

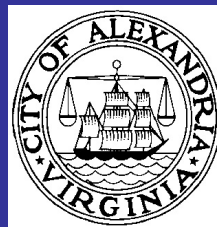
Software Defined Radio 2010 Technical Conference – Arlington, VA





City of Alexandria, VA

- 16 square miles / 150,000 – population (approximately)
- Member of the National Capital Region (NCR)
- 2 states & District of Columbia / 21 municipalities / 2008 Population – 5.5 million
- Mutual Aid is an hourly occurrence between DC, MD & VA public safety agencies
- Very strong governance in the region – standards and training



APD

SWORN OFFICERS:

- 300 +/-
- Each officer issued portable radio and tactical computer

CIVILIAN EMPLOYEES:

- 200 +/-

PATROL SECTORS:

- 3 Patrol Sectors

FLEET:

- 100 +/- patrol cars with mobile radio and standard mount for computer in each.



Air Florida Flight 90 – January 13, 1982

First Responders

VHF Low Band:

- Maryland State Police
- VA Dept. of Transportation

UHF:

- Pentagon Police & Fire
- Metropolitan DC Police
- Prince Georges County, MD Police & Fire

VHF High Band:

- Metro Transit Police
- US Capitol Police
- VA State Police
- US Marshal
- US Customs
- US Park Police
- FBI

800 MHz.

- Airport Authority Police & Fire
- Arlington County Police & Fire
- Alexandria City Police & Fire
- Fairfax County Police & Fire
- Metropolitan DC Fire
- Montgomery County, MD Police & Fire

2001 & 2005 Presidential Inauguration



Alexandria's Radio System

- Motorola Smartzone 7.9 P25 System
- 4 sites strategically located throughout the City with utility & system redundancy
- Mobile Radios – APX7500
- Portable Radios – APX7000
 - VHF / 700 / 800 MHz
- P25 9600 Baud Trunking
- Over-The-Air-Programming (OTAP)
- DES Encryption
- GPS Enabled

Software Defined Radio

Pros and Cons

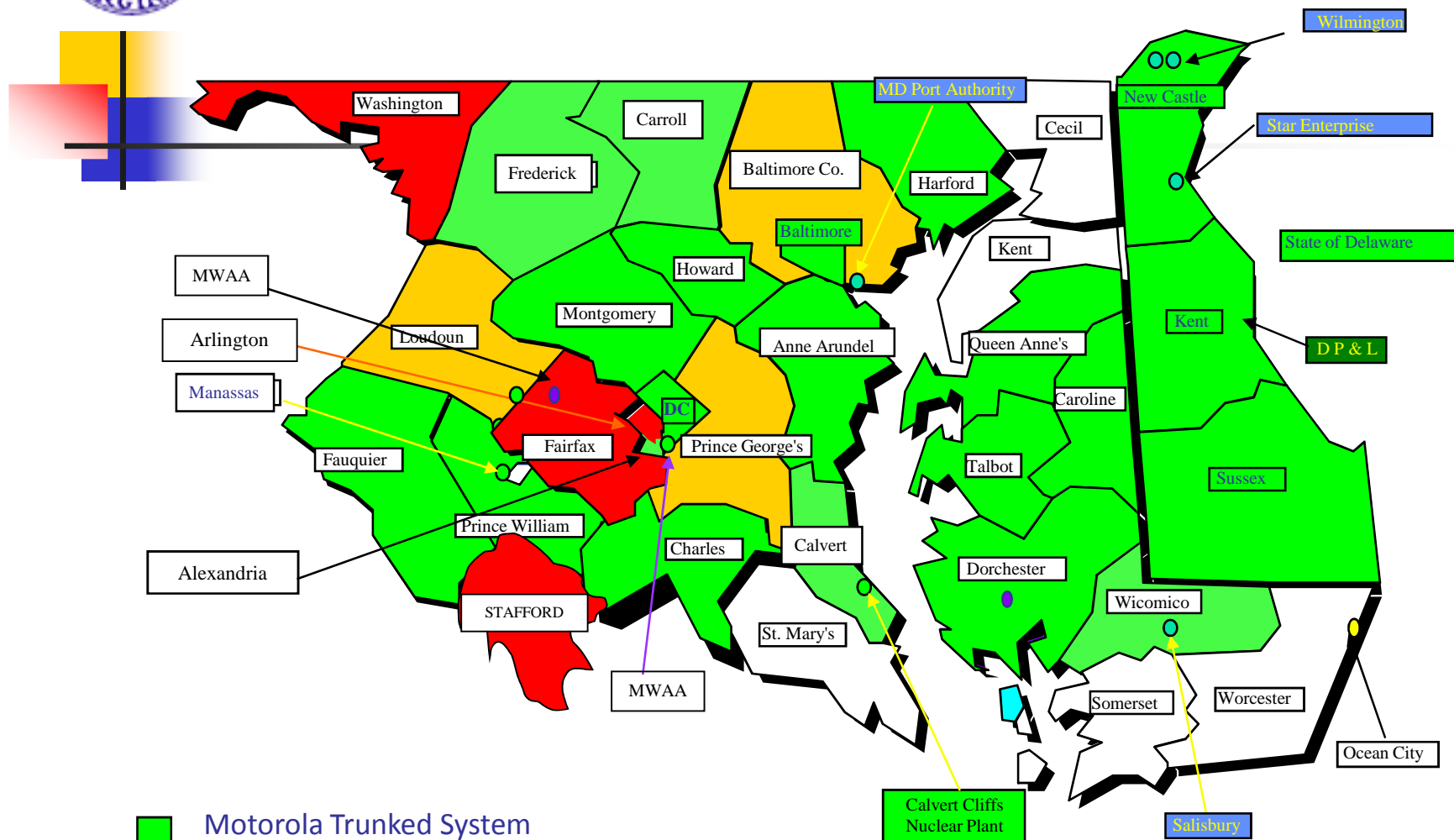
- Larger / color LCD window
- Improved audio quality
- Reduced weight
- Dual display (top and side)
- Speaker and microphone on both sides of the radio
- High / Low power consumption
- 20 hour Lithium Ion batteries (no memory effect)
- Battery cell indicator
- Long antennas! Needed for multiband and GPS

