

Storing every life memory in a surrogate brain

Microsoft researchers are developing a way to enable you to capture every moment of your life and store it on your computer

[Sharon Gaudin](#) 03/04/2008 07:02:30

Remember walking in to start your first job out of college? Or that diner you stopped in when you were on a road trip with your friends? The way the sky looked when you made that one perfect ski run, or the song that was playing when your daughter took her first step?

[Gordon Bell](#), a long-time veteran of the IT industry and now principal researcher with Microsoft's [research arm](#), is developing a way for everyone to remember those special moments.

Actually, Bell himself wants to remember - well, everything.

With memories piling up and continually slipping away, Bell is working to capture every moment of his life, so he can store it on his computer - a Dell laptop with a dual-core processor. He wants the ability to pull up any picture, phone call, e-mail or conversation any time he wants.

The nine-year project, called [MyLifeBits](#), has Bell supplementing his own memory by collecting as much information as he can about his life. He's trying to store a lifetime on his laptop.

For Bell, a key engineer and vice president of research and development at minicomputer pioneer Digital Equipment for 23 years and later a founder of the [Computer History Museum](#), the effort is about not forgetting, not deleting and holding onto all the bits of your life. In essence, it's about immortality.

"I believe this is the quest for what a personal computer really is," Bell said. "It's to capture one's entire life. A personal computer wouldn't be a machine that just sits on my desk. It's a repository. I think of the system as a personal memory. I feel immensely free by having all the information there."

Bell isn't talking about plastering a MySpace or Facebook page with information about the last cool restaurant he went to or details of a conversation with another industry luminary. For him, recording memories is immensely personal.

"A lot of people put their lives on the Web. I'm not an advocate of that," he said, adding that he thinks revealing too much personal information online can be dangerous. "We're not life loggers because we're not publicly disclosing or talking about ourselves. This was built to be entirely personal, to aid the individual. You will leave a personal legacy - a record of your life."

The project took seed in the late '90s when Bell decided to scan all of his books, articles, clippings and memos into a digital format. All of his paper records would be transformed. Just as his scanning project got underway, Bell read Bill Gates' book *The Road Ahead*, in which the Microsoft founder wrote about his belief that someday people will be able to record and recall everything they've ever heard or seen.

"It all just kind of triggered me," said Bell. "How much information do you end up with in your life? If you have it, how much does it cost and what good is it? That really was the genesis of getting started. I thought it was important to run an experiment for an individual to really do it and see what all is there and how valuable it is."

Bell said he began the scanning effort in 1999, and then in 2001, his friend and Microsoft colleague [Jim Gray](#) convinced that he was going to need a large database that could easily access information. With Gray acting as inspiration and co-conspirator, Bell began storing more and more aspects of his life - videos of lectures he'd given, CDs, correspondence and an avalanche of photos.

He's gone on to collect images of every Web page he's ever visited, television shows he's watched, recorded phone conversations, and images and audio from conference sessions, along with his e-mail and instant messages.

In 2003, Bell even began wearing a [SenseCam](#), a wearable digital camera designed to automatically take pictures without any user interaction. Created by scientists in Microsoft Research's England lab, the camera hangs around Bell's neck and snaps pictures with a fish-eye lens every 30 seconds or whenever it senses someone approaching.

So far, Bell has stored about 160 megabytes of information about his life, including 100,000 photos. Calculating that he saves about a gigabyte of information every month, he noted that he tries to only save photos of a megabyte or less. Bell figures one could store everything about his life, from start to finish, using a terabyte of storage.

Microsoft Research's [Jim Gemmell](#) and Roger Lueder developed the MyLifeBits software, which uses hyperlinks, fast search, annotations and saved queries. The software can record web pages and IM transcripts, along with radio and television programs, according to Microsoft.

When Gray disappeared a little more than a year ago, the experience of his loss gave Bell a new perspective on their project. Gray failed to return from a sailboat trip in the Pacific Ocean off the US west coast.

"We'd all like to see an immortal Jim," said Bell. "All of us have various pieces or an understanding of him. Jim had various theorems and books and metrics he created, so those things will last. But how close can we come to having something that would actually let people see who he was as a person?"

It's trying to make it more personal."

With such a personal project, the good and the bad parts of his life are being recorded equally. And Bell said he's just fine with that, and hasn't fallen victim to any urges to delete something that was painful or might not put him in the best light.

"People worry about that. So far I have not," he said, laughing. "I tend to leave everything there. There are some things I'm not so happy with, but what the hell? The value is in giving people a full view of what you're all about. There are various unpleasanties that are on there. There are some unpleasant characters that I've been involved with and it's more, 'Oh, god. I remember that episode or that board meeting.' "

Bell said he backs up his data, which is not encrypted, in the Microsoft Research lab and a copy is taken offsite for safekeeping. As for security, he said his main concerns are around physical security for his laptop. He doesn't travel with it, taking a tablet PC with him instead.

In 20 years, digitizing our memories will be standard procedure, according to Bell. "It's my supplemental memory and brain," he noted. "It's one of my most valuable possessions. I look at this thing and think, 'My whole life is there.'"

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