



Nevada Communication Interoperability Plan Overview

Developed by Nevada Communications
Steering Committee

Version 2.0 – Adopted April 6, 2006



The Beginning

- 2 years in the making by the Nevada Communications Steering Committee (NCSC).
- NCSC stakeholders representing northern & southern NV, rural & urban, & state, county and local governments.
- Prompted by AB441 legislation.
- Developed with assistance from the SAFECOM office of the Department of Homeland Security.
- A living document revised as conditions change.

What is Interoperability?

“Interoperability is the ability of appropriate officials and personnel to effectively communicate by radio across jurisdictions and with each other, when authorized, as needed and in real time.”



Who are Public Safety Agencies?

- Fire Services
- Law Enforcement
- Emergency Management
- Government Administrative Services
- Emergency Medical Services
- Public Health
- Health Care
- HazMat
- Private Industry
- Volunteer Organizations
- Public Safety Communication
- Public Works



Statement of Principles

- NCSC encourages & maintains a governance structure emphasizing transparency, accountability and collaboration.
- NCSC encourages comprehensive focus on key success factors – governance, SOPs, technology, training and exercises.
- NCSC reviews research on best practices/ lessons learned.
- NCSC **not to be** controlled by the State – must remain representative of entire NV public safety community.

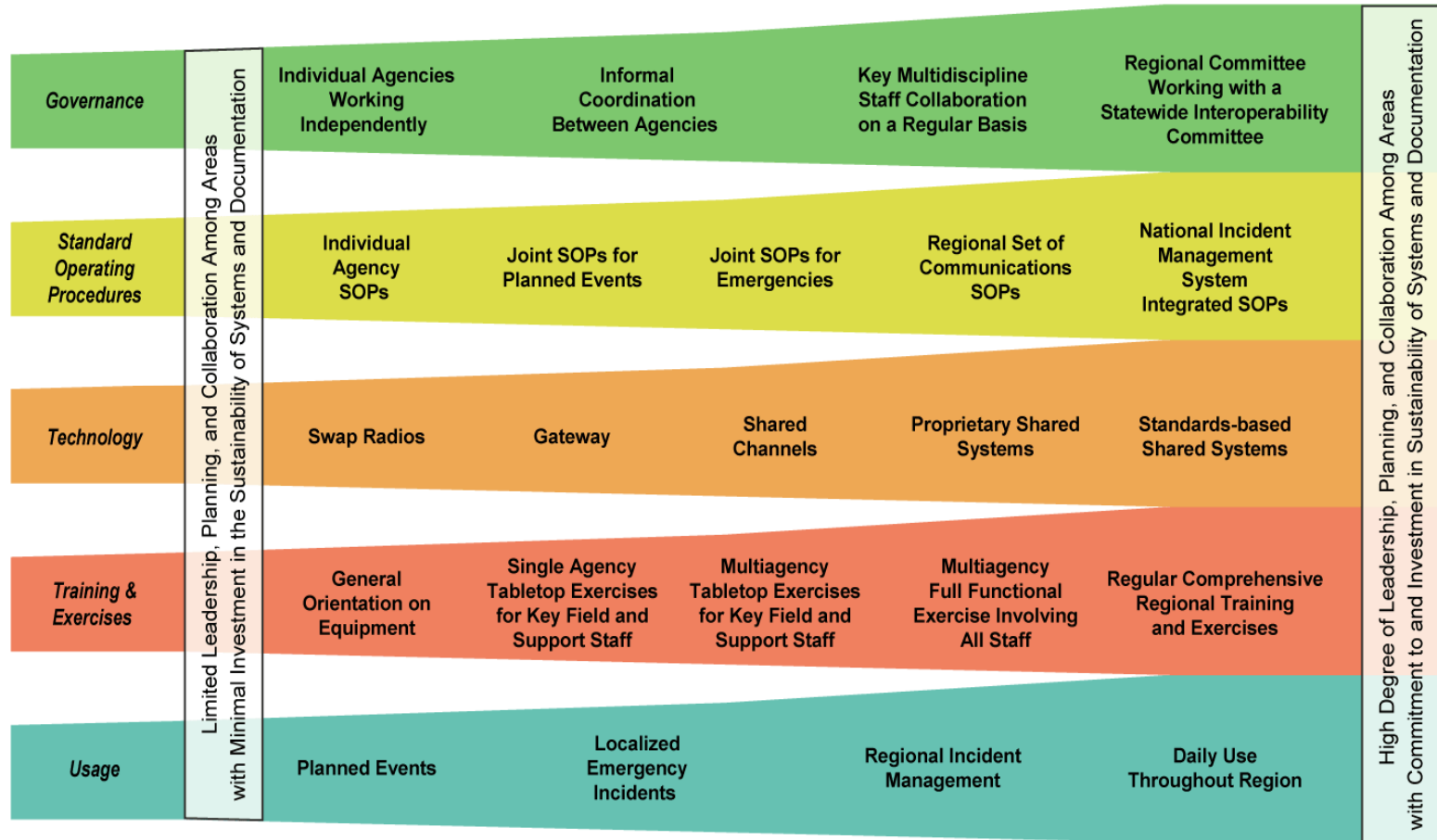


Interoperability Continuum - SAFECOM

- Designed to help the public safety community and local, tribal, state and federal policy makers address critical elements for success as they plan and implement interoperability solutions.
- Elements include governance, standard operating procedures, technology, training/exercises and usage of interoperable communications.



