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Companies Mentioned:

AIRN
ALVR
HSTX

\$3.27
\$10.07
\$18.34

Telecommunications Equipment: Telecommunications Equipment

Reason for Report: Recent Development

A Major WiMAX Deployment in the Outback; Implications for our Coverage List

INVESTMENT CONCLUSION:

The Australian government's recent \$1 billion contract award is a major opportunity for the wireless broadband equipment supply chain that we follow. In this report, we attempt to size this opportunity and discuss some of the potential beneficiaries. From a broader perspective, we believe that this deployment highlights how broadband access for underserved subscribers remains a major driver for fixed WiMAX deployments. As the business model for deploying these services gets refined, equipment costs decrease as unit volumes increase, and the 3.5 GHz spectrum gets allocated in more countries, we think the fixed WiMAX network deployment trend should accelerate.

KEY POINTS:

- Recently, the Australian government announced the award of a \$958 million contract to the Optus-Elders (OPEL) consortium to extend broadband services to rural areas of the country. OPEL will use a combination of WiMAX and DSL to provide broadband to rural subscribers.
- The OPEL network will cover over 600,000 square kilometers, delivering wireless data speeds of up to 6 Mbps initially, with plans to increase data speeds to 12 Mbps by 2009.
- Components of the network to be bid out will include fiber optic backbone switching equipment and microwave backhaul links as well as WiMAX and DSL network equipment. We believe that OPEL's contract with the Australian government will be finalized in the next 6-8 weeks, after which we think that OPEL will be in a position to begin negotiations with potential suppliers.
- We think that the initial opportunity size for WiMAX equipment vendors could approach \$100 million, roughly half of which we think will be infrastructure and the remainder subscriber terminals.
- OPEL has identified Alvarion, Nortel and Nokia Siemens as some of the initial bidders. We note that OPEL has worked with Alvarion before. We believe that NT's involvement in the bid could be a positive for AIRN, since we think that NT will use AIRN's equipment to bid this project because OPEL will be deploying fixed WiMAX equipment, likely in the unlicensed 5.8 GHz spectrum band.
- Another company Optus has worked with previously that could benefit in this deal is Ceragon Networks for the microwave backhaul portion of the network. Harris Stratex Networks and DragonWave could be other potential suppliers for this opportunity.

See important disclosures and analyst certification on page 4 of this report.

WiMAX in the Outback

Recently, the Australian government announced the award of a \$1 billion contract to extend broadband services to rural areas of the country. The contract is aimed at encouraging private sector rollouts of broadband services in rural areas and is a part of Australia's Broadband Connect Infrastructure Program. The Australian government awarded the OPEL consortium a \$958 million subsidy to build out the network that will use a combination of WiMAX and DSL to provide broadband connectivity to rural subscribers.

The Australian Telecom Environment

Australia has 21 million inhabitants. At only 3 inhabitants/km², its population density is one of the lowest of the Organization for Economic Cooperation and Development (OECD) countries (OECD average is 130 inhabitants/km²). This low population density typically means that wireline-based broadband access networks such as DSL are uneconomical in more rural regions since operators have only a small subscriber base to defray high upfront network investment costs. Despite this, broadband subscriber growth in Australia has been very strong thus far, expanding from less than 1 subscriber/100 inhabitants in 2001 to 19 subs/100 inhabitants in 2006. Australia's current broadband penetration rate is slightly higher than the OECD country average of 18 subs/100 inhabitants.

OPEL is a joint venture between Optus and Elders. Optus is a competitive carrier with over 6 million subscribers that provides a broad range of communications services including mobile, traditional telephone services, business network services, broadband services and subscription television. Elders is one of Australia's leading rural and regional service providers, serving those regions for almost 170 years. As an aside, Telstra, Australia's incumbent telecommunications services company, provides service to roughly 10 million fixed access lines and 9 million mobile service subscribers.

The Network

The OPEL network will cover more than 600,000 square kilometers, delivering wireless data speeds of up to 6 Mbps initially, with plans to increase data speeds to 12 Mbps by 2009. The WiMAX network will likely initially operate in the unlicensed 5.8 GHz frequency band as the 2.3 GHz and 3.4 GHz licensed bands are owned by other carriers.

