A competitive advantage comes only with superior IT.
(Aetna Healthcare Chairman/CEO Richard Huber)

In the last few years, information technology (IT) has significantly impacted the operation of most businesses, and even though most corporations still spend only 3% to 8% of their revenue on IT, businesses depend upon IT for their day-to-day operations. For many businesses, IT is a, if not the, key factor in their competitive strategy. Due to IT, we have all experienced many changes, some good some bad, in our personal lives. In fact, probably not since the industrial revolution have people all over the world experienced such dramatic life-style changes. One is reminded of the opening sentence from A Tale of Two Cities, by Charles Dickens: “It was the best of times, it was the worst of times.” Dickens was referring to the French Revolution, but in the 21st century we are well into the “IT Revolution.” In regard to project management, there are two IT related matters: the utilization of IT in managing all types of projects and the management of IT projects. Before we further discuss these project management matters in this modern IT dominated world, we need to consider the technical and business forces that are shaping this new environment.
The Information Revolution

According to the RAND organization (Hundley, 2004),

Advances in information technology are affecting most segments of business, society, and governments today in many if not most regions of the world. The changes that IT is bringing about in various aspects of life are often collectively called the “information revolution.”

The current IT revolution is not the first of its kind. Historians and nations may debate the exact time and place of previous information revolutions, but they are as follows:

- Invention of writing, first in Mesopotamia or China, around 3000 BC
- Invention of the written book in China or Greece, around 1000 BC
- Gutenberg’s printing press and engraving, around AD 1450

Major revolutions help some people and some organizations, and, therefore, for them it is the “best of times”; but revolutions also hurt some people and organizations, and for them it is the “worst of times.” With big revolutions, there always will be big winners and big losers. As an example, when the printing press was invented, the largest occupation in Europe was the hand copying of books in thousands of monasteries, each of which was home to hundreds of monks; 50 years later, the monks had been completely displaced. The impact to society was enormous, not because of the displacement of monks by other craftsmen and machines, but because the price of books dropped so drastically that common men could now afford to educate themselves.

For many, this new IT revolution is bringing great things with unprecedented improvements in the quality and efficiency of all we do as organizations and as individuals. For others, however, IT is a two-edged sword, bringing about many problems, disturbances, and unresolved issues. A great digital divide is being created, and this divide has three dimensions: income, age, and education. This divide will further separate the haves from the have-nots as manufacturing operations move to lesser developed countries, where over 1 billion low-paid workers will be available in a few years. In the future, for developed countries, workers may be divided into InfoWorkers and McWorkers. In addition IT security and privacy problems are getting out of control, as evidenced by computer viruses, worms, e-mail fraud and spam, compromise of personal and private digital information, spyware, piracy of intellectual property, ID theft, hacking, and other computer crimes. Today, there are major and numerous security “holes” in most software that corporations and individuals use every day.

The most important technology of this information revolution has to be the Internet, which is the combination of several underlying technologies. Consider the penetration
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