

Every Story

Sandy Says: Some Technologies Have Made Our Lives More Difficult



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A telecom industry veteran, Sandy spent 18 years with AT&T before moving to the broadband world. She joined her husband Dave Waks in their consultancy, System Dynamics, in 1996 and has been focused on consumer broadband ever since. Sandy splits her time between consulting, co-writing a monthly report on new broadband developments, and being a Skype video-addicted grandmother.



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Another early 1980s project was one we affectionately called “baby fax.”

Japanese companies started developing compact (“baby”) digital fax machines that were less expensive than the existing large messy analog ones and could be located close to the end users and eventually in homes and small businesses. What happened next parallels e-mail’s subsequent fate. As fax machines proliferated, people saw the opportunity to solicit business for all kinds of things the recipient had no interest in — and “junk faxes” were born.

The unintended consequences of technology are as relevant to today’s advances as they were to those created 25 years ago. Read the newspapers and trade magazines and some threats are clear. One of the biggest is the threat to privacy. An *EE Times*

article noted that video surveillance is suddenly “the fastest-growing market for [digital] video chip providers.” Historically, surveillance cameras have been analog. Digital compression technology and packet communications mean they can be increasingly inexpensive IP-networked digital systems with modest communications requirements.

Cell phones with GPS technology allow service providers to know where the phones (and those carrying them) are located. Sprint and Verizon both offer services allowing subscribers to know the current location of their friends. Another service recommends places frequently visited by a user’s friends.

Yet another example of the threat to privacy comes from systems recording data that track what sites users visit on the Internet. With proper guidelines and controls, such services can be helpful. However, there also is great potential for abuse. Privacy and personal information safeguards are critical. The challenge is to balance the threats vs. the benefits. The bottom line? Technology is neither inherently good nor evil. It is the applications of the technology that can have both positive and negative consequences.

I hate to be a party pooper, but let’s remember that using new technologies isn’t always beneficial. While emerging technologies hold the promise of improving people’s lives and the profitability of our businesses, there are also some cautionary tales to consider. In the spirit of looking back 25 years, I’d like to share a few recollections of technologies I was working on in the early 1980s at AT&T and some of their unintended consequences.

Let’s examine several of the systems that grew out of AT&T’s office automation efforts, starting with touch-tone entry/voice response. The notion of using the telephone to provide real-time interactivity to reach a person, a department or some information, seemed like a good idea. The technology was simple and familiar, callers could get what they needed and the sponsoring company could cut personnel costs. When implemented well, that’s true. But how many times have you encountered a menu with 10 items to listen to but none that address what you need? And there’s no apparent escape from the menu to a real person.

Sometimes the “solutions” to these problems change the form but not the substance. Using voice recognition instead of touch-tone entry doesn’t remove the frustration. It changes the dialog from punching in numbers on your keypad to saying words, but if the result is a frustrated user saying “operator” instead of pushing the “0” button, nothing is really fixed.

E-mail is another example. Since communicating in real time using voice often resulted in “telephone tag,” why not use asynchronous text communications instead? It would reduce interruptions, remove message transcription errors and provide a tangible record of a request or a colleague’s reply. E-mail works as intended, but has inadvertently given rise to spam. CYA e-mails and huge “copy to” lists. What we hoped would simplify and speed communications has instead taken over more of our time and attention.