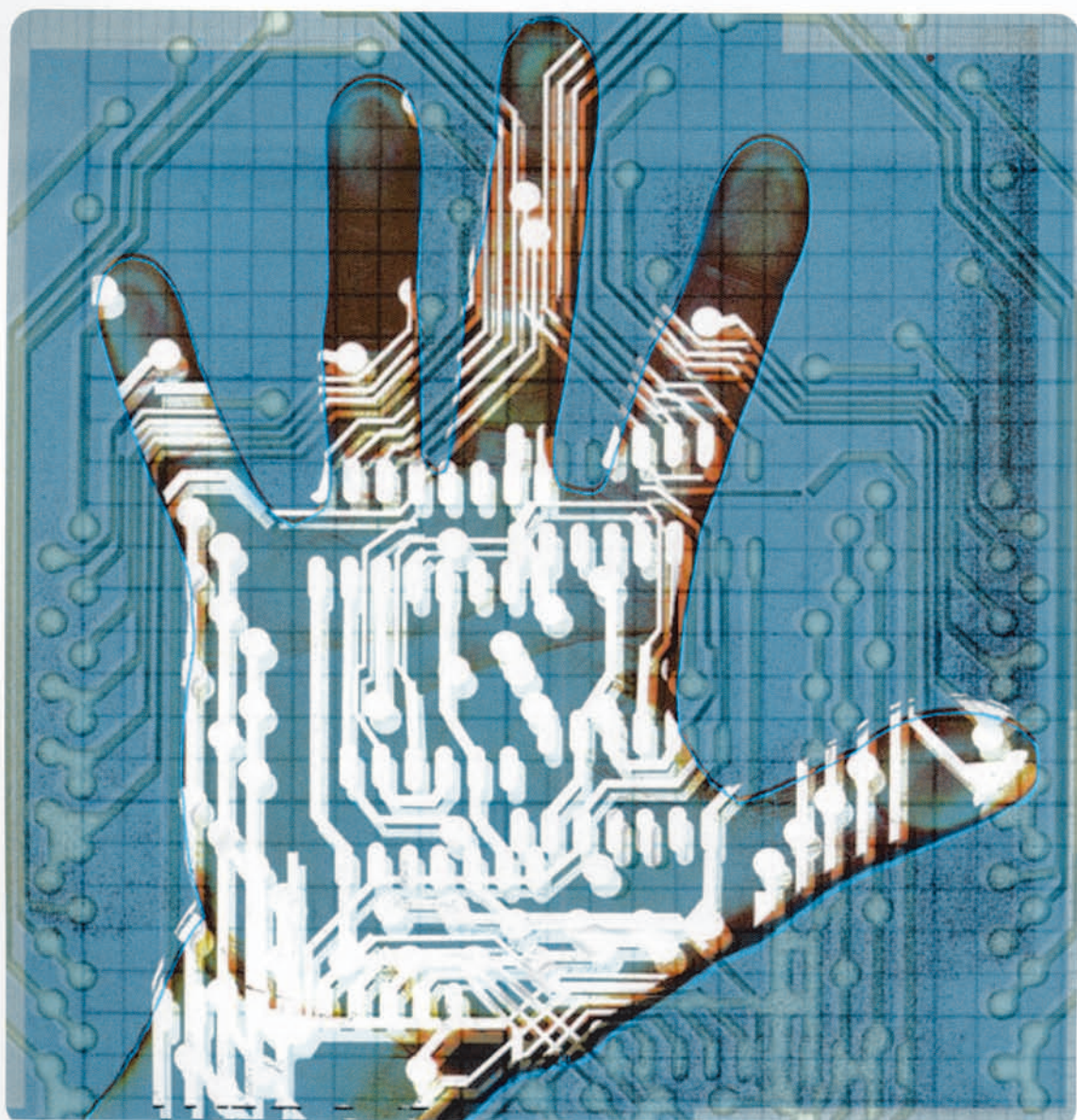


FUTURE



TECHNO-TRENDSPOTTER **PAUL SAFFO** SEES THE DAY WHEN

PERFECT

BY KATHY CHIN LEONG

I forgot where I put my car keys—again. Ten years ago, sheer panic would have orbited me into a tailspin, but now I calmly tell Godfrey, “Find my keys.” Within seconds, Godfrey, my miniature butler with built-in global positioning and voice recognition, tells me the set is hiding in my left windbreaker pocket in the hall closet. The keys chime melodiously. I know I won’t be late for my interview; my solar-powered vehicle knows the way.

Good morning. It’s now January 30, 2010. You and I may have to wait a few years to see if that prediction of things to come actually transpires, but not Paul Saffo. In his adventurous imagination, filled with images and ideas about tomorrow, he’s already been there. As Silicon Valley’s premiere futurist and research director at the Institute for the Future (IFF), an eminent forecasting think tank based in Menlo Park, Saffo gets paid to dream up such scenarios. Nice work if you can get it, and you probably can’t unless you have similar credentials. Few of us do.



