

Where Have All the Techies Gone? IT Workforce Faces Shortage

During an interview published by eWeek in late 2006, Robert Cresanti, the Undersecretary of Commerce for Technology who is also known as the Commerce Department's "Technology Czar," declared that there is a shortage of IT workers in the U.S. According to Cresanti, the shortage is a result of the dot-com bust: workforce entrants and college students chose to avoid the technology sector due to the stark lack of opportunity in the wake of so many failed IT companies. Cresanti explained that the lack of university enrollments in the U.S. is **"resulting in a dearth of information technology professionals."**

The truth is IT occupations have one of the lowest unemployment rates today (see IT Unemployment Rates on page 2) and demand is expected to remain strong at least until 2014, according to projections from the U.S. Bureau of Labor Statistics (BLS). Between 2004 and 2014, the BLS estimates the number of IT workers and professionals will grow from 3.4 million to more than 4.4 million, an increase of more than 1 million workers.

Job Growth Predictions

The highest job growth rate for the 10-year period is predicted for network systems and data communications analysts. This occupation is expected to grow for several reasons:

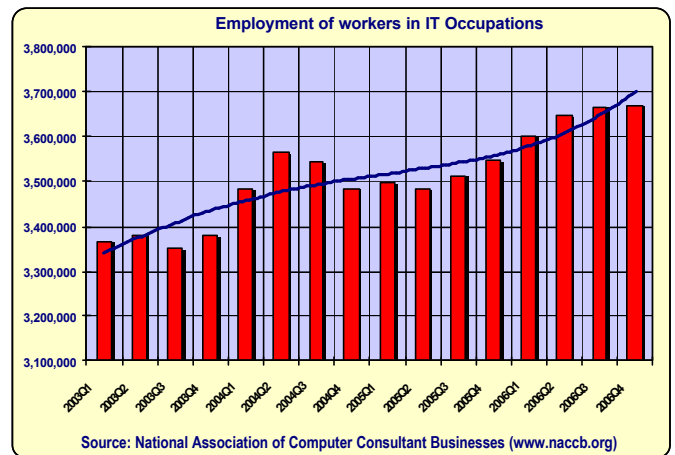
- The expansion of wireless networks
- Increasing business reliance on Web sites as a means of conducting business and delivering goods and services
- Growing emphasis on security and protection of digital information

The average number of annual job openings over the 10-year period for network systems and data communications analysts is predicted at 43,000.

However, the highest number of job openings is expected to be for computer software engineers. Job openings in this field are anticipated to soar to 91,000 annually from 2004 to 2014. Software engineers will also represent the largest IT occupation by number of workers, reaching an estimated 1.2 million.

Approximately 700,000 of that group are expected to be application software engineers, whose increased demand is due to the growing need for applications software and specialized utility programs. The remaining 500,000 systems software engineers will develop and design operating-level and network software in addition to implementing and maintaining the systems that ensure information security.

The ranks of computer hardware engineers are expected to grow by only 8,000 between 2004 and 2014, with an average annual number of job openings at 5,000. The relatively small projected increase in the computer and peripheral equipment manufacturing sector is attributed to the amount of manufacturing moving offshore.



Innovation Commitments in China

Cresanti also talked about a recent trip he took to China during which he observed that most of the senior government officials he had met were engineers: "Science and math are ingrained" in society, and the country is investing heavily in research schools and facilities.

IT Unemployment Rates: Low. Wage Growth: Slow!

The high demand for IT workers today is demonstrated by persistent low unemployment rates. In the third quarter of 2006, the unemployment rate for most IT occupations was less than 3%. It was less than 2% for some specialties, and the overall unemployment rate hovered between 4.6 and 4.8%.

With IT personnel in such short supply, a new channel of demand for IT personnel comes from VARs (value-added resellers) looking to assist clients in filling their staffing needs.

According to the U.S. Bureau of Labor Statistics, pay for all workers in private industry rose 3.9% in October 2006 from a year earlier (October 2005). Pay in most computer-related sectors was consistent with that national average.

| Occupation | 3Q2006 Unemployment Rate |
|--|--------------------------|
| Computer and information systems managers | 2.1 |
| Computer programmers | 1.8 |
| Computer scientists and systems analysts | 3.0 |
| Computer software engineers | 1.8 |
| Computer support specialists | 2.6 |
| Network and computer systems administrators | 3.8 |
| Network systems and data communications analysts | 2.0 |

Source: Unpublished tabulations of Current Population Survey data furnished by the U.S. Bureau of Labor Statistics.

Wage increases in IT-related sectors seem to be moderating. Workers in the ISP and Web search portal sector saw only a 3.1% rise in hourly wages from October 2005 to October 2006. The pay raise for the same group had been 12% in January 2006 (measured from a year earlier) and around 8% by the middle of the year. For the same period, wages were up 3.9% in computer systems design and related services and up 4.1% in custom computer programming services. Wages in data processing and related services rose 4.2% in October 2006 from a year earlier.

Although not an IT service per se but certainly related to the sector, computer and peripheral equipment manufacturing wages were down 2.9% for the same period, possibly reflecting the commoditization and offshore manufacturing of those products. However, wages in the semiconductors and electronic components sector were up 2.9% while wages in communications equipment manufacturing sector were up 5.6%, just slightly above the overall wage increase.

Strategic IT Consultants: What Are They Good For?

"Consultants" sometimes get a bad rap, but there are many justifiable reasons for using them. Often, an organization does not know how best to extract maximum value out of its IT infrastructure or what infrastructure will best address its needs.

According to a report in the *Financial Times*, even though an organization has internal business-oriented IT employees with a solid grasp on the business process, outside consultants can often bring more to the table. Some of the best reasons for using consultants are:

- The business needs expertise that is not inside the organization.
- Leveraging a consultant will save the business time, and therefore money.
- A cultural change is needed; outside, independent catalysts are often the only way to bring about change.
- The organization will greatly benefit from the outside experience, external solutions and new best practices a consultant can bring to the table.

Office 2007 May Put the Squeeze on IT Resources

Microsoft Office 2007 is its own application and quite unlike prior versions of Microsoft's Office Suite, which were backward compatible without any user action. The recently released Office 2007 could place additional demand on IT hardware and personnel.

In order to open Office 2007 files (Word, PowerPoint and Excel), Office XP, 2003 or 2000 users must first download and install the Microsoft Office Compatibility Pack. The good news is that the Compatibility Pack is free from the folks in Redmond, and the user will also be able to edit and save files in the latest file formats that are new for Word, Excel and PowerPoint 2007. The bad news is the Pack is big (27.1 MB), and for users of Office XP and 2003, all high-priority/required updates first need to be installed.

The effects of this download requirement are not yet known. Although there are no clear estimates regarding the adoption rate of Office 2007, most at this point are not expecting it to be fast.

