



WANTED: 600,000 MINORITY ENGINEERS

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What's next in computing? We're about to see extraordinary transformations as we apply advanced technology to a growing range of human and social problems. We've already seen unfathomable advancements in the speed, density capacity, price/performance and commoditization of the fundamental information technologies fueling our world. Soon, embedded intelligence in a vast range of everyday objects will be commonplace. Virtual collaboration will be the norm, and computing systems will protect, regulate and heal themselves, much like the human autonomic nervous system.

This is a very exciting time. Yet somehow, our young people aren't engaged in understanding technology basics. Too often they're averse to math and science from grade school on. As a result, our country's economic competitiveness is being severely threatened by an information-technology skills shortage.

For example, despite the current economic downturn, earlier this year the Information Technology Association of America reported that hiring managers are seeking to fill more than one million information-technology positions in the next twelve months, up 27 percent over last year. Of that total, six hundred thousand positions will go unfilled due to a lack of qualified workers.

Even worse, women and minorities continue to be grossly underrepresented in science and engineering careers. While

women make up 30 percent of doctors and lawyers and 50 percent of the global workforce, they represent fewer than 10 percent of engineers. Taken together, the Black, Hispanic and Native American communities make up about 6 percent of the two million scientists and engineers in the United States.

What can be done to reverse the trend? First, I'm convinced we need to focus on K-12 education in general, and specifically on math and science education. One way to do this is to extend the scope and duration of National Engineers Week, a program of volunteerism through which companies and technical professionals reach out and partner with schools to generate interest in math, science and technical careers. (See www.eweek.org for more information.)

Second, we need to make diversity in the workforce an imperative. Companies that already have support networks focused on retaining women and minority talent can get even better results by designating a team to spread experience gained across the company.

Third, we all need to support national advocacy, research and policy organizations working to redress the underrepresentation of women and minorities. These groups need funding, but most of all, they need volunteers.

Paying attention to the problem, and taking it personally, are sure to help. ■