This year, the 48-year-old research director will celebrate 21 years with IFF, a record by Silicon Valley standards. A media guru on all things futuristic, Saffo has appeared on PBS and has published essays in the *L.A. Times*,

Newsweek and *Fortune*. He has addressed corporate giants such as Procter and Gamble and Hewlett-Packard, and advised the governments of Singapore and Dubai. He’s been getting around for years, ever since he found his true calling in 1982 and joined IFF. At the time, he had a Harvard bachelor’s degree in anthropology as well as law diplomas from Cambridge and Stanford

universities. “I chose law because it allowed me to practice that intersection between technology and society,” he explains. The analytical rigors of law prepared him for IFF. “It’s a different lifestyle, one I find more satisfying.”

Roy Amara, IFF’s first president and co-founder, remains Saffo’s close friend and mentor. Says Amara, “In a short period, Paul developed a unique and uncanny ability in

PHOTO COURTESY OF PAUL SAFFO

WE’LL ALL BE IN TOUCH, 24/7. HE CALLS IT TOMORROW.

FUTURE PERFECT

technology assessment: picking those technologies that would have significant impact on society over a period of time.”

Saffo says he can't remember a time when he wasn't fascinated with technology. In eighth grade, he signed up for his first programming class learning FORTRAN. Later, at Harvard, he juggled courses in computer science and history. He was absorbed, as he is today, by the various ways that technology transforms culture and is shrinking the world around us byte by byte.

“Technology is a means to globalization,” he says. The world has, in Saffo's view, become much smaller and more accessible because of the digital revolution and the prevalence of air travel. It's up to us to adjust.

Our lives are going to experience change in numerous ways by the end of this first decade of the new millennium, he assures us. Specifically, globalization will alter how we work, play and interact with one another in subtle, yet profound ways. It is Saffo's job to let corporations and governments know what to expect in the near and distant future and to advise them on how to prepare for the coming changes.

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ll well and good, but what about the rest of us? What does the future hold for South Bay residents? Increased services and powerful technologies designed to ease and simplify the burdens of our hectic lifestyles, Saffo says. Then, solemnly:

“It's still up to us to make those choices wisely.”

Saffo gives me, the mother of a teenager, hope for her future, tinged with mild anxiety. Several months ago my 13-year-old daughter, Gwen, went on-line for a live chat with a friend from Singapore who told her school was closed for several weeks due to SARS. It is no big deal for a Sunnyvale resident to hook up with someone in South Asia via computer while gabbing on the phone with a local classmate. Today, thanks to access provided through cyberspace, the differences in time zones and physical distance is less of a liability for family and friends who want to remain close.

According to Saffo, the trend toward always staying connected and in touch 24/7 is becoming commonplace. “You won't be asking if you are connected, because you always will be,” he predicts. There will be machines talking to other machines to intercept messages for you so you are not disturbed. People can know at all times where you are,” says Saffo. That makes me slightly uneasy: I also like my privacy. So does Gwen.

If Saffo's future becomes ours, expect a spate of e-devices that will keep relationships tethered. Expect GPS embedded into cell phones, and button-sized web cameras. Not only will you be able to connect with people you know, you'll be leaving messages for those you don't. A concept called “tagging” will allow you to leave tags or messages on interactive digital displays in public places such as restaurants.

“The customer who has just eaten at this sushi bar can leave a note recommending the California roll,” says Saffo. “And you can come along and add your comments.”

“On hiking trails you can leave a message for the rest of your party to turn left at this fork,” he continues, “and they can catch up with you without getting lost.”

Humans will communicate with you and products will, too. Imagine going to that same sushi restaurant where the table is a biometric display that recognizes your fingerprints. Once your hands touch the surface, it lights up and welcomes you. It remembers what you ordered last time and tells you you're up for a free meal since this is your tenth visit. Great, but what about

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guilty pleasures? Do you really want your cone of French fries at McDonald's to remind you of all the calories and artery-clogging cholesterol you're ingesting with each mouthful? Ignorance, after all, can be blissful.

But as Saffo says, knowledge can be even more rewarding, and the future will be all about constructing a global information supergalactic highway. Assume for a moment it's 2010, the day of my daughter's 20th birthday. She's in Hong Kong, three months into a journalism internship with the World News, an on-line, multi-lingual newspaper with staffers scattered planet-wide. As with other students from her university, she is globe-trotting to learn new languages, take classes with sister colleges and gain work experience. Teens in 2010 apply for school, register for classes and sign up for scholarships on-line without picking up a telephone. The advent of globalization fueled by technology permits students to learn remotely. As webcams and robotic devices become available for a host of new applications, educational experiences broaden as well, says Saffo.

Expect to see a “global university,” he says. “Today we have state universities with local campuses. Why not a world university with campuses all over the world?”

Flexibility will be the buzzword for graduates, a global mindset a must. According to Saffo, they should be willing to relocate anywhere for jobs or internships. Taking a plane from one continent to another will be like commuting within the Bay Area, he says. By which, presumably, he doesn't mean gridlock.

The successful young Americans will also be multi-lingual, notes Saffo. “It's horrendously competitive out there. People from other countries speak three to four languages. We cannot be so provincial.” Having skills such as a facility for foreign language that cut across disciplines will add career value more than ever.

