

WIRELESS TECHNOLOGY

# RWBA crosses the divide



A DEVELOPMENT BY Nectec promises to bring technology to all parts of the country.

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*The Nation*

**H**OPING TO BRIDGE the digital divide, the National Electronics Computer and Technology Centre (Nectec) has developed what it calls Rural Wireless Broadband Access (RWBA) by utilising wireless technology to allow people in remote areas to communicate with the outside world.

Nectec director Thaweesak Koanatakool said the project involved developing sets of equipment for wireless broadband access, including community broadband access fixed-terminal adapters (FTAs) and community broadband-access base stations (BSTs).

RWBA will use a satellite-network access system and Wi-Fi technology in place of conventional copper cables to connect subscribers to their local exchange, thus saving money and installation time.

"Satellite networks will be the backbone of the Internet, allowing people to communicate with the outside, while within communities it will connect people via Wi-Fi networks," said Thaweesak.

The technology is undergoing trials at the Science Park in Pathum Thani and at Samkha village in Lampang.

At Samkha village, the team installed FTAs at several locations - a school, a local shop, a temple and a health station - using a voice-over IP telephone service and high-speed Internet access via the iPStar network.

The centre also plans to test the system in Surin soon.

Project manager Sutat Patomnuphong, a telecommunications researcher in Nectec's Wireless Communications Section, said RWBA has the same objectives as the Wireless Local Loop (WLL) project but uses different technology. For the WLL project,

Nectec developed equipment based on PHS technology, whereas RWBA involves Wi-Fi technology.

Sutat said Nectec decided to stop developing equipment based on PHS technology for the WLL Project last year, choosing Wi-Fi technology instead. PHS technology is proprietary, which obstructs development, he said. Meanwhile, Wi-Fi technology has been widely adopted and is a more open standard, so it is easier and faster to develop equipment sets.

"We have developed more than 50 equipment sets so far. Some have been tested in Samkha village and some provided for TT&T and ISP field trials. We're developing more than 50 sets for further trials in more than 30 locations within three kilometres of Science Park," said Sutat.

The move is due to TOT Corp's expectation that in 2010, Thailand will have approximately 65 million people needing at least 20 million telephone lines, with 7.8 million potential users in rural areas, and the cost of implementing landlines is huge.

"With Wi-Fi technology, the goal is to develop wireless equipment for less cost than combining both voice and data functionality. It utilises voice-over IP with computer telephony to allow people living in the so-called 'last mile' to talk to others, as well as access the Internet through the same wireless network," said Sutat.

The network is designed to support the LAN IEEE802.11b wireless-link standard in the transmission frequency band of 2.4GHz, moving data at 11 megabits per second. The initiatives are part of the government's mission to provide equal opportunities for all in accessing ICT knowledge, no matter where they are. It is expected to turn the "last mile with high speed" concept into reality.

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