When more
is wireless

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The map of our working world has been radically redrawn in the past decade, mainly by the explosion in high-speed global communications. At the same time, relatively affordable travel has turned many business executives into computer-toting nomads, dividing working hours between (increasingly downsized) offices, homes, and far-flung locations in the field or around the world.

But one part of this new order has lagged behind, putting a drag on the extra productivity and convenience these changes have brought. When most IT users sit down to a keyboard, even today, they are tied to a bundle — sometimes a jungle — of immovable wires and switches. Freedom from fixed connections holds the promise not only of greater convenience, but of using IT in ways not previously possible.

The good news is that practical wireless connectivity is at hand. For IT leaders, enterprise wireless solutions are no longer pipe dreams or wishful thinking, these are available today.

Mobile computing takes place in three concentric circles of physical coverage, with different technologies driving each. There's the 'personal' interconnection, between the different devices used by one worker: notebook and desktop computers, handhelds, mobile phones and the like (this is known as the Personal Area Network, or PAN). Wireless technologies linking such devices, for example Bluetooth, have a typical range of about ten metres and offer connection speeds of up to one megabit per second (Mbps). Expand that circle to encompass part or all of an office and via a Wireless Local Area Network (WLAN) many of those devices can be linked to those of co-workers, and to the enterprise's IT backbone. Further afield, systems based on mobile telephony promise to keep workers connected (albeit at lower speeds) anywhere mobile phone coverage exists.

In all areas of wireless technology there are two opportunities: to improve existing business processes, and to tap into a host of innovative uses. While the initial price of installing wireless connectivity may exceed that of equivalent wired networks — some recent studies have actually shown it to be cheaper.

Careful analysis of a company's environment and goals is obviously needed before making far-reaching decisions, but ROI studies have shown that investments in wireless may be recouped in less than 12 months; after that the bottom line improves further with each passing year.

Let's look at three scenarios familiar to many enterprises and sketch the kinds of solutions now on offer, as well as examining some real-world examples.