



November 19, 2008

Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
445 12th Street, SW  
Washington, DC 20554

Re: WT Docket No. 06-150  
PS Docket No. 06-229

Dear Ms. Dortch:

Pursuant to Section 1.1206(b)(2) of the Commission's Rules, this is to notify you that on November 18, 2008, I met with Angela Giancarlo, Legal Advisor to Commissioner McDowell, regarding the regarding the above captioned proceedings.

During the meeting we discussed the attached slides regarding the estimated cost of relocating narrowband equipment in the 700 MHz band and the need for the FCC to obtain accurate information from licensees regarding the cost of relocation.

Pursuant to the Commission's Rules, one copy of this notice is being filed electronically with the Commission. If you require any additional information please contact the undersigned at (202) 371-6953.

Sincerely,

/s/ Steve B. Sharkey

Steve B. Sharkey  
Senior Director, Regulatory and Spectrum Policy

Cc: Angela Giancarlo

# 700 MHz Narrowband Relocation

# Additional Information Is Needed To Accurately Assess the Cost of Narrowband Relocation

- **A more precise process is required to estimate cost of Narrowband Relocation based on information from licensees**
  - Currently available information is incomplete
- **There is significant risk in underestimating a relocation cap**
  - Insufficient funds will leave Public Safety licensees unable to relocate
  - Delays in relocating narrowband systems lead to greater uncertainty and delay in deployment of the broadband network
- **There is no downside to a cap that overestimates relocation costs**
  - Cost will always be small relative to necessary D-Block investment and will not be a deterrent to bidders
  - D-Block licensee can work with PSST and licensees to limit actual cost of relocation based on documented costs
- **Estimates for one system can not be automatically extended to other systems**
  - Costs vary widely by region, system design and equipment

# Current Estimates Vary Greatly

## PSST Appendix B

FCC estimate is clearly too low

- Doesn't include necessary multiple touches to some radios
- Doesn't include program management costs and other professional services
- Bases cost on average values for relatively small number of systems
- PSST estimate just for vehicular repeater equipment is \$35 million (doesn't include installation)

There is no single source for a firm estimate

Common Wealth of Virginia estimate is \$14,260,241 for just the STARS system (doesn't include ORION)

PSR Region	PSST Estimate PSR Region Cost	FCC Estimate PSR Region Cost	Difference FCC-PSST
3	1,272,724	1,610,111	337,387
4	5,682,122	1,124,900	(4,557,222)
7	6,373,164	2,276,800	(4,096,364)
8	297,798	0	(297,798)
10	1,124,256	0	(1,124,256)
11	36,094	53,000	16,906
12	1,402,452	723,200	(679,252)
13	12,026,044	2,885,800	(9,140,244)
17	23,969	2,472,600	2,448,631
18	6,065,796	3,979,700	(2,086,096)
19	1,872,289	414,400	(1,457,889)
22	291,582	186,000	(105,582)
23	406,181	401,000	(5,181)
24	464,285	244,100	(220,185)
26	387,444	366,400	(21,044)
27	2,396,038	783,000	(1,613,038)
31	382,229	826,200	443,971
33	18,964,706	3,893,000	(15,071,706)
35	7,182	7,200	18
39	854,567	231,100	(623,467)
41	174,365	204,100	29,735
42/20	11,361,664	2,614,800	(8,746,864)
43	392,613	209,700	(182,913)
49	192,163	63,800	(128,363)
51	1,384,754	1,034,600	(350,154)
30/55/8	0	78,100	78,100
	<b>73,836,481</b>	<b>26,683,611</b>	<b>47,152,870</b>

# Motorola Narrowband Relocation Preliminary Cost Estimate Development Efforts

- **Preliminary Cost Estimates & Statements of Work**
  - Effort Conducted March – mid-June 2008
  - 41 Formal Presale Projects Created (26 Preliminary Cost Estimates Completed)
  - 10-Step Process Established
    1. Leadership Team Notified and a Core Team Established
    2. Local Project Resources Committed - >\$450K Expended
    3. Project Teams Kick-Off Calls Conducted – All Customers Contacted
    4. One-Page Project Survey Completed – 26 Customers Opted to Work with Motorola
    5. Project Data Collected (Sites, Frequencies, Subscribers, VRs)
    6. Project Relocation Plans Developed – Statements of Work Documented
    7. Project Plans Reviewed
    8. Customer Review – Not Completed in Many Cases
    9. Finalize Preliminary Estimates
    10. Deliver Estimates
  - Preliminary Cost Data was provided to the PSST on May 29<sup>th</sup>, 2008
  - Comparing and Contrasting of Preliminary Cost Estimates was not done.
- **Footnotes:**
  - Other manufacturer radios not included
  - Colorado effort suspended due to possible RFP procurement process
  - State of Georgia
  - State of Ohio – not included – large number of VRs
  - Some systems require subscriber units to be programmed twice to facilitate a smooth migration.

# 700 MHz Narrowband Cost Estimate Components

- Infrastructure Reconfiguration – Repeater Sites
- Subscriber Reconfiguration
  - Portable Radios (Motorola - other vendors not included)
  - Mobile Radios / Mobile Data Modems
  - Vehicular Repeaters (Futurecom - other vendors not included)
- Professional Services
  - Program Management
  - Systems Engineering
  - Systems Technicians
  - Testing / Documentation
- Equipment
  - Vehicular Repeaters (Digital Filters / Entire Analog Units)
    - Replacement of Analog Units with Digital Units requires complete unit upgrade
  - Software Upgrades in some cases
  - Mobile Antennas



# Process Required for Estimating Narrowband Relocation Cost

- **FCC Objective**
  - Provide certainty regarding relocations costs to bidders
  - Limit funds for relocating narrowband systems
- **Risk based on setting cap using incomplete information**
  - No single source has complete information
  - Multiple manufacturers and system implementation
  - Complete information must come from Licensees
- **Proposed Solution**
  - Licensees required to provide “not-to-exceed” estimate well in advance of auction
  - Provides time after the auction for the FCC, D-block licensee and PSST to review costs and ensure that only allowed costs are included.

# Example 700 MHz Relocation Process Timeline



# 700 MHz Narrowband Relocation Plans and Cost Estimates Required Detailed Information

## Relocation Plans

- Detailed System Description
- Frequency Plan Changes (List of Sites / Frequencies at Each Site)
- List of Affected Equipment at Each Site (Repeaters / Combiners / Antennas)
- Field Equipment Inventory (Control Stations / Mobiles / Portables / Vehicular Repeaters / BDAs, etc.)
- Frequency Relocation Migration Process Description (Infrastructure and Fielded Units)
- Work Breakdown Structure / Project Schedule
- Acceptance Test Plan
- Documentation Requirements

## Not-To-Exceed Cost Estimates

- Turn-Key Contractor Cost Estimates, or
- Task Level Labor Estimates and Subcontractor Costs
- Project Engineering and Project Management
- Travel Time and Travel Expenses
- Warehouse and Temporary Facilities Expenses
- Replacement Equipment and Software Costs
- Licensee Consultant and Legal Expenses
- Other Allowable Licensee Expenses