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Latest Trends in IT & Engineering Staffing and Solutions

IT & Engineering Services Update

What the Decline in PC Sales May Mean for IT Professionals

While it is no longer news that PC sales are declining, leading IT research and analyst firm, International Data Corporation, revealed that Q1 2013 PC shipments were down 13.9 percent year-on-year. This was "the worst quarter since IDC began tracking the PC market quarterly in 1994."

One reason for the decline often given is the tepid sales of Windows 8 – new computers are not necessary if few are migrating to the new OS. The burgeoning tablet market is also likely siphoning off new PC sales.

Perhaps more relevant to IT services that are still working in a PC environment is that extended support (no more security updates, paid or free assisted support options, or online technical content updates) for Windows XP – along with Office 2003 – will end in less than a year.

According to StatCounter, a web analytics service with tracking codes on more than 3 million sites globally and billions of recorded page views per month, there are still a lot of XP machines in the world. In March 2013, XP had a worldwide 23.4 percent market share; in the United States, that figure is 13.6 percent.

The problem – or perhaps the opportunity for IT professionals – is that there are still a lot of enterprise XP users and machines out there that will need to maintained or replaced and their systems migrated to new machines.

Stress Levels Drop for IT Professionals

It can be difficult working in IT, but how stressful? In a new 2013 survey, 65 percent of IT administrators said their job was stressful. However, this was down slightly from the 69 percent who responded that way in 2012.

One of the major stress-inducers was not having enough IT staff. At least half of the respondents in Columbus, OH (56 percent) and Detroit (50 percent) said they do not have sufficient staff to get their jobs accomplished.

The annual survey attempting to measure stress levels of U.S. IT professionals found that although 57 percent were thinking about leaving their jobs, this was a 10 percentage point drop from last year's 67 percent. The survey of 207 IT administrators was conducted by an outside research company for GFI Software, which provides various software solutions.

The Top Three Sources of Stress for IT Administrators

Management / dealing with managers:	29 percent
Lack of enough IT staff:	24 percent
Tight deadlines:	20 percent

… and one of the smaller sources of stress

Users only contributed 12 percent to the stress levels of IT managers on a national basis but 43 percent of respondents in Boston said users were their biggest cause of stress.

IT professionals in smaller companies (10 to 49 employees) are the "most likely to quit their current roles due to stress, with 41 percent regularly considering a change."

It wasn't clear if overtime was a method of relieving or triggering stress, but nationally nearly one-third reported working an average of eight hours of overtime per week. The cities with the most respondents working more than eight hours of overtime were Philadelphia (47 percent), Boston (43 percent), and Dallas (40 percent).

The results of the 2013 survey show some improvement in how health and personal lives are affected by work stress. For example, 42 percent of the respondents said they lost sleep due to work in 2012, but only 34 percent reported so in 2013. Similar drops in 2013 were seen in other categories including canceling family commitments, missing social functions, and not spending time with their children due to work demands.

IT and Engineering Professionals are in High Demand as their Unemployment Rates Remained Below the National Average

While the nation's unemployment rate declined throughout Q1 2013 and ranged between 7.6 and 7.9 percent, the unemployment rates for almost all IT and engineering professions were significantly lower.

IT Occupations (Q1 2013)	
Computer hardware engineers	6.0
Computer and information research scientists	4.2
Computer and information systems managers	3.5
Computer network architects	1.7
Computer programmers	6.3
Computer support specialists	5.7
Computer systems analysts	3.7
Database administrators	2.8
Information security analysts	5.8
Network and computer systems administrators	3.1
Software developers, applications and systems software	2.2
Web developers	1.0
Engineering Occupations (Q1 2013)	
Architectural and engineering managers	2.8
Chemical engineers	1.6
Civil engineers	3.4
Electrical and electronic engineers	6.5
Engineering Technicians, Except Drafters	5.4
Industrial engineers, including health and safety	4.0
Materials engineers	7.8
Mechanical engineers	3.4

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

Breakthrough Technologies for 2013

Following emerging technologies may lead to new business opportunities for IT services and technical engineering firms. Here are a few of the breakthrough technologies that the editors of *MIT Technology Review*, founded in 1899 at the Massachusetts Institute of Technology, recently identified as some of the most promising for 2013:

- **Deep Learning:** Editors feel that "Artificial intelligence is finally getting smart" as computing power reaches massive levels and begins to recognize configurations of data, sounds, and images in real time. According to *MIT Technology Review*, "Some of today's artificial neural networks can train themselves to recognize complex patterns."
- **Social Media Becoming Temporary:** Self-destructing messages that enhance the privacy of online communication will make users more "candid and spontaneous."
- **Additive Manufacturing:** 3D printing is becoming more accepted in the mainstream because it is faster, uses less material and can be more cost effective than traditional manufacturing. For example, GE Aviation, in a joint venture with a French company, will be "printing" some jet engine parts.
- **Memory Implants / Neuroprosthetics:** Theodore Berger, a biomedical engineer and neuroscientist at the University of Southern California, predicts computing hardware will advance to the point of implantable chips that will have the ability to generate and possibly help retrieve long-term memories.
- **Smart Watches:** Look for Apple to create another hot market soon with the iWatch, as more watches become able to wirelessly connect to smartphones.
- **Solar Power:** Recent advances in materials, science, and nanotechnology may completely change the economics of this form of energy production.
- **Cheap Phones Producing Big Data**: Although it may cast the dark shadow of *Big Brother*, analyzing how people move and behave may be available with "big data" from simple cell phones – e.g. provide insights into how diseases spread.
- **Practical DC Power Grids:** DC power is more efficient in transporting electricity than AC, which currently dominates power transmission grids today. However, a Swiss company has apparently solved a technical hurdle by developing a high-voltage DC circuit breaker that only disconnects the part of the grid with the problem.