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Companies Look To Take Wi-Fi To The Sea, Emergency Room

Exhibitors at Cebit promise to extend Wi-Fi to hospitals and ocean-going vessels.

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While wireless Internet access has become a virtual commodity in homes and offices, exhibitors at this week's Cebit show in Hanover, Germany, are displaying wares focused on extending and optimizing the technology.

Nonius Software, a small Portuguese company, is showcasing a software appliance for serving up the Internet on cruise ships as cheaply as possible.

The pleasure vessels generally have to use expensive satellite connections when deep at sea, but can often access lower-cost terrestrial networks when cruising close to shore. Nonius' appliance serves as a referee between the various networks a ship contracts with, automatically switching to a lower-cost provider when it is available, said CEO Antonio Silva.

For now, Nonius is focusing on cruise ships but the concept could apply to other scenarios, such as a tour bus, he suggested.

Meanwhile, the company is rolling out another product aimed at hospitals; it combines Wi-Fi with location tags to create a specialized communication network for tracking the whereabouts of people and machines.

For example, the system could determine whether an Alzheimer's patient unknowingly entered an unsafe area, or could keep tabs on expensive medical equipment, he said.

The system is ideal because it leverages an existing Wi-Fi installation, according to Silva. It is priced based on the number of operational location tags; a 100-tag implementation might cost \$30,000, he said.

"It's not for Big Brother," Silva said of the technology. "It's so that patients can feel that they can get someone's attention."

However, none of that is possible if the building in question has a weak or spotty Wi-Fi installation.

Psiber, a company based in Germany and San Diego, is displaying 3-D modeling software during Cebit that aims to maximize the potential of WLANs (wireless local area networks) in buildings.

While the concept of 3-D WLAN planning software is years old, Psiber is pricing its offering aggressively, with a feature-limited version going for US\$300 and the full-fledged product costing \$600.

A Psiber official said the main target customers for the software include likely suspects such as architects, but argued there could be a mass-market opportunity as well, given the limits of the 2.4Ghz band on which many Wi-Fi signals travel. "Because it's a free spectrum, there will be so much collision [between networks]," said Klaus Romanek, the company's co-founder/owner.

Users of the software input the plans for each floor of the target building. In addition, the software can take into account the building's composition: Is it wood, concrete or a combination? Are there double-glazed windows?

Going even further, users can include the topography within the building's open spaces, such as desks and cubicles.

They place "access points" around the building, and the software generates a visual representation of both the reach and potential interference of the signals.

The software generates models, and therefore its accuracy "depends on the quality of the input data you put in," Romanek said. However, he added, "We find a rough model of your building is good enough."

"There's a lot of experience from real-life [WLAN] installers that went into this," he asserted.