FT.com FINANCIAL TIMES

Close

Thomas Hazlett: In the clouds over municipal Wi-Fi

Print

By Thomas Hazlett
Published: January 13 2005 16:22 | Last updated: January 13 2005 16:22

The fog of broadband policy has given way to frenzy over municipal Wi-Fi. Ignited by Philadelphia's consideration of a city-owned wireless broadband network, the concept appears to rock. The blogosphere trumpets "Philadelphia, the biggest WiFi hotspot in the world," while Mayor John Street is feted as a visionary. Newspaper features bulge with internet bubble-style pull quotes, such as this summation by Aaron Nutt, a consultant: "Wi-Fi is no longer a 'coffee house' technology and represents a potentially serious disruptive challenge to the current wireline-based broadband market."

In fact, scores of municipalities have embraced Wi-Fi. Bryant Park, adjacent to the New York Public Library, is a hotspot. A "wireless cloud" hangs over city streets in Portland, Oregon. Indeed, Philadelphia already offers free wireless internet access in Love Park and the Museum of Art. We trust that park and museum goers appreciate their tax dollars at work. But the real "disruption" will be diverting attention from reforms that could actually extend broadband networks to millions of mass market consumers.

The wireless connection provided to your notebook's 802.11a/b/g chip is just the tip of an extensive telecommunications grid typically provided by the phone or cable company. Just as your cordless phone augments, rather than replaces, your phone line, Wi-Fi signals enable PC mobility only when a fixed grid is within shouting distance. Hence, municipal Wi-Fi coverage will be spotty if cheap, very expensive if ubiquitous.

Yet, even without ribbon cuttings at City Hall, every neighbourhood in the US already teems with Wi-Fi access. Nodes sprout naturally in the 31m US homes (of about 110m total) subscribing to broadband via cable modems and DSL, a tide rising by 2m each quarter. Nokia scientist Dirk Trossen enjoys high-speed connections for his personal digital assistant all along his one-mile morning walk to the subway in Massachusetts, courtesy of home networking spillovers. "You have an awful lot of wireless coverage already in cities," Mr Trossen tells Technology Review. "The problem is it's not building up a wireless network."

The problem is, policy makers are slow to embrace actual networks - if not downright hostile. While Philadelphia's policy elite smiles for today's press photos, they snarled when an upstart broadband service provider applied for a city franchise in 1998-99. After more than two years of exhaustive effort, RCN gave up its quest to challenge incumbent cable and telco operators with its "triple play" of video, voice, and high-speed internet access. Then Mayor Ed Rendell had openly opposed the potential entrant, demanding tough franchise conditions. While thousands of suburban Philadelphia households today enjoy superior broadband service, courtesy of RCN's competition, urbanites pay more for fewer choices. Thank the mayor, who has since been promoted to governor.

The same hostility to market competition is evident in federal spectrum policy. Cellular carriers provide nationwide coverage for 174m mobile voice subscribers, about 47m of which pay for data services too. The networks are aching to give them broadband speeds. Sprint PCS and Verizon Wireless are upgrading networks to provide EV-DO, offering 300-700 kbps downloads almost anywhere a cell call is made. Cingular has responded with its own nationwide upgrade to a rival technology delivering 400-700 kbps.

Each carrier plans to invest in excess of $1bn on these improvements. But each is stymied by lack of radio spectrum. Incredibly, American carriers have access to only about 170 MHz of bandwidth - just half that available in the UK. Cingular announced its plan to invest in high-speed services only after acquiring AT&T wireless, stating that the extra capacity was crucial to expansion. T-Mobile recently announced it would not invest in wireless broadband. With just 30 MHz to serve its 17m voice customers, its airspace is too cramped. The two EV-DO networks adopted a more advanced technology to squeeze out extra bits, but squeezing is not cheap: $80 a month for unlimited use.

The government's starvation diet plan is not limited to existing networks. Picking through licences originally allocated for educational video distribution in 1963, wireless pioneer (and billionaire) Craig McCaw has cobbled together sufficient bandwidth to cover Jacksonville, Florida with wireless broadband. McCaw's Clearwire deploys NextNet infrastructure (base stations and modems), as well as wireless cards (slipping, like Wi-Fi cards, into the PCMCIA slot), to provide a $25 a month service covering 100 square miles. Meanwhile, Nextel deploys a rival Flarion network in North Carolina's Research Triangle. Using 120 cell towers, the new system beams broadband to 3,000 subscribers who pay from $35 a month. Both systems offer access indoors and out.

These "wide area clouds" would sweep the US - with still other technologies from ArrayComm, Navini, IP Wireless, BeamReach and Qualcomm - were prevailing political winds favourable. But licences are extremely scarce and their restrictions grim; regulatory obstacles have filled a graveyard with entrepreneurs who dared. The only new spectrum allocations suitable for broadband since the 1993 PCS rule making have been for unlicensed use. This month marks a re-auction of 2G (second generation) licences from that 1993 allocation - five years after Europeans auctioned their 3G permits.

The social value squandered by under-utilisation of radio spectrum is truly enormous. Business and residential users are willing to pay billions annually for mobile applications that are on the shelf, ready to roll. Oodles of prime bandwidth is today idle. Sprinkling downtown streets with Wi-Fi access points will do little to change that. Thinking that progressive policies have been adopted will make it worse.

The writer is a senior fellow at the Manhattan Institute for Policy Research