Interoperability Continuum



Minimal Level



Optimal Level

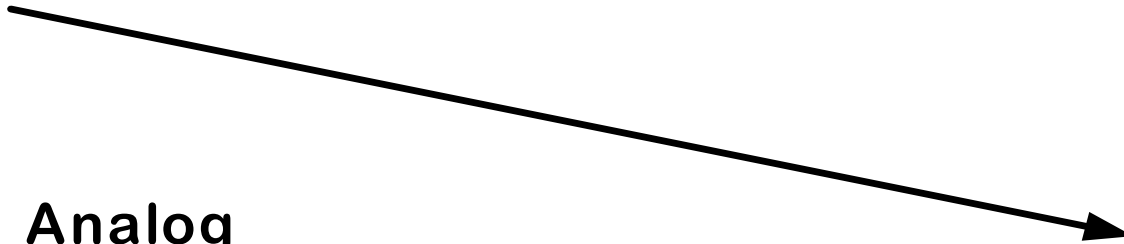


Long-Term Convergence

- The plan emphasizes convergence over time.
- Upgrading when equipment otherwise needs replacement on maintenance schedules, not a wholesale change out.
- Preserving the public's existing investments in communications technology.
- Require new purchases comply with Plan.
- Allow existing equipment serve out its useful life.

Long-Term Convergence (10-15 yrs)

