When she's forgotten his name her back-up brain will be there to help out

SURROGATE MEMORY

Download your life into this computer

IT WILL come as no surprise to Microsoft's critics to learn that the software company wants full control of everybody's life. *New Scientist* can reveal that Bill Gates's software engineers are working on ways to load every photo you take, every letter you write – in fact your every memory and experience – into a surrogate brain that never forgets anything.

It's part of a curious venture dubbed the MyLifeBits project, in which engineers at Microsoft's Media Presence lab in San Francisco are aiming to build multimedia databases that chronicle people's life events and make them searchable. "Imagine being able to run a Google-like search on your life," says Gordon Bell, one of the developers.

The motivation? Microsoft argues that our memories often deceive us: experiences get exaggerated, we muddle the timing of events and simply forget stuff. Much better, says the firm, to junk such unreliable interpretations and instead build a faithful memory on that most reliable of entities, the PC.

Bell and his colleagues developed MyLifeBits as a surrogate brain to solve what they call the "giant shoebox problem". "In a giant shoebox full of photos, it's hard to find what you are looking for," says Microsoft's Jim Gemmell. Add to this the reels of home movies, videotapes, bundles of letters and documents we file away, and remembering what we have, let alone finding it, becomes a major headache.

By the time he speaks at next month's Association for Computing Machinery Multimedia conference in Juan Les Pins, France, Bell says he will have logged everything he possibly can onto his MyLifeBits database. Apart from official documents like his passport, he'll post everything from letters and photos to home videos and work documents. All his email is automatically saved on the system, as is anything he reads or buys online. He's also started recording phone conversations and meetings to store as audio files. The privacy and corporate security risks are clear.

Of course the system takes up a huge amount of memory. But Bell's group calculates that within 5 years, a 1000-gigabyte hard drive will cost less than $300 – and that's enough to store four hours of video every day for a year.

Each media file saved in MyLifeBits can be tagged with a written or spoken commentary and linked to other files. Spoken annotations are also converted into text, so the speech is searchable, too.

To recall a period in his past, Bell just types in the dates he's interested in. MyLifeBits then calls up a timeline of phone and email conversations, things he has read and any images he recorded. The system can also be used to build narratives involving other people, events or places. Searching for the name of a friend would bring together a chronological set of files describing when you both did things together, for instance.

Although MyLifeBits is essentially a large database, it could gradually become a repository for many of our experiences. Now that many mobile devices contain photomessaging cameras, you could save everyday events onto the system. "Users will eventually be able to keep every document they read, every picture they view, all the audio they hear and a good portion of what they see," says Gemmell.

Bell believes that for some people, especially those with memory problems, MyLifeBits will become a surrogate memory that's able to recall past experiences in a way not possible with the familiar but disparate records like photo albums and scrapbooks. "You'll begin to rely on it more and more," he believes.

A really accurate, searchable store of events could also help us preserve our experiences more vividly for posterity. Doug de Groot, who works on computer-generated beings called avatars and other types of digital "life" at Leiden University in the Netherlands, says Bell's system could eventually form the basis for "meet the ancestor" style educational tools, where people will quiz their ancestors on what happened in their lifetimes.

A system like MyLifeBits was first suggested in 1945, when presidential technology adviser Vannevar Bush hatched the then farsighted idea of an infinite personal archive based on the emerging digital computer. His ideas also inspired the Internet archive website (see Interview, this issue, p **46). Ian Sample** ●