

**Michael T. McMenamin**  
Global Govt & Public Affairs

1100 New York Avenue, NW  
Suite 640 West  
Washington, DC 20005  
Phone +1 202 312 5916  
Fax +1 202 312 5904  
mcmenamin@alcatel-lucent.com

21 March 2007

*VIA ELECTRONIC FILING*

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

**Re: Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169; The Development of Operational Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communication Requirements Through the Year 2010, WT Docket No. 96-86.**

Dear Ms. Dortch:

On 20 March 2007, Ken Budka and I, on behalf of Alcatel-Lucent, participated in separate meetings with Aaron Goldberger, Legal Advisor for Commissioner Deborah T. Tate, and Cathy Massey and James Schlichting, Wireless Telecommunications Bureau. The purpose of the meetings was to discuss, reiterate and affirm Lucent's position in the above referenced proceedings.

Alcatel-Lucent continues to support the need for a broadband-only 6 MHz broadband block in the 700 MHz public safety spectrum space. In addition, the Federal Communications Commission should specify 1.25 MHz as a basic broadband channel size and allow for aggregation of multiple 1.25 MHz broadband channels in the 12 MHz of space currently set aside for public safety. Further substance of the discussion is set forth in the attached handout.

In accordance with Section 1.1206(b)(2) of the Commission's rules, this letter is being filed electronically with your office. Please contact the undersigned with any questions in connection with this filing.

Respectfully submitted,



---

Michael T. McMenamin

cc: Aaron Goldberger  
Cathy Massey  
James Schlichting



# Public Safety 700 MHz Band Recommendations



March 2007

## Broadband vs. Wideband

---

Today's Broadband Technologies are >10 Times More Spectrally Efficient than Wideband

At Like Data Rates and Coverage Criteria, Today's Broadband Technologies Offer Ranges Comparable to Wideband (TIA-902)

- Broadband technologies are the right answer for urban, suburban and rural environments

Broadband Technologies offer Cost Advantages Absent in Wideband Technologies

- Scale economies through re-banding of existing commercial broadband technologies
- Robust, competitive ecosystem largely absent from today's public safety market

## Pitfalls of Mixed Broadband + Wideband Band Plans

Spectrum Managed locally (flexibility) with nationwide implications:

- Broadband + Wideband Hampers Interoperability
  - Multimode devices required, network evolution hampered
- Broadband + Wideband Fragments Greenfield Spectrum
  - Preserving contiguous blocks of broadband spectrum today essential for use of broadband technologies tomorrow
- Broadband + Wideband Wastes Spectrum
  - Broadband technologies today are an order of magnitude more spectrally efficient than wideband. This gap will continue to widen.

“...any application that will run on a wideband network can also run, faster and supporting more simultaneous users, on a broadband network (while the reverse is not necessarily true).”

8<sup>th</sup> NPRM Comments of the  
Spectrum Coalition for Public Safety (Docket 96-86)

# Benefits of a Broadband-only Plan

---

Makes Best Use of Limited Public Safety Spectrum

Encourages Deployment of Cooperative Regional Networks

- Increased Spectral efficiency through use of spectrally efficient broadband technologies, pooling of spectrum resources
- Cross-Agency, Cross-Jurisdiction Interoperability by design
  - E.g., National Capital Region's Regional Wireless Broadband Network

Aligns Public Safety Broadband with Commercial Market Forces

- Scale Economies, R&D investment

Easier Frequency Planning

- Same channels used in adjacent sectors

Supports All Envisaged Public Safety Applications

# Alcatel-Lucent Recommendations for Public Safety 700 MHz Band

---

## Consolidate Narrowband Services in a Single Block\*

- Provides greatest protection for narrowband services
- Reuse internal guard between narrowband and broadband blocks for cross-border coordination

## Adopt Broadband-only Block in remaining PS700 MHz spectrum

- Broadband technologies make most efficient use of limited spectrum
- Wideband + Broadband: Hampers future evolution and interoperability
- Allow for sufficient guardband to maximize spectrum utilization and protect narrowband from broadband-induced out of band emissions and intermodulation risks

## Specify 1.25 MHz as Basic Broadband Channel Size

- Accommodates ALL generations of commercial broadband technologies
- Allow aggregation of multiple 1.25 MHz Broadband Channels

## Adopt Cellular Operations for Broadband

- Improves Spectrum Utilization
- Eases roaming onto commercial networks

\* *One for inbound and one for outbound*