



National Regional Planning Council

Welcome to the 2024 NRPC Technical Seminar

Agenda

0810-0850	National updates on issues of interest to NRPC Membership <ul style="list-style-type: none">➤ Charley Bryson - NRPC Best Practices initiative and Interoperability in the Nation's Capital➤ Brandon Renehan, MD FiRST – Key Bridge Collapse – Communications Impacts and tracking Cellular Interference in 700 MHz➤ Don Root – APCO Standard Development – Common Channel Naming and Deployable Trunking
0900-0950	FCC Panel – Tracy Simmons, Brian Marenco, and Roberto Mussenden – FCC Topics and Q & A
1000-1150	Safer Building Coalition – BDA/DAS Systems
1150-1300	Lunch
1300-1350	Frequent CAPRAD Issues – Amanda Bredstrup and Scott Bigham
1400-1450	Use and issues associated with 700 MHz adjacent channel assignments – Dave Buchanan with Nick Falgiatore and David Stern
1500-1550	Michael Baltrosky, Assistant Chief, Montgomery County Fire and EMS along with James Downs, DHS CISA – National issues associated with encryption and key management
1600-1650	Open Forum – Members raise topics of interest from their home area

NRPC Best Practices

- The goal is for the NRPC to recommend “best practices” for members
- Best practices may evolve based upon the experiences of members or in adherence to federal rules
- Best practices developed to date include:
 - Use of 800 MHz interoperability channels
 - Licensing 700 MHz spectrum for Non-governmental organizations (NGOs)
 - Coordinating FCC form 601 applications and concurrences
- Goal for the NRPC is to develop “best practices” as needed

Upcoming 2025 Presidential Inauguration

- The Metropolitan Washington Council of Governments (MWCOCG) has sponsored three (“3”) new 700 MHz interoperability stations in Arlington and D.C. to support first responders called to the nation’s capital
- The MWCOCG has also purchased three deployable trunking units for Washington, Northern Virginia, and Maryland
- Most states send an honorary team to Washington for the Inauguration
- These new interoperability resources are expected to be available for official use by first responders

Controlled by DC Office of Unified Communications

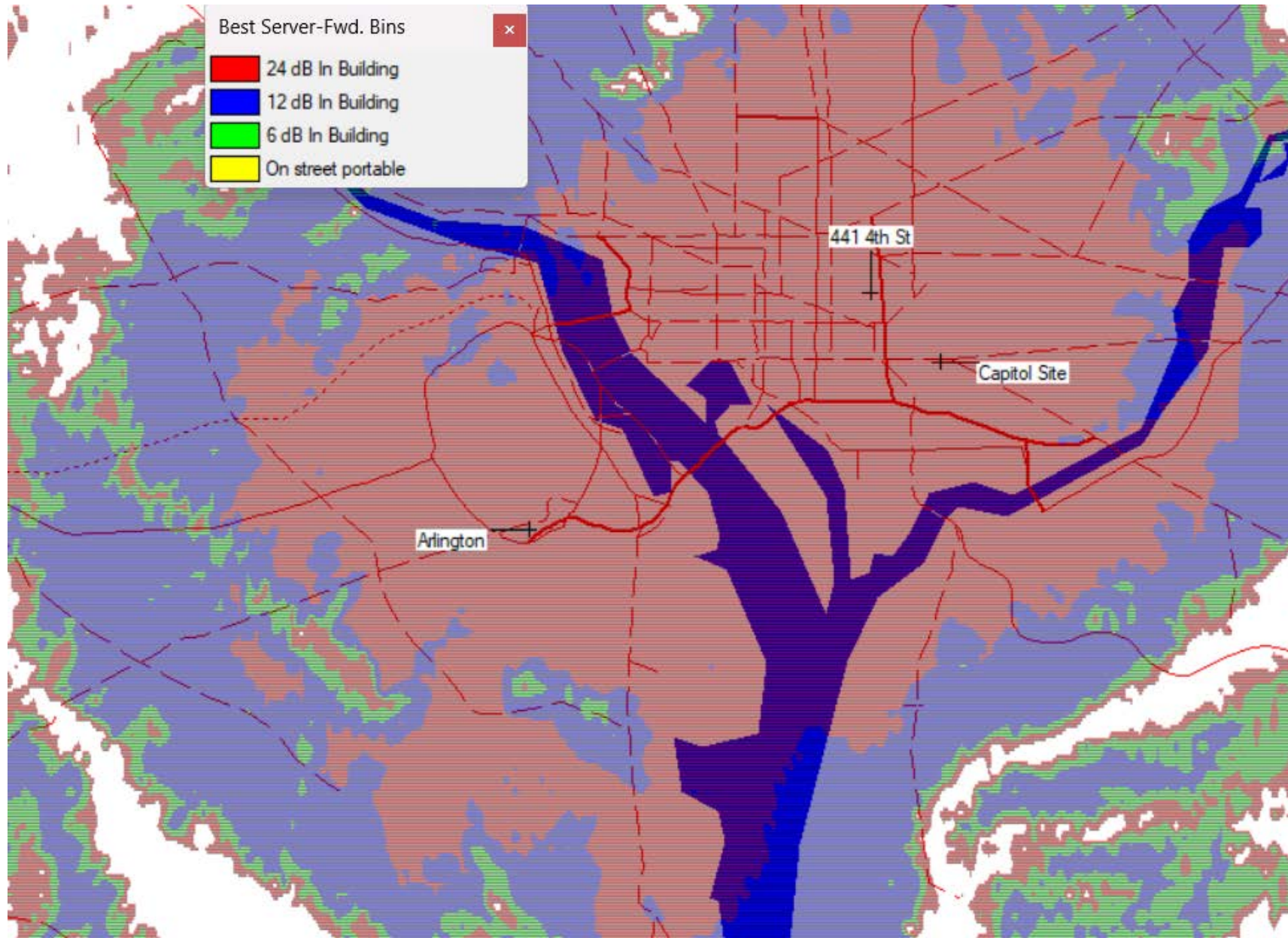
- 7TAC53 – located proximate to U.S. Capitol
- 7TAC71 – located at Judiciary Square – 441 4th St. NW
- 7TAC72 - located proximate to U.S. Capitol
- 7TAC76 - located at Judiciary Square – 441 4th St. NW

