--Interoperability--

Getting the Most from Wireless Spectrum for Consumers, Taxpayers and Public Safety

ISSUE SUMMARY: The wireless marketplace needs interoperability to get substantial private capital to work creating jobs and bringing economic activity through the deployment of the next generation of wireless technology.

It is imperative to restore the Reagan-era requirement that mobile wireless devices designed to work in any one block of spectrum, work across all paired blocks within that same spectrum band. Unless this requirement is restored for the 700 MHz spectrum, it will be impossible for 4G devices to roam from one network to another on this "beachfront" spectrum.

As a result, large blocks of spectrum could go unused, spectrum will be unnecessarily devalued and, more importantly, wireless consumers and public safety will suffer limited access and will pay much more for wireless technology.

The FCC's failure to act on interoperability has created uncertainty that is keeping competitive wireless carriers (i.e., everyone other than the Bells – AT&T and Verizon) from putting hundreds of millions of dollars of capital to work creating jobs by building towers and retail locations in new markets throughout the country.

FCC Inaction

- The FCC has sought and received substantial comments on a petition for interoperability over the last 19 months yet it has failed to act.

- The uncertainty created by the FCC's inaction will discourage bidders from participating in future spectrum auctions - reducing the revenues that could be generated from those auctions and used to reduce federal deficits. Large blocks of auctioned spectrum likely will go unused and become worthless or nearly worthless. Going forward, the failure to require interoperability will damage the nation's ability to reduce budget deficits or the federal debt through future spectrum auction revenue.

Lack of Interoperability is Harmful to Public Safety

- Unless policy-makers take quick action to assure 700 MHz interoperability, our first responders will have less-than-adequate redundancy and more expensive LTE equipment.

- After Katrina and other recent disasters, first responders were unable to use their wireless devices in many Gulf Coast communities, because the devices were not interoperable with the available commercial networks (which often remained up and running during and after the emergency).

- Interoperability will also allow many rural police departments, sheriff's offices and volunteer fire departments to have affordable access to the services and applications available with 4G speeds. The Congressional Research Service says that the price of public safety devices would drop from $3000 to $500 if we had interoperability.[1]

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[1] *See, e.g.*, L. Moore, "Public Safety Communications and Spectrum Resources: Policy Issues for Congress," Congressional Research Service Doc. No. R40859 (September 1, 2010) ("The participation of commercial carriers in developing and deploying, for example, a common radio interface, is expected to

No Technological Bar to Interoperability

- The 2 wireless carriers that oppose 700 MHz interoperability (AT&T and Verizon) argue that it is not feasible to incorporate multiple 700 MHz bands in a device. **But we now know that's not true.** In fact, this Urgent Communications article[2] confirms Verizon's own plans to deploy devices in the public safety sector that support multiple 700 MHz bands:

> To roam between private public-safety networks and Verizon's LTE systems, Motorola devices **will have the capability of operating on public safety's Band 14 spectrum, as well as Verizon's Band 13 frequencies in the 700 MHz band**, [Rick] Keith [Motorola Solutions senior director of LTE product management] said. In addition, the devices will be able to access Verizon's 2G/3G networks and will include Wi-Fi connectivity, he said.[3]

- AT&T and Verizon also claim that adjacent-channel interference required the Lower 700 MHz Band Class 12 to be walled-off from their respective proprietary band classes (17 and 13). But 3GPP – the international standards setting body for wireless communications – in its Release 9 has formally concluded that Band Class 12 is a viable band class and is available for standard utilization.

- Even before 3GPP concluded its Release 9 proceedings, Samsung, the world's largest technology company[4], had begun production of infrastructure and devices for deployment on Band Class 12.

When Abroad, Even AT&T's CEO Wants Interoperability

According to industry press reports, AT&T CEO Randall Stephenson made the following statements regarding interoperability during a February 15, 2011 presentation at the Mobile World Congress in Barcelona, Spain (emphasis added):

- "AT&T is committed to the world's most advanced network, and **we want it the most open and highly available** and easily addressable."

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put the costs of public safety radios in the same price range as commercial high-end devices ($500). By contrast, interoperable radios for the narrowband networks at 700 MHz cost $3000 and up, each.")

[2] (http://urgentcomm.com/networks_and_systems/news/motorola-verizon-lte-alliance-20110223/) D. Jackson, "Motorola, Verizon Establish Public-Safety LTE Alliance," *Urgent Communications* (Feb 23, 2011).

[3] Incidentally, this article also demonstrates that it is possible to deliver the prioritization and other functionality that public safety has claimed cannot be provided by commercial networks. This is further evidence for supporting a D Block auction – the ability to satisfy public safety's requirements for prioritization on a commercial network – if the leadership chooses to take a stand on the fiscal impact of the giveaway.

[4] *See*, S. Jung-a and C. Oliver, "Samsung beats HP to Pole Position," *FT.com*, January 29, 2010 (http://on.ft.com/e009QV)

- “If our object is to grow the [wireless] pie, **interoperability is necessary**."

- "Spectrum is going to play a huge role [globally], especially as we move to 4G. It's most important that **regulators have to be aware of this if we want to create interoperability across geographies** and countries."

- “The **customer expectation for an open and seamless [wireless] environment will only increase** and the more we facilitate that openness, [the better]."

- “**An open and interoperable environment ... will drive mobile broadband** and mobile broadband with the cloud will drive the next wave.”

Mr. Stephenson repeated many of these same statements in support of interoperability during a CNBC interview immediately following his speech. Video of that interview is available here.[5] The relevant comments begin at the 1:18 mark.

[5] http://www.cnbc.com/id/15840232?play=1&video=1796966487