Typical Alexandria Police Car





Regional Trunked Systems

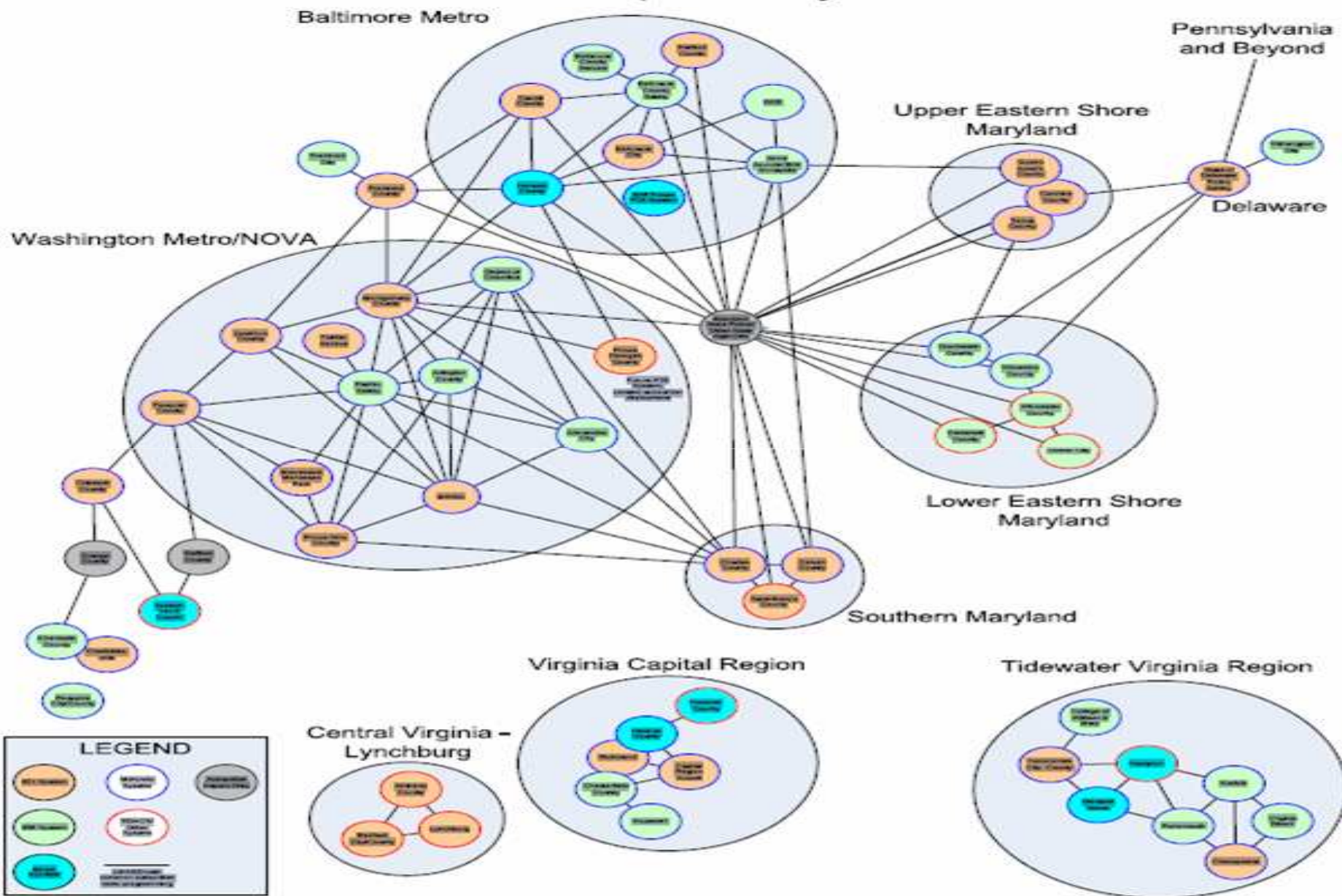


Motorola Trunked System

Motorola Digital Simulcast Trunked System, ASTRO P25

Motorola Digital Simulcast Trunked System, ASTRO P25, TDMA
(Green cannot talk to red or gold unless patched or use P25 subscribers)

Maryland–Washington, DC–Virginia-Delaware
800 MHz Voice Radio Interoperability Web



Questions?



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