

# Siemens base station for GSM coverage

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## ■ BizTools

**S** IEMENS Malaysia Sdn Bhd has introduced a unique global system for mobile communications (GSM) base station that uses Internet protocol (IP) as part of its transmission for indoor coverage.

The nano-GSM base station, which Siemens claims to be the lightest and smallest base station in the market, is suitable for any indoor application, including for use in an airplane or cruise ship.

According to Siemens Malaysia's vice president, applications and managed services Dirk Fidorra, the base station is the most cost-effective solution for telecommunications companies to widen their GSM coverage within a building or cater to the increased capacity of mobile phone users within a building.

"The installation of this base station is much simpler because it uses the existing IP network that a building has. In this case, the transmission will be radio, then convert into voice-over IP and radio again," he said.

"For in-flight use, the base station will connect to a satellite network."

The base station supports existing Ethernet

network, which supplies the power. The current model supports GSM 1800/1900 and GPRS Class 1 to 10 for data.

"Next year, we will introduce EDGE (enhanced data rates for global evolution) support as an improvement to GSM," Fidorra said.

Each base station supports 30 simultaneous active users at any one time with a coverage radius of 80 metres. If all lines are used, it only takes about 400 to 500 kilobytes of bandwidth on the network.

Commenting on the bandwidth requirements, Fidorra said the solution only uses a fraction of the Ethernet bandwidth, but the quality very much depends on the line.

For example, if the base station is connected to a public Internet network, then voice quality will deteriorate during peak time. However, by using a private network, which most telcos have, voice quality will not be an issue.

Siemens is currently selling the idea to the local telcos. The company also said trial projects involving the nano-GSM

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base station are currently under way in Indonesia.

Besides that, the company has signed an agreement with Airbus to install the solution on their planes, which should take off next year but the official availability of the service still depends on how fast the flight regulation bodies give their nod.

"There is a big debate right now whether to allow users to use mobile phones in the airplanes, but a decision should come out probably by end of the year. As of now, the technology is proven and can be deployed immediately," said Siemens Malaysia's strategic marketing manager Steven Tai.