Public Broadband Wireless Access – What will it take?   Suzanne Stelmock
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The hype of the 802.11 standard – the availability of a technology that makes use of unlicensed spectrum to deliver broadband (wireless) access to the Internet – sounds like a great opportunity for new players – especially following the disappointing rollout of DSL and clouded promise of 3G wireless.

The fact is 802.11 is a technology on a journey to find itself and while we've seen successful applications on the enterprise scale, public access gateways have been slow to come on board and to turn a profit.

Maybe it takes more than a hot technology to make a successful business.

Can a new technology really provide an instant business opportunity?

Companies clamored to get in on the potential created by the development of 802.11x technologies. The list of companies – large and small – with their finger in the pie is long.

Gartner has forecast an installed base of 802.11b equipped laptops of 11.9 million by end 2002. Frost & Sullivan predicted 802.11b wireless LAN revenues of $2.5B by end 2002. (May 2001 "The Global Market for 5GHz Wireless Technology") Providers have announced installation of broadband wireless access at hundreds of locations in the USA (and internationally) in airports, hotels and coffee shops. Meanwhile, the bold, "new" entrants like Mobilestar and Ardent Communications, who dared to take on the public Internet access as a business, were unable to sustain a profitable business.

To deliver roaming Internet access at even one convenient location involves a raft of players. For this reason, making the business model successful requires a critical mass of users; and creating a critical mass of users requires a backbone roaming network similar to what occurred in the cellular industry. Achieving this within the lifecycle of the technology is the real question. No individual player alone is able to deliver on the promise of broadband wireless Internet access from anywhere at anytime. The core relationships here are the roaming consortiums providing interconnectivity of the Authentication, Authorization and Accounting (AAA), settlements, collections, Internet Service Providers and their customers. The piece they are missing is the extension of access and usage to public locations which requires:

- Wireless access installed, managed and maintained at desirable locations

- Caring service providers with a vested interest in providing broadband access – if only to expand the attractiveness of an existing customer service

Of the locations attempted thus far, some of these are better candidates than others; some are awaiting the availability of more sophisticated services to be of value, while others simply need someone who cares to make the business model work.

- In the case of hotels, the alternative for 802.11b is a wired connection Ethernet LAN (which most hotels already provide) and it becomes a simple cost tradeoff of wiring a set of rooms, or clouding the same area. For guestrooms a single connection is sufficient, so wireless offers little benefit in being able to serve an unlimited number of users. Conference rooms, however, make an attractive location for wireless enabling connection of multiple users, from anywhere in the room.

- The idea of setting up your laptop at the local coffee shop just didn't play; whether these locations become convenient locations to pick up urgent info by PDA or web enabled cell phone remains to be seen.

- Private airport lounges offer the greatest potential, assuming the lounge operator can successfully promote the convenience and speed of the ubiquitous broadband Internet access to its frequent travelers as one more perk.

The likely scenario, then, is the existing ISP partnering with a location operator and facilities provider to allow roaming via their ISP from the operator's location. For example, American Airlines lounge partners with ISPs from major roaming consortiums such as iPass and/or GRIC to enable Internet access, and contracts Wifi Equipment Inc to install and manage access points connected to each of these ISPs via high speed data link.

As the ISP would receive ongoing revenue generated by foreign ISP customers, and the Airline Lounge is able to generate additional revenues through annual membership fees, it is reasonable to expect that the total costs could be shared.

In this model, the value chain is complete and provides benefits for costs incurred and involves a vested interest on the part of each party to promote and support the service.

Having a vested interest in providing the service – both costs and benefits – ensures the necessary promotion and support of the service. This didn't seem to be the case for Mobilestar, as the Starbucks cafes neither promoted the service, nor reportedly paid the cost of the equipment being installed.

Unfortunately, even in the airports and hotels that are clouded today, there is little, if any, promotion that they have wireless broadband access capabilities. Certainly if you don't tell the customers that the service is available, their chances of using it are very slim.

In order to provide a valued, profitable service, a number of elements need to fall into place:

1. User demand. Broadband Access needs to become a "must have" rather than a "nice to have" for a critical mass of traveling Internet users, who, by the way, frequently visit a common set of specific locations.

2. Broadband Access needs to be offered through an operator with a vested interest in the customers – such as a hotel operator, airline lounge operator, or even cellular network operator.

3. Minimal cost of market entry through reuse of existing infrastructure, partnerships, and operating processes.

4. Reuse of the existing provider-customer relationships by providing access in private airport lounges only, through the airline lounge operator, who has a vested interest in attracting and keeping the user happy – treating the broadband access as they would a free glass of wine – an enticement to loyalty

5. Reuse of existing infrastructure to minimize costs and enable competitive pricing. ISPs already have AAA and iPass have the settlements and interconnection capabilities.

6. Proven cost/ benefit of Wireless over wireline options. Until connection to the Internet via handheld devices takes off, whether the connection is wireless or wireline is irrelevant to the end user – the capability is the same.

7. A rational focus on the real benefits – to the end user and the individual players.

8. The establishment of broadband as an expected level of Internet access and wireline connection as an inconvenience.

In the short term, existing infrastructure operators with an available customer base – including ISPs, roaming consortiums and cellular network operators – are best positioned to benefit from the proliferation of public wireless access gateways through increased usage. However, the key to their success is in co-opting location operators to promote the service and provide the space to accommodate a shared customer base. At the same time, the value to the user must be sufficient to justify the cost.

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