Controlled by Arlington County

- 7TAC51 – located proximate to the Pentagon
- 7TAC74 – located proximate to the Pentagon

For first responders coming to Washington for the Inauguration, contact for resources should be made to Charlie Guddemi, DC SWIC
(Charles.Guddemi@dc.gov)

Predicted Interoperability Coverage



Francis Scott Key Bridge Collapse

Event Stresses Importance of APCO P25 Standards

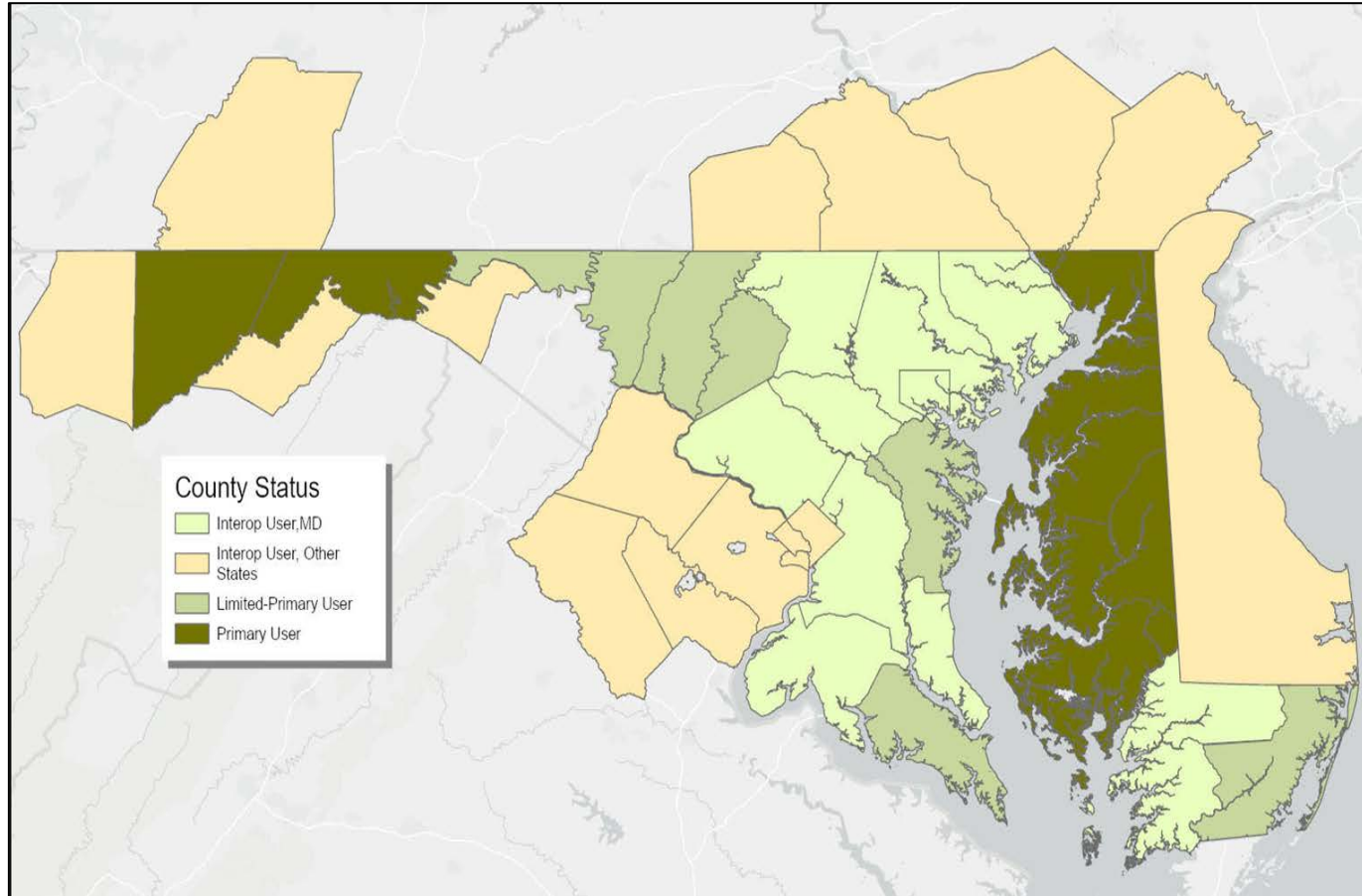
- First Responders throughout region able to easily switch to each others' systems
- Many radio systems were used during response to this incident (Baltimore City / County, Anne Arundel County, MD FiRST), all P25 systems

