

Wireless internet

World domination postponed

The prospects for WiMax technology have been hugely overhyped

TO HEAR some of its more enthusiastic proponents you might conclude that WiMax, an emerging wireless-broadband technology, was about to take over the world. WiMax is akin to a long-range version of the popular Wi-Fi technology that allows computers close to a small base-station to surf the internet without wires. Whereas Wi-Fi's range is limited to a few tens of metres, WiMax can, in theory, work over tens of kilometres, allowing huge areas to be blanketed with wireless coverage. Hence the claims that WiMax will bring internet access to the 5 billion people who currently lack it, or that it will render expensive "third-generation" (3G) mobile networks redundant.

The reality, however, is that WiMax has been hugely overhyped. Despite claims by several firms that they are offering WiMax technology today, the actual number of WiMax devices on the market is precisely zero. That is because the WiMax Forum, a standards body that oversees the technology and ensures that gear from different vendors works together, has yet to certify any devices with the WiMax label.

On January 24th it announced that pre-certification testing will begin in July, which means that the first WiMax devices will be available only at the end of the year, six months later than expected. So far, equipment-makers can offer only "pre-WiMax" or "WiMax-ready" equipment which will, they promise, be compatible with WiMax devices when they appear.

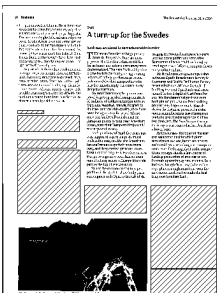
The hype is now giving way to much scepticism about the technology's prospects. "I don't think it's completely hot air, but it won't live up to its early promise," says Jagdish Rebello of iSuppli, a market-research firm. WiMax, he says, will chiefly be used by telecoms firms in rural areas, to plug holes in their broadband coverage.

In urban areas WiMax does not make sense, since it will be uneconomic compared with cable and DSL, argues Kenneth Furer, an analyst at IDC. "It's not going into New York, Los Angeles or London," he says. It is also too expensive for use in the developing world, at least for the time be- ▶▶

ing, since early WiMax access devices (which must be fixed to the outside of a building) will cost around \$500; other forms of wireless link, such as mobile-phone networks, will remain a cheaper way to connect up remote villages.

Fervent believers in WiMax, chief among them Intel, the world's largest chip-maker, believe the technology will take off when it can be incorporated into mobile, rather than just fixed, devices. The next version of the WiMax standard, which has yet to be finalised, will support mobile access, provided the technology can be made small and energy-efficient enough to fit into laptops and handheld devices. Alan Murphy, a WiMax specialist at Intel, is optimistic that WiMax chips for laptops will be available in late 2006 and that they will consume only 10% more power than today's Wi-Fi chips.

Intel regards WiMax as a promising source of future growth. Intel chips power a majority of the world's PCs, and the company dreams of establishing a similar franchise in mobile devices, a far larger market. Equipment-makers, for their part, are counting on Intel to deliver: WiMax will become widespread only if the price of access devices falls, which in turn depends on the availability of cheap, mass-produced WiMax chips. But Intel has a poor track record in shipping wireless chips on time. And it is still unclear how much demand there will be for mobile WiMax. Carlton O'Neal of Alvarion, the biggest maker of fixed-wireless gear, notes that the



mobile-phone base-station market is over \$55 billion a year. "The big dream is to cover the planet with WiMax and get to a \$50 billion market," he says. It certainly is a big dream—but so far, that is all it is. ■



"WiMax-ready", they said. But I say, "WiMax not ready"