



## On a Clearwire, you can see everything

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By Thomas Hazlett

In May, mobile carrier Sprint entered a venture with wireless broadband start-up Clearwire and a corporate cadre that includes Google and cable operators Comcast, Time Warner and Bright House. They joined previous investors Intel, Motorola, Bell Canada, cellular billionaire Craig McCaw and share buyers in Clearwire's 2007 initial public offering to give the company, with just 500,000 subscribers, a market value of \$14bn - dwarfing the rest of Sprint, which has 47m subscribers.

To most, it is a yawn. Not even techies took much notice. Sprint and Clearwire, having bandwidth in the 2.5 GHz band (not far from PCS frequencies), formed a national network powered by a consortium of service, equipment and application suppliers. Ho hum. Business as usual.

Ordinary - and sensational. Clearwire-Sprint-Intel-Google-Comcast-TimeWarner-McCaw blasts away barriers to broadband and a flock of public policy myths. Stories about the coming era of municipal wi-fi, the obsolescence of property rights to radio spectrum and the desperate need for "net neutrality" fall to pieces. For years these tales were spun from the triumphal assertion that the "innovation commons" of the post-internet economy changed everything. The "Chicago School" tools to prosperity - establish property rights, deregulate, let market competition rip - were dusty relics of a bygone era.

So broadband was a crummy cable-DSL duopoly, and local governments' wireless networks would fix that. Mobile telephony was a crummy oligopoly, and more unlicensed spectrum - as used for wi-fi and cordless phones - would fix that. And to protect it all, the internet's "open end-to-end" environment needed some regulatory muscle: rules prohibiting discrimination by internet service providers, control freaks who, left to their grabby impulses, would increasingly squeeze customer choices. Network neutrality rules would fix that.

But here's "New Clearwire". The chief advocates of muni networks are shelling out to build private networks, instead; the lobbyists for more unlicensed spectrum are paying to purchase licensed spectrum; the champions of net neutrality are getting preferential non-neutral customer access by buying the internet service provider.

Municipal Wi-Fi Adieu. When local government networks were the rage, circa 2003, their loudest corporate backer was Google. Broadband for all via "free" unlicensed spectrum, smart radios and just a gentle nudge from City Hall. Politicians from Philadelphia to Portland drank the Kool-Aid. But Google just paid \$500m to jump to the Clearwire ship. The change in strategy speaks volumes: municipal wi-fi is considered small opportunity for Google and no threat to Clearwire.

Fleeing the "Spectrum Commons". Five years ago, Intel was pressuring US regulators for more unlicensed bands. It won - the Federal Communications Commission dumped hundreds of MHz into the market. The bump was little noticed - short-range apps continued to work, but not much else developed. Meanwhile, wireless phone networks - providing wide area, mobile service - were booming. But regulators held off new allocations for a decade, starving the sector just when it was upgrading to high-speed data networks.

New Clearwire boasts WiMAX, "wi-fi on steroids", as its technological innovation, but note: this

WiMAX runs on licensed frequencies. That is an economic choice, not a technical one. Only with the control afforded by exclusivity will these companies invest in the networks that, they hope, will make consumers sing. The "spectrum commons"? Been there, done that. This wireless broadband innovation aims to do what no one has done in unlicensed - and betting \$14bn on it.

Net Neutrality Not. Clearwire consortium members are not passive investors. Buying in, they become network friends with benefits. The cable ops will retail service. McCaw's NextNet is the lead gear maker. Motorola supplies handsets. Intel's chips are plugged in. And Google's search engine gets its own button on the phones, a cute efficiency copied from the wildly popular DoCoMo network in Japan. If the NTT model, where the carrier extracts payment from mobile apps for a preferred spot on the wireless web, is "open" - then "open" all capitalists must be. Richly, NTT is a member in good standing in Google's Open Handset Alliance.

New Clearwire tells us that a "fully-open, third pipe" has arrived in the broadband market - and their corporate network, crafted with exclusive spectrum and preferential access, and gobs of private capital -- will deliver it. That, truly, is a great leap forward. Thank goodness for the "innovation commons". The Chicago School could not have said it better.

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