



**STATEMENT OF ROBERT LEGRANDE, II
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**BEFORE THE
UNITED STATES HOUSE COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON EMERGENCY COMMUNICATIONS,
PREPAREDNESS, AND RESPONSE**

**HEARING ON
INTEROPERABLE EMERGENCY COMMUNICATIONS: DOES THE
NATIONAL BROADBAND PLAN MEET THE NEEDS OF FIRST
RESPONDERS
REPORT/ORAL TESTIMONY**

JULY 27, 2010

Good afternoon Ms. Chairwoman and members of the Subcommittee. My name is Robert LeGrande and I am the former Chief Technology Officer of the District of Columbia Government and former Program Executive for the National Capitol Region's Interoperability Program. In this role, I led the District's Land Mobile Radio (LMR) network upgrade and I also led the development of the nation's first city-wide 700 MHz broadband wireless network for First Responders. This pilot network is considered a model for the nation (http://www.ntia.doc.gov/ntiahome/press/2007/WARN_060807.html) and in recent years served as a test bed for how broadband applications can be shared securely among Public Safety Agencies.

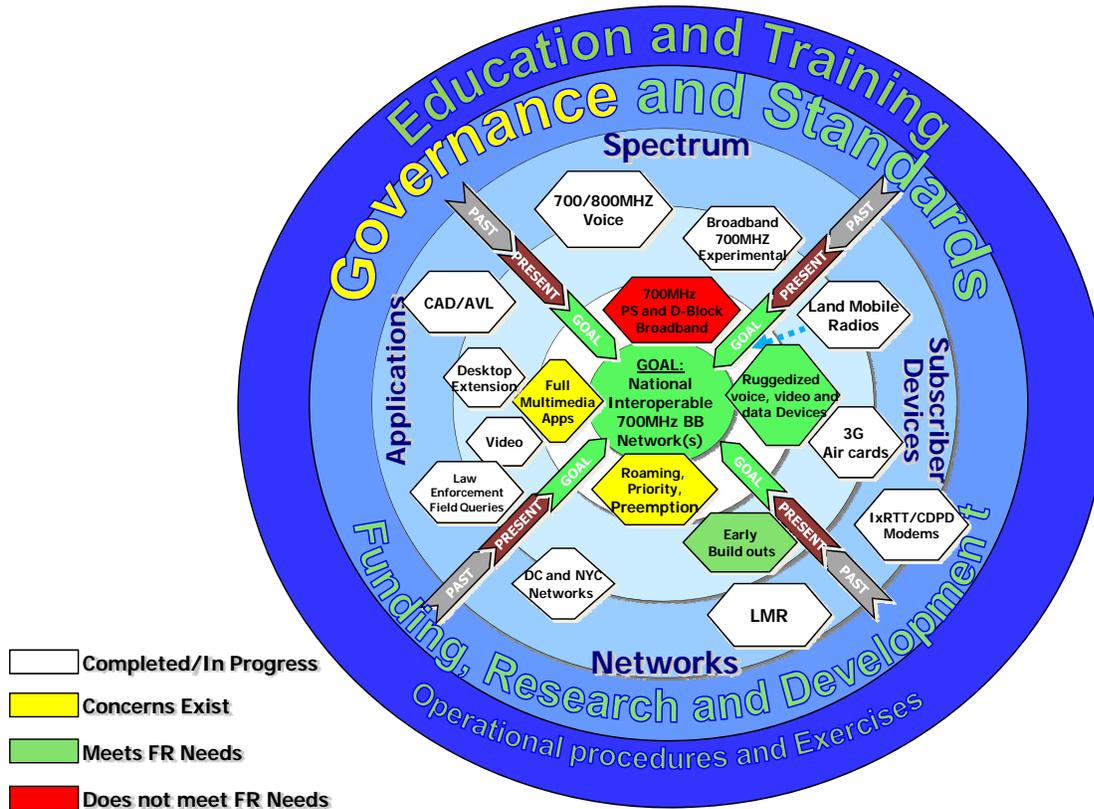
I resigned from the District of Columbia in 2007 and formed LeGrande Technical and Social Services, LLC, which has been recently renamed to "The Digital Decision".

My firm leverages lessons learned in the District's successful LMR and 700MHz wireless broadband network deployments to help other state and local governments prepare for and deploy Public Safety communications networks.

First, please allow me to acknowledge the outstanding efforts of this Committee, APCO, the Public Safety Alliance (PSA) and all member organizations, as well as FCC. In short, we are closer to providing next generation communications to our First Responders than we have ever been.

I appreciate the committee's ongoing efforts to address this critical issue and thank you for the opportunity to present my views on "Interoperable Emergency Communications: Does the National Broadband Plan meet the needs of First Responders?" Given the complexity of this issue and time allotted, I will keep my comments brief and focused on three key areas: **Where the National Broadband Plan (NBP) meets First Responder's needs; Where the NBP does not meet First Responder's needs and why** and **What I recommend we do about it.** Please reference Figure I below;

Figure I
Public Safety Communications Vision:
 The National Broadband Plan meets the needs of First Responders (FR) in many cases but there are a few **Significant Exceptions**



Where the National Broadband Plan (NBP) meets First Responder’s needs:

As the slide indicates the FCC’s National Broadband plan meets Public Safety’s needs in far more areas than it does not. The FCC has made substantial progress in moving us from a fractured and disjointed approach to a national interoperable wireless broadband network design that is flexible, interoperable, and with some changes suggested later in my testimony, is capable of meeting all First Responder needs today, tomorrow and well into the future.

