IT Hiring Back on the Rise

Skill Requirements for Today's IT Professional

The Dynamics of Open Source Technology
IT Innovation and the Role of Diversity

By Lucinda Sanders

What do technical innovation and diversity have to do with one another? If you follow the press coverage of our nation's current competitiveness woes, the answer to this question is, apparently, "nothing." Draft innovation legislation pending in the U.S. Congress treats this issue with echoing silence. But if you listen to the leading information technologists in this country, you'll hear something remarkably different, pragmatic, and refreshing.

At the first-ever Innovation and Diversity Town Hall — sponsored by the National Center for Women & Information Technology (NCWIT) and the National Science Foundation (NSF) and held in May 2006 at the National Academy of Sciences — every speaker, whether from the federal government, industry, think tanks, non-profits or academia, cited the lack of diversity in information technology (IT) as a major competitive and creative problem for the U.S. Although the Department of Labor estimates that there will be 1 million new jobs in IT by 2014, sharp declines in undergraduate computer science enrollment mean that we will graduate only half of the qualified candidates we will need to fill these jobs.

The lack of diversity in the IT workforce isn't just a matter of filling jobs by numbers; we are blunting a key national differentiator if we don't fully involve our diverse population in the invention of new technology. There is a strong return on investment to companies that diversify their IT workforce, including better decision-making, higher return to shareholders, and technological design more applicable to a wide range of customer needs. And yet, ironically, IT professionals are still culled from a very narrow segment of our population.

Why should we care about information technology?
said that the number of Fortune 500 company boards with 25 percent or more women has increased almost sixfold—from 11 in 1995 to 64 in 2005. Yet women still hold only 14.7 percent of all Fortune 500 board seats, and 11 percent of Fortune 500 companies still have no women board members.

The dialogue at the Town Hall covered extensive ground, with conversations ranging from passionate appeals for reform to specific suggestions and solutions. Some of the recommendations included:

**For educators:** Use novel methods of working computing concepts into other core courses at the K-12 level; emphasize computing’s more relevant, social, and creative elements; reach out to guidance counselors with respect to IT careers—explain what “real” IT jobs are like and why they should be recommended; and look to minority-serving institutions as a graduate school pipeline.

**For corporations and business owners:** Support re-training of retirees as IT teachers and as resources for classroom teachers; commit to better representation of women and minorities in technical leadership positions; create bridge programs for people wanting to re-enter the IT workforce, providing them with training and mentoring.

**For government:** Pass and implement innovation legislation; and support sustaining infrastructures to ensure that progress continues over the long term.

**For not-for-profits:** Work together and share resources; commit to practices that have been shown, through evaluative evidence, to work; and use distribution lists and member bases to build awareness and activism.

**For the media:** Foster a more accurate representation of IT and its practitioners; realize that diversity has a critical role to play in maintaining U.S. leadership in IT innovation; seek out and report stories that support diversity in IT.

Diversity is an opportunity, not an obstacle. Many avenues exist through which to increase the number of women and minorities participating in every aspect of information technology—if we just work together.

As a society, we must recognize and mobilize: recognize that this is an issue we must address, and mobilize for rapid change.

We must form alliances including but not limited to industry representatives, public and private school teachers, university faculty and administrators and others who can be change agents. We need to focus on institutional reform, based on practices that have been proven to be effective by solid research. We need to reform curriculum at K-12, ensuring that computer science is taught in high schools as well as at higher education levels. We need to improve the public image of computing so young people understand that, far from a narrow technical field suited only to white male hackers, computing is socially valuable work that can be a good career choice for a diverse cross-section of America.

In short, we need to broaden the appeal of IT to people who previously may have considered themselves merely its consumers and not its creators. When we do, the face of IT will begin to change and to better reflect the face of the nation.

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