Role of MD FiRST During Event and in Recovery Process

- MDTA is a primary user of MD FiRST
 - Call to close bridge to all traffic went out on MDTA's Talkgroup on MD FiRST
 - MDTA's dispatch talkgroup handled some of the first marine, aviation assets that arrived on-scene
- Multiple MD FiRST interoperability talkgroups used for overall coordination during recovery operations:
 - Overall Incident Command
 - Aviation Coordination
 - Dive Team Ops



MD FiRST Interoperability Map



8
Primary
Counties

5
Limited Primary
Counties

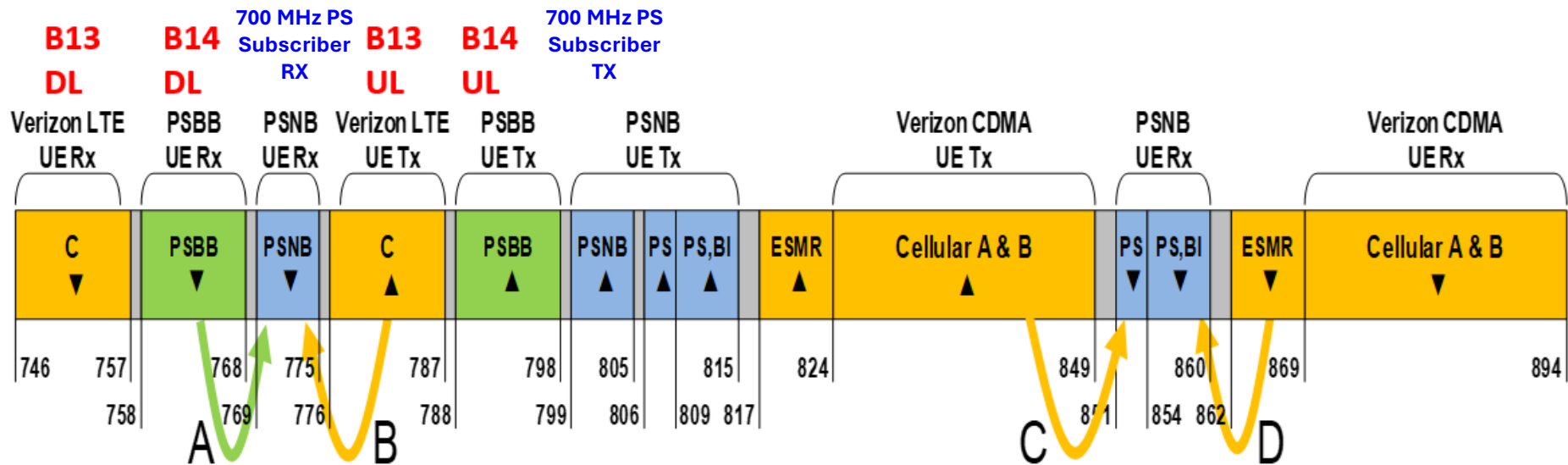
10
MD
Interoperability
Counties

15
VA/WV/PA/DE
Interoperability
Counties

700 MHz and Suspected Cellular Interference

Symptoms / Manifestations

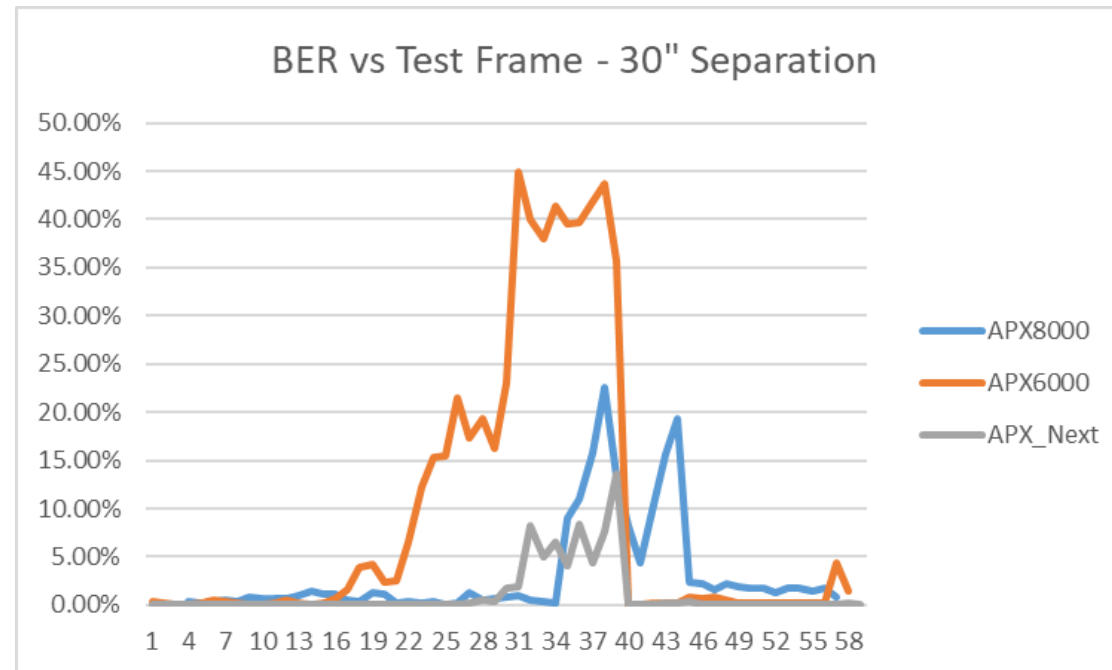
- MD FiRST Team has been fielding reports of coverage issues potentially related to cellular interference for ~1.5 years
- Majority of issues seem to be on the subscriber radio receive band
 - Radios going “out of range” in areas of normally sufficient coverage
 - Typically happens in “fringe” coverage areas, several miles from tower sites
 - System reports show multiple radio registration attempts at surrounding sites
 - Radios appear to be detecting interference on their current site/channel, causing radios to search for a “clean” site to switch to
- Common thread to many of these reports: Locations in proximity to B13 mobile devices or B14 tower infrastructure
- Tactical BDA Equipment operated by MD FiRST requires special filtering when used in areas near B14 tower sites



700 MHz and Suspected Cellular Interference

Testing (to-date)

- MD FiRST Team has conducted testing to demonstrate effect of subscriber radio receive degradation when in proximity of cellular devices on B13
