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October 27, 2009

Earley Green
Chief Clerk
United States House of Representatives
Room 2125
Rayburn House Office Building
Washington, DC 20515-6115

Dear Chief Clerk Green:

Please find enclosed the responses to the written questions for the record from members of the Subcommittee on Communications, Technology, and the Internet concerning the September 24, 2009 hearing entitled, "A National Interoperable Broadband Network for Public Safety: Recent Developments."

The Honorable Bart Stupak

Q1. Is everyone in agreement that some form of consistent federal funding, especially for rural areas and other high cost areas, would be necessary for the construction of the national interoperable network, especially if we are talking about 4G ?

A1. Yes. The potential commercial customer base in rural areas would be insufficient to support the network in the current economic environment. Increases in population and an increase in commercial and public demand for broadband services could help to mitigate the shortfall, but it is unlikely that the network would be profitable in these areas for the foreseeable future.

The Honorable Cliff Stearns

Q1. Let's assume we give public safety the D block; how much money would it cost to build out the public safety network and where will this money come from?

A2. It is premature to estimate costs since network performance specifications have not been firmly established. (There was a set of requirements set forth for prior to the auction; however a different set of



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network and coverage requirements, significantly relaxed from the original was proposed in the Third Further Notice of Proposed Rulemaking (3FNPRM). This document also proposed a second auction by region.) The inability of potential bidders to accurately gauge network implementation costs was a major factor in the failure of the first auction.

Some funding can be secured by forming public-private partnerships with existing wireless carriers, however as stated above this funding is unlikely to be sufficient to fund the network costs in rural or high cost areas. Relaxing network robustness requirements would defeat the purpose of the network as it would result in a “public safety network” that would be no more reliable than existing commercial networks.

Q2. If the FCC were to once again auction the D Block with Public Safety conditions, do you have confidence that you could negotiate a spectrum sharing agreement with companies that would meet your needs and still be within your budget?

A2. No, I am not confident. The costs to deploy the network and the substantial risk that these costs may not be recoverable remain major unknowns. It may be possible in some areas but not in others depending upon local demand for broadband services. In the future, this situation may change as economic conditions improve and the demand for broadband network access increases nationwide. As noted above, reducing network coverage and robustness requirements would increase the likelihood of forming a successful public private partnership, but the resulting network would not meet our needs.

Q3. Some argue that the 24MHz. public safety already has is not enough to build the broadband network because half will be used for narrowband voice. But haven't more than 10 cities filed waiver (requests) with the FCC asking to build their broadband networks on just 10MHz. of the 24MHz.? And aren't some cities planning to use VOIP instead of narrowband voice, which means they could use for broadband all of the 24MHz. the 2005 DTV legislation already cleared for them?



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A3. Your question raises several issues.

1.) Both narrowband channels and broadband channels require a buffer or guard band between channels. Broadband designs aggregate spectrum into much wider channels, however they still require a guard band at the channel edges. In a broadband network design, these guard bands are much larger than in a narrowband network, but since there are only two of them, rather than hundreds, the net effect is a more spectrally efficient network consisting of one very wide channel bounded by two rather wide guard bands.

Although 24 MHz is allocated to Public Safety, it is allocated in two blocks, broadband and narrowband, 12MHz each. The Broadband spectrum will require 1MHz guard bands on either side, leaving 10MHz of usable spectrum. This 10MHz is divided into two non contiguous blocks of 5MHz each, one block for uplink, one for downlink.

The D Block consists of two 5MHz spectrum chunks, one for uplink and one for downlink. These spectrum blocks are adjacent to the Public Safety uplink and downlink spectrum blocks making them ideal for spectrum aggregation in a broadband network.

2.) Narrowbanding is an FCC initiative designed to improve spectrum efficiency that has been stated policy since 1996. Many jurisdictions have constructed, or are in the process of constructing, narrowband mission critical voice radio systems. Hundreds of millions of dollars have been invested in this technology.

3.) New York City, and in particular the New York City Police Department, have expressed a desire to pilot a mission critical voice proof of concept as an application on the 700 MHz Public Safety broadband network they would like to deploy. This initiative is a mechanism intended to push the wireless industry to focus on, and perfect, mission critical voice applications on an LTE broadband network, in as short a



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timeframe as possible. They believe that ultimately there will be a single broadband network capable of supporting both mission critical voice and data.

We applaud them for their effort. However, others argue that their vision will not become a reality for many years. Our position is simply that we cannot be certain if this effort will succeed or in what timeframe. Until we are certain, we cannot embrace broadband mission critical voice nor can we advocate converting narrowband channels to broadband. As a final note, neither New York City nor the NYPD advocates converting the 700 MHz narrowband channels to broadband because they recognize that many jurisdictions are heavily invested in narrowband mission critical voice technology nor they do not wish to disrupt these projects.

All the best,

WILLIAM J. BRATTON
Chief of Police, City of Los Angeles
President, Major Cities Chiefs'

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