

FACT SHEET on WiMax – the Wireless Broadband Technology which OPEL will use

- WiMax is short for *Worldwide Interoperability for Microwave Access*.
- WiMax is an international standard for wireless broadband technology (WBT). WBT is one of many technologies which can be used to deliver broadband. Others include fibre, DSL including ADSL2+, 3G Mobile and satellite.
- WiMax is now well accepted as the preferred international standard for WBT, with over 400 manufacturers and telecommunications companies now part of the WiMax Forum.
- WiMax will be used by OPEL (a partnership between Optus and Elders) to provide broadband access to rural and regional areas which will be capable of delivering speeds of up to 6Mbps initially, rising to up to 12Mbps.
- 1361 WiMax base stations will be built by OPEL across Australia under the Australia Connected program announced by the Australian Government (also known as the Broadband Connect Infrastructure Program).
- WiMax is well suited to rural and regional Australia and can deliver high bandwidth services over long distances (up to 20 kilometres). OPEL's WiMax network has a target completion date of 30 June 2009.
- Wireless broadband technology (either WiMax or near WiMax) is being used worldwide to provide broadband access to previously underserved areas.
- In the United States WBT is connecting regional and remote communities in states such as Nebraska, Kansas and Wyoming, as well as meeting specific needs of educational institutions and law enforcement authorities in communities in Texas, California, Ohio and Indiana.
- WBT connects the largest ski venture in Austria, which covers 25 resorts and 270 lifts.
- In the rural and regional areas of Ontario, Canada, WBT has connected 117,000 people living across 50,000 sq kilometres. And WBT is connecting small, isolated villages spanning 120 kilometres of small islands in Newfoundland, Canada.
- WiMax is also the wireless technology of choice in countries such as China, South Africa, Japan, Denmark and Sweden to connect previously difficult-to-connect areas in large cities, regional and rural communities and isolated regions.
- OPEL will finalise its technology choice following vendor negotiations. However, OPEL currently considers that it is likely to choose WiMax technology that conforms to what is known as the 802.16d standard. This standard supports fixed broadband applications.
- WiMax can operate in a range of frequencies including 3.5GHz (gigahertz), 5.4GHz and 5.8GHz. In Australia the 5.4GHz and 5.8GHz spectrum is available under a class licence. OPEL will finalise its frequency choice following vendor negotiations.
- Optus has completed a successful trial of WBT using class licence spectrum with no interference issues. On this basis OPEL's options include the use of class licence spectrum to deliver carrier grade services in OPEL coverage areas.
- WiMax or near-WiMax networks at 5.8GHz are operated today by BT in Britain and Verizon in the US.