The plan successfully addresses the need for technical and operational standards, national interoperability, funding, Public Safety broadband devices and most importantly, it gives day to day control of the network to the people who need it most; our First Responders. The plan has successfully influenced commercial carrier national broadband strategies resulting in both AT&T and Verizon wireless committing to share network infrastructure with Public Safety. This portion of the plan combined with PS' and the FCC's commitment to Long Term Evolution (LTE) 4G technology sets the stage for a highly competitive, low cost, efficient network deployments; while achieving private and commercial network redundancy which is essential to ensuring nation-wide coverage.

Where the NBP does not meet First Responder's needs and why:

While the NBP makes great strides towards PS nation-wide interoperable broadband communications, it has one key deficiency...; sufficient spectrum to get the job done. Historically PS has been allocated spectrum in non-contiguous chunks which has contributed to the Land Mobile Radio (LMR) interoperability problems we have today. The FCC has repeatedly stated that PS has 20 to 25 times more spectrum per user than commercial providers.

However, 50MHz of this calculation is from 4.9G spectrum which is unusable for wide-area broadband network use and all but the current 10MHz of broadband spectrum can be used for broadband network deployment.

The FCC has acknowledged that PS will need additional spectrum in the future and suggests that the best approach would be to begin with 10MHz of spectrum already allocated for PS broadband use, then allocate additional spectrum later. This sounds familiar and based on past results would just exacerbate the interoperability problems we already have... Further, what spectrum would we allocate and when? Will this new spectrum cause technical problems and force the commercial industry to establish a special separate standard for PS? This is a worst case scenario in the making as we will be repeating our past LMR approach and this will result in monopolistic innovation and pricing.

PS needs the 700MHz D-Block spectrum as it will stabilize PS' technological path and will result in efficient spectrum use as we will be able to plan a smooth transition to comprehensive voice, video and data communications. The good news is that once PS has transitioned all communications to our new network of networks, PS' spectrum holdings can be evaluated to determine if un-used spectrum can be returned for commercial use.

In the FCC's recently released whitepaper; "The Public Safety Nationwide Interoperable Broadband Network: A New Model for Capacity, Performance and Cost" the Commission concludes that PS has sufficient spectrum based on three emergency incidents. Given the number of users and uses identified in the document, the author is correct. However, based on my experience deploying the nation's first and only PS 700MHz wireless broadband network here in Washington, D.C., the scenarios referenced in the document do not accurately represent the anticipated number of network users or uses. Government users will be "super-users" because they need to consistently optimize government operations to lower costs while being driven to improve service delivery to citizens. Private wireless broadband networks provide a low cost alternative to achieve this result. Our next generation networks must have sufficient spectrum and be designed to support comprehensive government communications for the entire State and Local Government Enterprise, as well as Federal PS users.

The NBP seeks to offset PS spectrum needs by leveraging commercial roaming. Everyone supports PS having interoperability with commercial carriers; however PS should rely on commercial carriers as a last resort and not have to depend on them for everyday mission critical communications. An example of the difficulty we will face can be seen today with the recent release of the IPHONE 4.

Network outages due to capacity shortages and some technical glitches have been causing lapses in communications. If PS communications fail, people could die.

More recently the FCC has been suggesting that auctioning the D-Block in 2011 with an anticipated deployment date starting in 2012 will speed network deployments and lower costs. This means that PS should wait for an eventual D-Block winner to start network deployments 2 years from now. This actually delays the opportunities to deploy networks starting today and creates a “worst case” dependency on a single D-Block commercial carrier. Commercial carriers are deploying LTE networks now. This highly-competitive network deployment window of opportunity will close before a D-Block winner can be fully leveraged. This portion of the NBP would be great for the D-Block winner but very bad for PS.

What I recommend we do about it: In summary, the FCC has done an outstanding job developing the PS portion of the NBP. Additionally, the Commission’s recent waiver approvals and coordination with NTIA to help fund network deployments starting today are great first steps that will get the ball rolling. However, in order to fully meet First Responder’s communications needs, the NBP needs:

- 1) To re-allocate the D-Block to PS
- 2) A Comprehensive, long term spectrum plan for PS
- 3) A national network deployment plan and schedule and
- 4) A PS LMR to BB communications migration plan

Our First Responders are also our last line of defense and they deserve to have the best available tools and resources to protect us. Please support Congressman King's, Congresswoman Clarke's and many others efforts we get this done right once and for all.

I sincerely appreciate the opportunity to share my recommendations and the committee's continued work on addressing this issue. I'm happy to answer any questions you may have.

Thank you.