can also attract attention and invoke an expectation of timely response in the way that email does today.

In this future, Alice uses PIM support to design her future world. Suppose, for example, that Alice wants to plan a business trip to Chicago in early October and also to use the trip to re-connect with an old friend who lives in Chicago. She describes her world as she would like it to be in early October. She wants a window seat on a non-stop flight to and from Chicago -- ideally in business class. She wants a nice hotel room (non-smoking) in downtown Chicago with a view over Lake Michigan, exercise facilities and wireless internet access. She would like to have dinner with her friend at least one night of the trip in a nice restaurant near her hotel.

As Alice builds her world, her system of PIM support reminds her of other details she might otherwise have overlooked. If her trip involves attending a conference in Chicago, for example, then she'll need to register -- better do so now in order to qualify for the early registration fee. This is not the stuff of unfulfilled artificial intelligence promises. Reminding happens simply because Alice is able to re-use, in modified form, a plan she has already used successfully on previous trips. The plan not only reminds Alice of tasks to be completed, it also provides a structure and context in which to store incoming information (hotel confirmation, electronic airplane tickets, etc.) and in which to situate outgoing information -- including "email" correspondence.

As Alice builds her world as she would like it to be, she makes parts of this description public. For example, Alice makes her preferences concerning travel dates, seating, hotels and rooms, etc. public to travel services which then put together alternate packages as part of competitive bid process. Alice can pick the package she likes best. Alice can do something similar later to find a new computer or a car (or a house or, even, a mate) that best meets her needs. In each case, the process begins with the creation of description by Alice of things as she would like them to be.

Alice does remember that her last meeting with her friend – nearly ten years ago (“can it really be that long ago?”) – concluded with an argument over her friend’s then-recent divorce. Alice wants to avoid a similar argument this time (“Life is too short!”). But, even if she had a digital recording for this argument of long ago, she would not likely take the time to review it as a way to avoid a recurrence of the argument this time. Instead, Alice views her friend’s “web” site (public parts of her friend’s PSI) in order to catch up on her friend’s life, family, current job, hobbies, etc. This information gives Alice plenty of things to talk about with her friend without bringing up controversial topics like divorce.

Alice’s description of her world as she would like it to be goes well beyond making travel arrangements. Alice would like to reach a period of “semi-retirement” in about ten year’s time (she is now in her early 50’s) so that she can work part time and travel much of the rest of the time. Her description is used by her and her financial advisor to develop a financial plan that specifies a little more work now, a little less spending and a re-balancing of her portfolio towards a higher percentage equity position.

Alice would like to lose weight, get in better shape and find a life-long mate. Though she is past child-bearing age, she loves children and would like to find some way of including children in her life. In developing her descriptions of a world as she would like it to be, Alice can count on PIM tool support.

Tool support gives Alice the ability to describe a virtual world – even providing her with pictures of herself as she might look under various scenarios of the future. PIM support includes the ability to download “Life Organizers” that include customizable, modifiable step-by-step plans for realizing various goals and roles in life (“get a better job”, “plan a summer vacation”, “find a life-long mate”, etc.). Organizers also provide a structure and context in which to organize the information – incoming and outgoing – needed to make things so. Organizers help Alice to make effective use of her precious resources of money, energy, attention and time. Organizers help Alice to see the ways in which her dreams of the future are incomplete or inconsistent.

It’s time to consider a seeming sacrilege of PIM: Maybe Vannevar Bush got it wrong or, perhaps more accurately, we are getting it wrong in equating Bush’s vision with the notion of a high-fidelity recording of all past personal experience. (Bush’s article was primarily directed towards the preservation and exchange of scientific knowledge). A vision we might hold, instead, is of a world of PIM support that empowers people like Alice to take a more active hand in designing better, more purposeful lives for themselves. If we hold this vision, we can begin to take actions now to make it so.