In Saffo's presence you are challenged to think about the past as well as the future. He reminds you that in the 1950's, a person's

worklife was outlined in terms of one company, one career. By the '80s, Silicon Valley hotshots were hopscotching from one startup to the next in a single career. Moving forward from today, the paradigm will shift to multiple companies, multiple careers. The prison-like cubicles of corporate worklife will go the way of the slide rule. "People can work at home, but more importantly," says Saffo, "they can work anywhere. Electronic addresses are now more important than physical ones."

Business styles will evolve accordingly. "It's no big deal for someone to fully complete a business transaction without even meeting in person. People will want to meet each other face-to-face but won't require it up front," he says.

And the economy in the South Bay by 2010? New positions will emerge as Silicon Valley shifts technical work outside its borders to India, China and Mexico, where labor is cheaper and the intelligence pool high. "Laid off, 50-year-old workers will have to reinvent themselves by utilizing existing skills in new ways or starting their own companies," he stresses.

About the Valley's present woes, Saffo remains hopeful. Things will pick up, he insists, just as they did in the late-1980s after a recession. Emerging technologies such as robotics, sensor technology and biotech are wide-open fields that will need workers.

In the realm of aging and healthcare, Saffo sees a bright, unregimented future. In 2010, the food and pharmaceutical industries will overlap, giving birth to organic products of every ilk. As I take a bite out of my futuristic breakfast power bar, I have no need to ask myself, "Is this medicine or is it food?" It has been designed for both purposes. Next, I put on my sunscreen makeup loaded with an alphabet-soup of good chemicals that will chase away those nasty "free radicals," guaranteed to keep my skin taut and fair. Continuing a current trend of better personal health practices and increased longevity, IFTF's ten-year forecast points to products that claim to capture that elusive fountain of youth. By 2013, over 150 million Americans will be choosing alternative medicines (compared to over 50 million in 1990) and using a variety of health aids.

What may look like a Gucci bag is actually a heart and blood pressure monitor that transmits abnormal levels to your doctor's computer. The t-shirt your girlfriend is wearing not only looks terrific but is delivering vitamins C and E through her pores upon contact. According to the IFTF, vendors from every market segment will jump on the health bandwagon to show how even a video game will be able to promote well-being when connected to a treadmill. Be on the lookout for products such as building materials and paints that boast low-toxin levels.

With fears of bioterrorism after 9/11, and concerns about aging and environmental hazards, consumers will demand that practically everything they ingest, handle, smell and wear yields a health or safety benefit.

As supervisors put more of the burden on workers to maintain and improve their health, baby boomers will be fastidious in managing their own medical portfolios, much like they do their stocks. They will have access to their own medical records, track their weight on graphs and set up medical and dental appointments all on-line, Saffo points out.

In 2010, if your surgeon is in Australia, he may be able to perform a remote operation using robotics, he notes. After your procedure, your pharmacist will create a custom drug based on your genome map so that you get the appropriate dosage for your height, weight and ethnic and family history.



When there's recreation to consider. Just take a look around, says Saffo. A teenager's zeal in downloading tunes to create personalized sets of CD recordings underscores the fact that we want to customize our recreation. "People want to engage in making their own fun, not be passive consumers." For example, flash-mobs were the hottest worldwide rage last summer. These random collections of strangers are alerted via the Internet to gather at a particular location at a particular time. They call out, sing, or shout, jump around and then disperse after a few seconds or minutes.

The web will continue to bring more interactive games of various genres to the foreground, where masses of people globally will engage in roleplay, according to the IFTF report.

For those with active lifestyles, technology has and will continue to make it possible to manufacture better and safer equipment for outdoor recreation such as rock-climbing and diving. Extraordinarily strong fibers and materials have inspired developers to invent new sports such as parachute wing flying, a hang gliding-like sport utilizing powered parachutes.

Saffo points out that robotics, radio frequency identification (RFID) and other sensor technologies will be embedded in products and services to enhance many aspects of living in the South Bay and elsewhere.

Replacing traditional bar-code labels, tiny RFID computer chips could be placed on grocery packaging, and sensors built into the floor of Safeway would read the cost and shelf-life of the products at the self-service checkout counter. Another type of sensor technology will replace wiring systems previously required for burglar alarms. These will be less obstructive and much more accurate and sensitive to disturbances.

Your washing machine that goes on the blink will have built-in sensors, alerting the manufacturer that a bearing is worn. You'll get an e-mail message from the repair facility to schedule a time for a serviceman. Other devices will detect how much mold is in your home and measure the air quality inside a mall on a smog-alert day.

How do we prepare for the onslaught of globalization, technology and change by 2010? "This is a valley already filled with traffic, people and pollution. In ten years, it may be full of even more urban sprawl unless people are willing to make a stand to preserve open areas, cut down on pollution-bearing activities and preserve things that make for a good quality of life," Saffo warns.

If Paul Saffo has anything to say about it, we'll enter into that future with our eyes open and our hearts set on using its advanced technology to improve the quality of life for the global community we call home. ■