We think that OPEL is targeting around 3.7 million households for services with its new networks. The consortium has said that it can cover roughly three-quarters of its planned subscribers with ADSL2+ using its current copper wire network, implying somewhere around 1 million households to be passed by OPEL's WiMAX network. A 20% take rate assumption implies 200,000 subscribing households. We would view a 20% take rate assumption as conservative, given that these services are targeted at rural areas and in many cases OPEL's broadband services will be the only game in town.

We think that in the OPEL network deployment, an above-average percentage of capital investment will be allocated to equipment since OPEL can utilize its existing 2G and 3G mobile cell sites to collocate the new equipment, lowering capital outlays for real estate, towers and enclosures. The network is expected to utilize 1,360 WiMAX base station sites in addition to the consortium's plans for 426 DSL-enabled central offices.

Our Thoughts on the Opportunity Size and Potential Suppliers

Components of the network to be put out for RFQ (request for quote) will include the core fiber optic backbone network and microwave backhaul as well as WiMAX and DSL equipment components. We believe that OPEL's contract with the Australian government should be finalized in the next 6-8 weeks, after which we think OPEL will be in a position to begin negotiations with potential suppliers.

Based on the information we have thus far, along with our assumptions on subscriber take rates (mentioned above), we think the initial opportunity size for WiMAX equipment vendors could approach \$100 million, roughly half of which we think will be infrastructure and the remainder subscriber terminals. In our view, our subscriber terminal opportunity size estimate is somewhat validated by recent statements from OPEL, in which the consortium suggests that its initial subscriber terminal (or customer premises equipment—CPE) order could be as large as \$40 million to \$50 million. We think our initial opportunity size could be followed by additional opportunities as the subscriber base grows.

On the microwave equipment side, we expect the opportunity size could be slightly lower. Based on our estimated per link price of \$25,000, OPEL's deployment of 1,360 base station sites would require an investment of \$35 million, assuming each base station site requires a microwave link for backhaul. Assuming that only three-quarters of base stations would require a microwave link (the remaining 25% would be assumed to have a fixed-line means of backhaul), the total opportunity size gets closer to \$25 million.

OPEL has identified Alvarion, Nortel and Nokia Siemens as some of the initial bidders. We point out that ALVR has previously worked with Optus, which could be an advantage for the Company in its current bid. Also, from our coverage list, we believe that NT's involvement in the bid could be a positive for AIRN, since we think that NT will likely use AIRN's equipment to bid this project because OPEL will be deploying fixed WiMAX equipment, likely in the unlicensed 5.8 GHz spectrum band.

As we mentioned previously, microwave equipment suppliers will also be beneficiaries of this project. Another company that we believe Optus has worked with before and could be a beneficiary from this deal is Ceragon Networks for the microwave backhaul portion of the network. Harris Stratex Networks and DragonWave could be other potential suppliers for this opportunity.

In earlier days, deployments of this nature were mostly sourced through a single supplier, particularly for fixed wireless communications equipment. Based on the increasing deal sizes for WiMAX deployments and the more standardized nature of WiMAX equipment, we think that, going forward, sizeable network deployments (such as this one) will be multi-sourced, which gives network operators purchasing leverage and helps to ensure continuity of supply. As a result, we view it as unlikely that any one single supplier walks away with the entire contract amount; nevertheless, OPEL's deployment still represents a major opportunity for many of the companies on our coverage list.

Broader Implications

We have maintained for some time that the extension of broadband services to rural areas of developed countries and the growth of broadband subscribers in underdeveloped countries with little (or no) communications infrastructure both could spur fresh rounds of capital investment and represent major opportunities for fixed WiMAX services.

The Australian Broadband Connect contract award is one of the bigger fixed WiMAX deployments thus far in the industry, and we think representative of the types of deployments that should become more widespread over the next few years. OPEL's operating model is particularly interesting because of its initial use of unlicensed spectrum. We continue to believe that as the business model for deploying these services gets refined, equipment costs decrease through growing unit volumes, and 3.5 GHz spectrum gets allocated in more countries, then the fixed WiMAX deployment trend should accelerate further.

APPENDIX A

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Distribution of Stephens Inc. Ratings

Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
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HOLD [EW]	87	40.65	13	14.94
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