 - Radios received significant degradation of RX sensitivity from cellular devices **actively transmitting** on B13, even at ~3 ft separation
 - MSI confirmed similar results in their own testing in lab environment
 - MSI's findings suggest cellular Out-of-Band Emissions at least partially to blame



700 MHz and Suspected Cellular Interference

MD FiRST Guidance to Users

- Stressing importance of separation between LMR and Cellular antennas, especially in mobile installations
- Encouraging Agencies to make users aware that cellular devices, especially those on VZW (in our area) can potentially cause problems for their portable radios, keep devices separated where possible
- Detailed reporting / record-keeping of occurrences
 - FCC requested reports whenever we see suspected incidents

Subscriber Manufacturer Guidance

- MSI is incorporating newer filter technology in next-gen radios, beginning with APX NEXT and N70 product lines to improve broadband interference rejection
- MSI Recommends enabling interference mitigation features like “Advanced RF AGC” and “Broadband Protection” in capable models
 - MD FiRST to evaluate these features before providing suggestions to user Agencies

700 MHz and Suspected Cellular Interference

Requesting Data from Other Impacted Users

- MD FiRST has spoken with several other PS Agencies who have experienced similar situations
- Encourage anyone with suspected impacts to reach out, share data and experiences
- Report suspected incidents to FCC for investigation
 - FCC Field Enforcement Bureau asked us to report any and all suspected incidents, provide as much data as possible