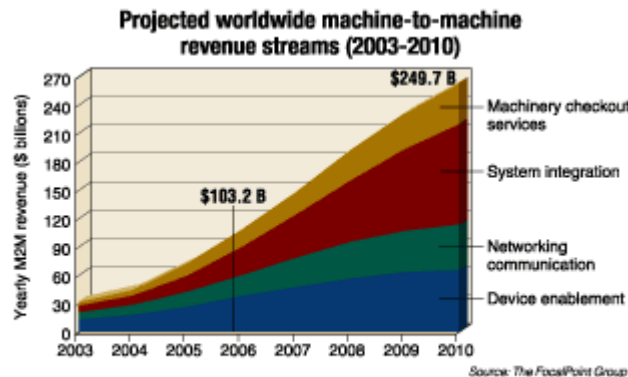




Lower costs for machine-to-machine communication will lead to new industrial applications

The maturation of remote monitoring has the makings of the next "disruptive technology." So says Glen Allmendinger, president of San Francisco-based consultancy Harbor Research.

"Continuous monitoring is game-changing. The minute I put a [product or machine] on a network, I can move to a service business," Allmendinger said at a one-day seminar on machine-to-machine (M2M); mobile-to-machine; and machine-to-mobile technology recently held in Chicago and sponsored by M2M technology vendor nPhase.



Some analysts say the machine-to-machine market is expected to balloon to \$250 billion by 2010.

M2M's ability to monitor products on a customer's site opens the door to product differentiation and after-sale services opportunities—a prospect so potentially lucrative it could stand the OEM business model on its head, claims Allmendinger.

San Francisco-based M2M consultancy The FocalPoint Group estimates M2M applications will enter the manufacturing mainstream in the next 18 to 24 months, and pegs the market at \$250 billion by 2010. Wireless Data Research Group, San Mateo, Calif., estimates the M2M market will reach \$28 billion in 2007.

M2M is the basis for what Allmendinger calls "the pervasive Internet," a web of devices and machines networked to report to each other, and to humans, on their status and condition—e.g., location, health, consumables levels, temperature, and maintenance history. In this scenario, sensors automatically alert other machines or humans—

regardless of their location—to take any required action. They also provide information about usage patterns, and customer needs and behaviors that can be leveraged for better service.

The first volunteers for this revolution will be those in mature manufacturing markets, where sustaining the double-digit growth numbers beloved of stockholders is difficult, observes nPhase CEO Steve Pazol. However, the M2M concept is not new.

NASA has tracked manned and unmanned probes for years, and utilities are gradually using remote monitoring for more efficient equipment servicing. But the advent of relatively cheap and easy networking and wireless computing is bringing M2M technology from exotic or specialized markets to the commonplace.

Manufacturers of expensive, high-value, long-life items—such as jet engines or elevators—can make 20 to 30 times the original cost of the item providing service over its useful life. Allmendinger believes forward-looking OEMs will start thinking the same way about the sales of other products as well—a radical change from the practice of focusing the most attention and spending on initial sales, and letting service take a back seat.