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Watch For It

By Karen D. Schwartz

IT'S TIME for your morning run, so you strap on your watch and heart rate monitor, put on your wireless headphones and head out. As you go, your watch chooses music tracks based on how fast you're running. It also collects your workout statistics (time, distance, heart rate) for later analysis. And when you slack off, your in-watch virtual coach prompts you to step it up.

Industry experts have seen this scenario coming for some time now, but with the recent adoption of the *Bluetooth* low energy technology specification, these and other wristwatch applications could start hitting the market as soon as the end of this year.

Bluetooth low energy technology, which consumes only a fraction of the power of traditional *Bluetooth* technology, opens a whole new world to watch manufacturers, whose ideas and applications are often limited by the small battery size used by the devices. The most obvious opportunities with the new specification are health and fitness applications driven by a watch and sensor.

"This type of watch will be able to show useful information as a result of human activity based on sensor data in or out of the watch," says Koyama Shunsuke, senior engineer at Seiko-Epson, which plans to have a *Bluetooth* low energy technology enabled watch on the market by 2011. "For example, a sensor could transmit information from a foot pad to the watch in real time. The goal is to use the information to better analyze the human condition."

Wrist-worn health and fitness monitoring applications may be the first to hit the watch industry, but they aren't all that's on the horizon. The new low energy specification could enable a wristwatch to monitor and control a host of other conditions and devices in the wearer's daily life. Imagine being able to:

- Monitor your house's temperature and humidity from the sofa.
- Track the whereabouts of phones, laptops and other valuables.
- Change TV channels and adjust the volume from your watch.

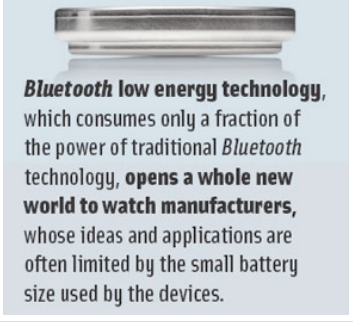
Bluetooth low energy technology also puts mobile handsets to work in watch-based applications. This is an area of opportunity for watch manufacturers, according to Jonathan Collins, senior analyst at ABI Research in Oyster Bay, N.Y. "It opens up a range of applications that watches can offer that leverage that connectivity with mobile handsets and still build on the more wearable form factor of watches," he notes.

Watches will be able to monitor and control incoming calls, use a mobile phone to access the Internet, track and record movement via GPS applications, and much more.

Most of the major watch manufacturers today are working on some type of *Bluetooth* low energy enabled watch, and Collins believes that all of them are looking at the new specification as the long-term future for short-range connectivity to their devices.

Satomi Mitchitsuta, manager of strategic product planning in Casio's Hamura R&D Center in Tokyo, Japan, says the advent of *Bluetooth* low energy technology will finally bring all watches, including those in Casio's product line, into the 21st century. "The chip size means (less) cost and (more) flexibility, and the ability to connect to the Internet means many, many possibilities," he says. Casio expects to release a *Bluetooth* low energy enabled watch within one year after the release of the specification.

It remains to be seen exactly which applications manufacturers will explore first. For now, work continues on developing profiles, which are expected to be completed in early 2010, according to Peter Cook, the Bluetooth SIG's specification director. After the profiles are completed, the specification will be implemented in mobile handsets, at which point watchmakers will be able to create products to leverage the vast and still-growing mobile phone base.



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Watch manufacturers should be able to begin deploying the new functionality offered by the *Bluetooth* low energy technology profiles, such as remote control and synchronization, within a few months after they are finalized, Cook notes.

Until then, consumers will be "watching" the market with great interest.

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Share your thoughts at signature@bluetooth.com