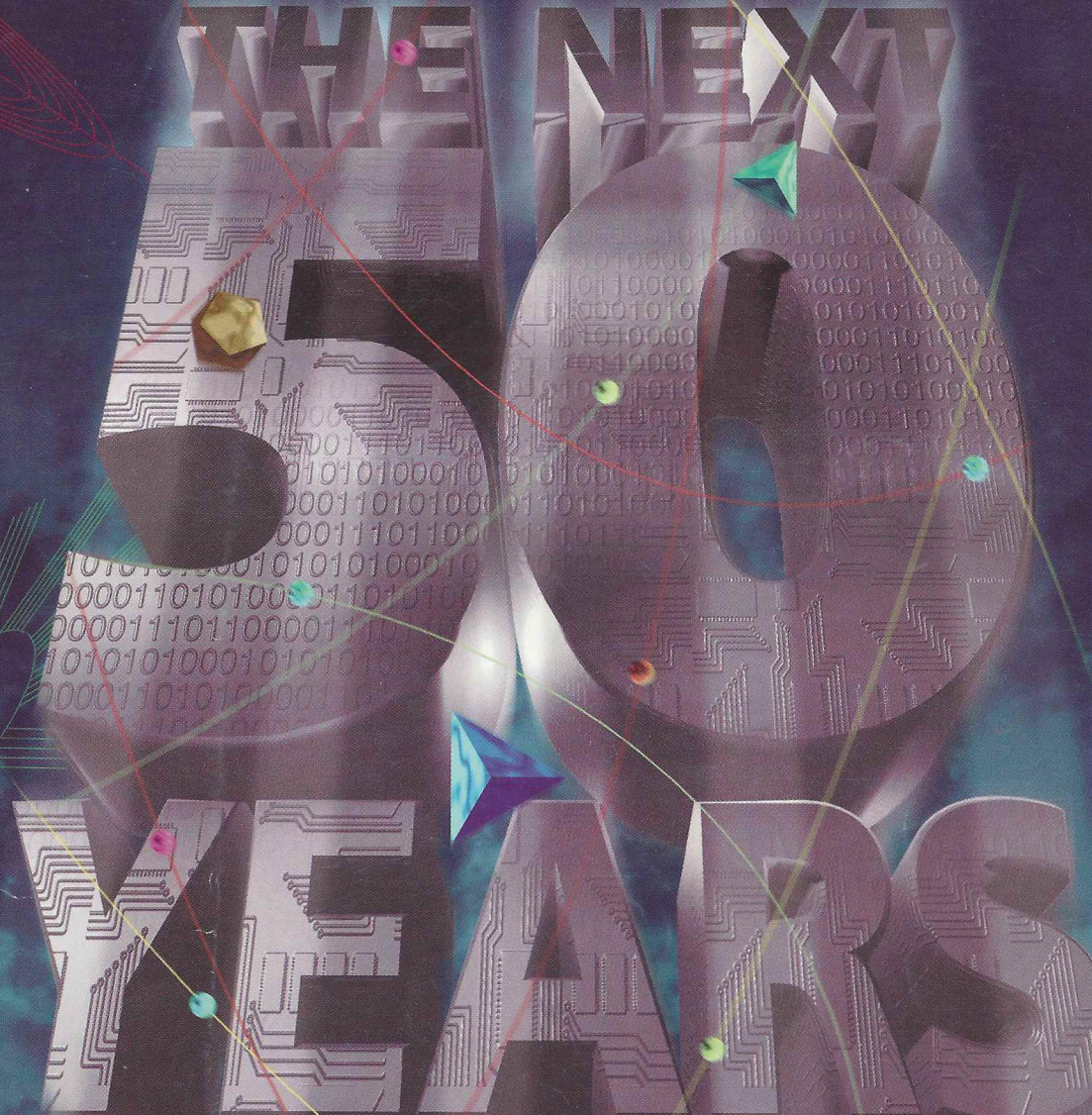


COMMUNICATIONS

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Ted Selker

societal dimensions

WHAT WILL HAPPEN IN THE NEXT 50 YEARS?

WHEN I WAS A CHILD, I WONDERED WHY I HAD TO STAND IN LINE so often. As I got older, I began to question why I had to fill out the same information over and over again. These phenomena of waiting and repetition are ending now. Scenarios that include electronic communication and computer memory have been developed and are slowly being put into place, making it possible to get money, apply, and register for things without ever engaging a human intermediary.

In the next 50 years, however, the collaborations and communications between people will continue to be their passion. We will find the miraculous feelings that telephones gave us in the last 50 years to be even more genteel. Just-in-time communities will embrace us as we are trying to grapple with such tasks as learning how to understand the difference in design constraints between audio and video amplifiers or how to ride a unicycle.

As we move about in our personal lives, the artifacts we carry to record our experiences require us to retranscribe those experiences; these devices will be replaced by tools allowing us to record our experiences with less effort and not require retranscription. The traditional pen will finally give way to something powerful enough that we will no longer use a conventional pen, and will not feel our abilities are diminished relative to the flexibility of a pen—writing anywhere on nearly any surface. Our wallets, which carry so many impor-

tant things, will give way to something with powerful augmented capabilities without relinquishing the universal important nonelectronic parts of a wallet (those irreplaceable photos of a child or distant ancestor, for example).

