The Free State Foundation

A Free Market Think Tank For Maryland...Because Ideas Matter

Perspectives from FSF Scholars
November 28, 2007
Vol. 2, No. 27

Wireless Works--Without More Regulation

by

Solveig Singleton*

The World Wide Web gets the popular press, but wireless began the work of bringing down old communications monopolies years ago. Wireless services were freed from public utility-like economic regulation in the U.S. in 1993. Today, wireless innovators are poised to shatter more expensive and static regulatory and business and models around the world. Change is afoot. But the lesson of the past, that regulation and innovation do not combine well, is already being forgotten, as regulatory rhetoric about net neutrality and openness mandates heats up.

Most wireless devices in use today are second or third generation (2G or 3G). Each generation of technology is associated with a set of standards used to build devices that operate within a certain bandwidth and that offer about the same range of data speeds and quality. Roughly speaking 3G is faster and better than 2G, and supports a wider range of services. 3G services include CDMA or TDMA phone networks, and Wifi and WiMax.

In 2005, some networks deployed faster 3.5G services based on a standard called High-Speed Downlink Packet Access (HSDPA). But the next generation is already in the works, with pre-4G services like Ultra Mobile Broadband (UMB) expected in 2008 and 2009. In 2012, 4G devices are anticipated. The 4G devices will be all-IP, capable of supporting about 1 Gbps stationary and 100 Mbps mobile, and are expected to make mobile broadband and even more affordable mass market service.

With this pace of change comes competition, competition that drives companies to design and redesign products to keep pace with what consumers want. Devices built to 3G and 4G standards compete; but one set of 3G devices also competes with other 3G devices. The latest high-end phones such as the iPhone are still 3G devices; its introduction has triggered the introduction of new features to competing models such as Microsoft's Zune and Verizon's Voyager, which uses a touch-screen similar to the iPhone. Nokia's new 3G phones include one that combines navigation, a high-end camera, and multi-media computer capabilities with now-familiar features such as games, and is advertising its N-series phones as "open to anything," hoping customers will prefer a range of carrier choices not supported by the iPhone, which offers only AT&T wireless service.

Overall, wireless devices are still in competition with wire-based and satellite networks, as well. Customers in the United States can choose among four national wireless carriers and many regional services. Over the last decade, costs per minute of wireless use have dropped from 37 cents to 7 cents. Thirteen percent of customers use only a wireless phone, and that figure of wireless-only subscribers is expected to grow to one third of the population by 2012. U.S. customers pay over 60 percent less than European consumers and have a wider range of service choices. This all adds up to a lot of competition --and an enormous array of cost and compatibility factors to consider when building any network.

The standards that support the growth of each generation of technology are open and neutral, in the sense that anyone can build devices using those standards. Each developer, such as Nokia or Apple, adds its own proprietary technology and sets out the terms on which customers will use its services. Not every network device will necessarily work with every other network device or service. The degree to which devices, networks, and services interconnect is determined by market forces at multiple levels, in the standard-setting process, during product and service development and provision.

Requiring openness or neutrality beyond the basics now supported by demand would needlessly make development far more costly and slow. A company that wants to invent a new type of phone with cutting edge features already has a good bit to think about without having to worry about new phones and networks being simultaneously built by everyone else. Furthermore, once the network is up and running, interconnection with other networks and unanticipated--or illegal-- behavior by users means that not all networks can carry all traffic on exactly the same terms, all the time.

"Open" and "neutral" supported by market forces makes sense. For example, Verizon has just announced what it calls an “any apps, any device” option that will be available by the end of 2008. Under this option, customers will have the option of using, on Verizon’s network, wireless devices, software, and applications not offered by the company. Verizon says that it will publish technical standards that the development community will need to design products that interface with its network.

But mandate "open" and "neutral" everywhere all the time for everything, and innovation will slow to a snail's pace and network traffic will jam. Competition between operators to offer innovative combinations of services at special prices would become almost impossible. This in turn would slow down the spread of new services to more remote areas, because operators could not be sure that they could recover their costs by luring customers with unique features like the ability to route VoIP calls over data networks, or free WiFi. The FCC's provision for 4G includes a grant to new Ultra Wide-Band (UWB) overlapping with the spectrum used by 3G WiFi services; this might create conflicts that can be solved by routing traffic in a certain way. In this fast-changing context, a regulatory command to treat all traffic all the same is just a bad idea.

Still, as the presidential campaign heats up, some candidates have tried to appeal to the tech crowd by supporting broad neutrality mandates. John Edwards, for example, supports net neutrality for wireless, asking the FCC to bar winners of spectrum from discriminating among data or services. And Barack Obama recently came out in favor of net neutrality regulation. Indeed, the FCC bowed to pro-regulatory activists and adopted rules requiring winners of some spectrum auctions to support any device or application on the spectrum they buy. This regulatory fervor and the resulting new regulatory mandates will depress the market, not generate a nirvana of new services.

With respect to wireless, during the nineties the FCC and political leaders did something right. By and large, policymakers repealed legacy common carrier regulation that applied to wireless, the same type of regulation that would be reimposed by net neutrality mandates. The next decade of wireless policy will show us if policymakers can learn from the prior deregulatory success. Or will they risk another round of innovation-reducing and investment-stifling failure?

* Solveig Singleton is a lawyer and Adjunct Senior Fellow with the Free State Foundation. The views expressed are her own. The Free State Foundation is an independent non-profit free market-oriented think tank located in Potomac, Maryland.