Our watches and wallets are in some ways our most coveted possessions and we are rarely without these items. These are all transforming and will change our experiences as we move around. The most important and coveted parts of our lives are those years when we are in college, unfettered by any restrictions and encouraged to concentrate and learn whatever we'd like. Fifty years from now, the opportunity to concentrate and focus on information at a particular level, using the best teaching materials available, with the ability to share the experience, will be available to us at all times and at any location. The communications media plethora we currently experience should be replaced by engaging escapist, educational, informa-

tional, and group entertainment media. Some of these experiences will be interactive, some will be vicarious, and others will be voyeuristic.

Many of these changes can occur in the next five years, not 50. The nature of relationships, which are fundamental to our sense of who we are and what we can do, are going to be fundamentally impacted by the communications software developed in the next five years. Of course, I've been wrong before: I thought developing the TrackPoint pointing device would take six weeks—it took 10 years. I thought making a presentation computer could be done in six months—it took three years to develop the IBM ThinkPad 755CV portable computer, which acts as a transparency on an overhead projector. I thought making an adaptive help system could be done in six months—it took me 14 years to put COACH into an actual product.

Our collective task in the forthcoming years is to visualize revolution without dying emotionally in the viscosity of change. Too often we have holed up in "special computing environments and communities" unable to embrace current tools and embittered by our inability to get others to use our inventions.

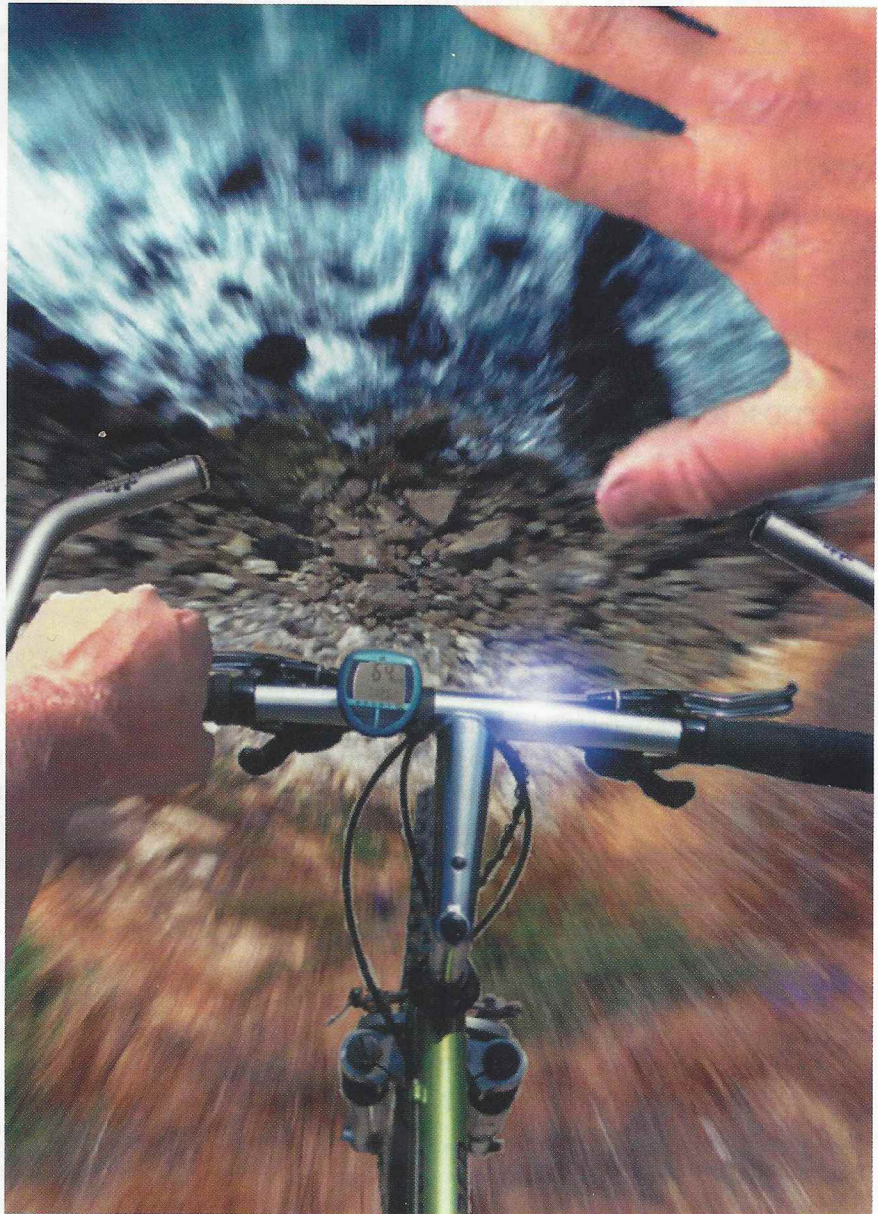
I also hope we learn to give more freely. Some of us have lived with the fruits of a DARPA contract for 25 years: access to the ARPAnet. This gave us worldwide communication, email, the ability to run computer system demonstrations over great distances, as well as the basic capability to send and receive files and software around the world in a relatively platform-independent manner. I wonder if the world would be different today if that community could have been made an information FREEway or FEEway (as it is today) for all in the late 1960s. Or is it better that the Internet was developed in a sequestered environment before multimedia technology could become

pervasive? Technology will inevitably be absorbed by society. But will society improve?

Let us visualize and live the future enjoying the fruits we produce and savoring the time 50 years from now when intellectual, ecological, and productivity goals that seem just out of reach today become pervasive and mundane. ■

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