Existing



Analog

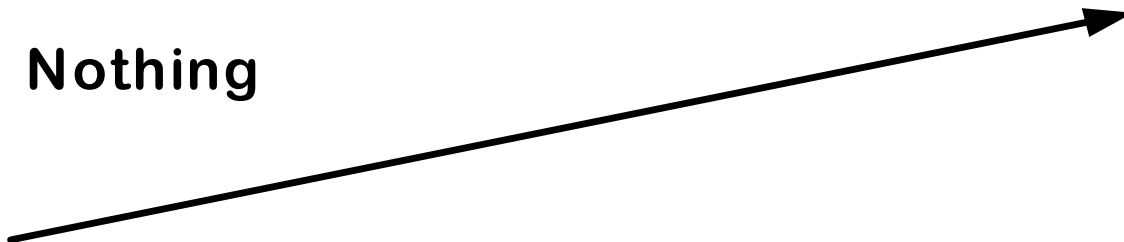
Digital

Proprietary

Nothing

Future

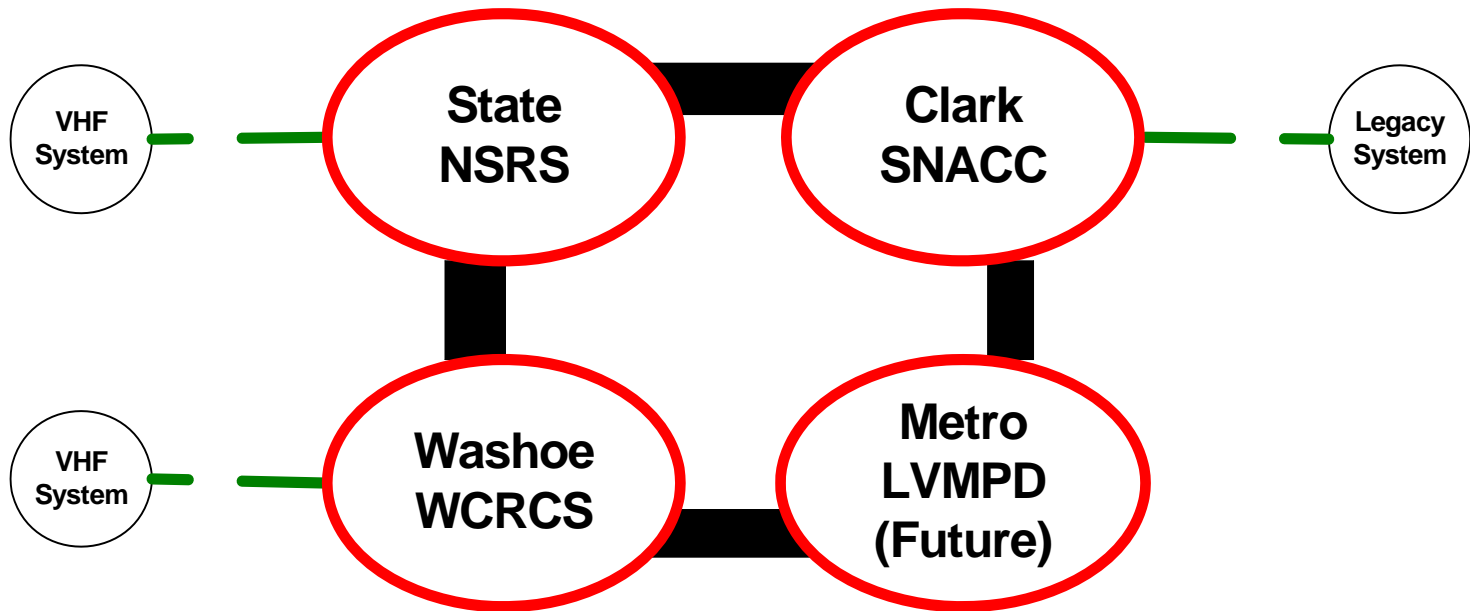
Digital
Open
Standards
Technology






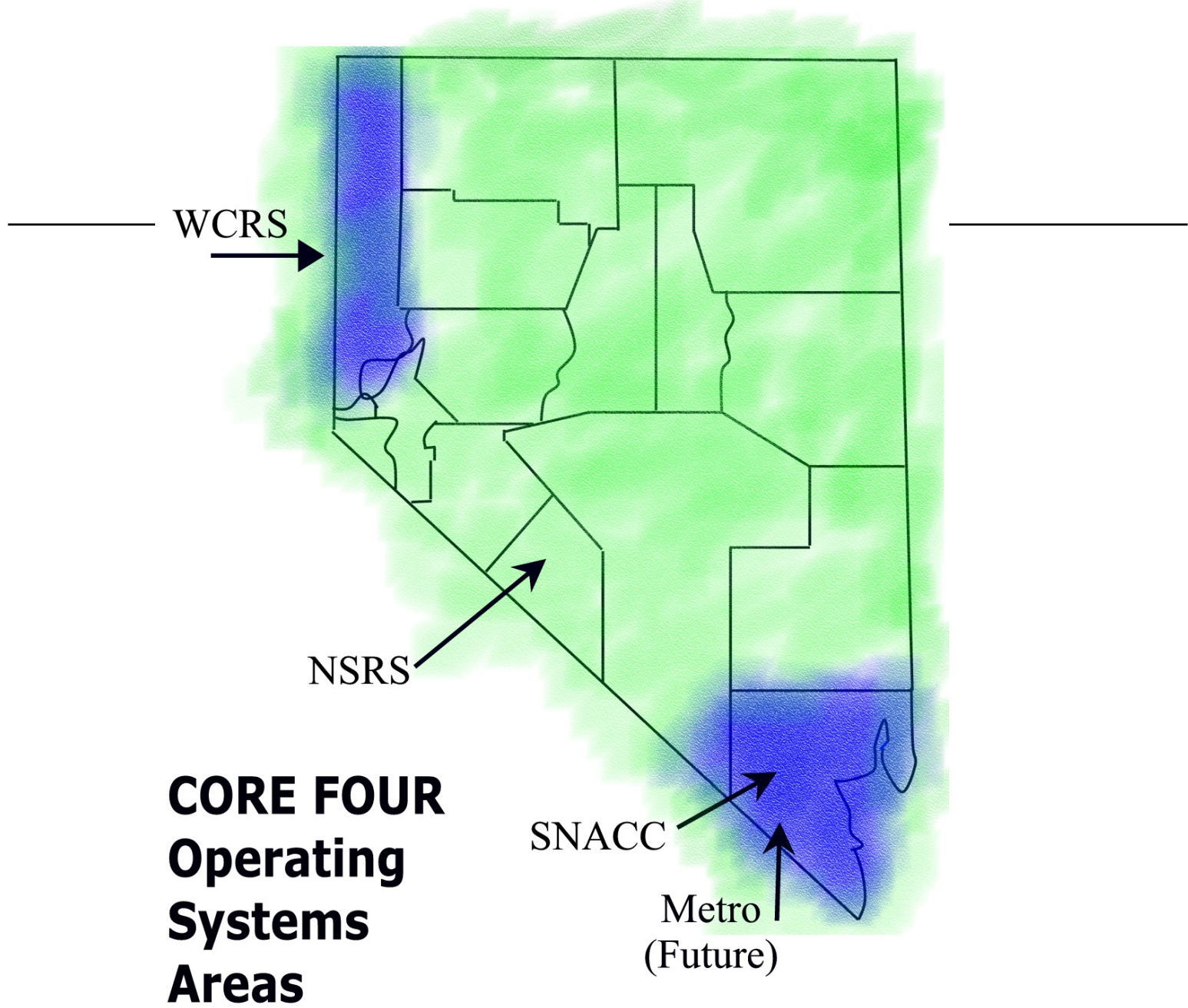
Core Four – Short & Long-Term

- By connecting the 4 major trunked systems a single “virtual” system is created.
 - Nevada Shared Radio System (NSRS)
 - Southern NV Area Communication Council (SNACC)
 - Washoe County Regional Communication System (WCRCS)
 - Las Vegas Metropolitan Police (LVMPD)

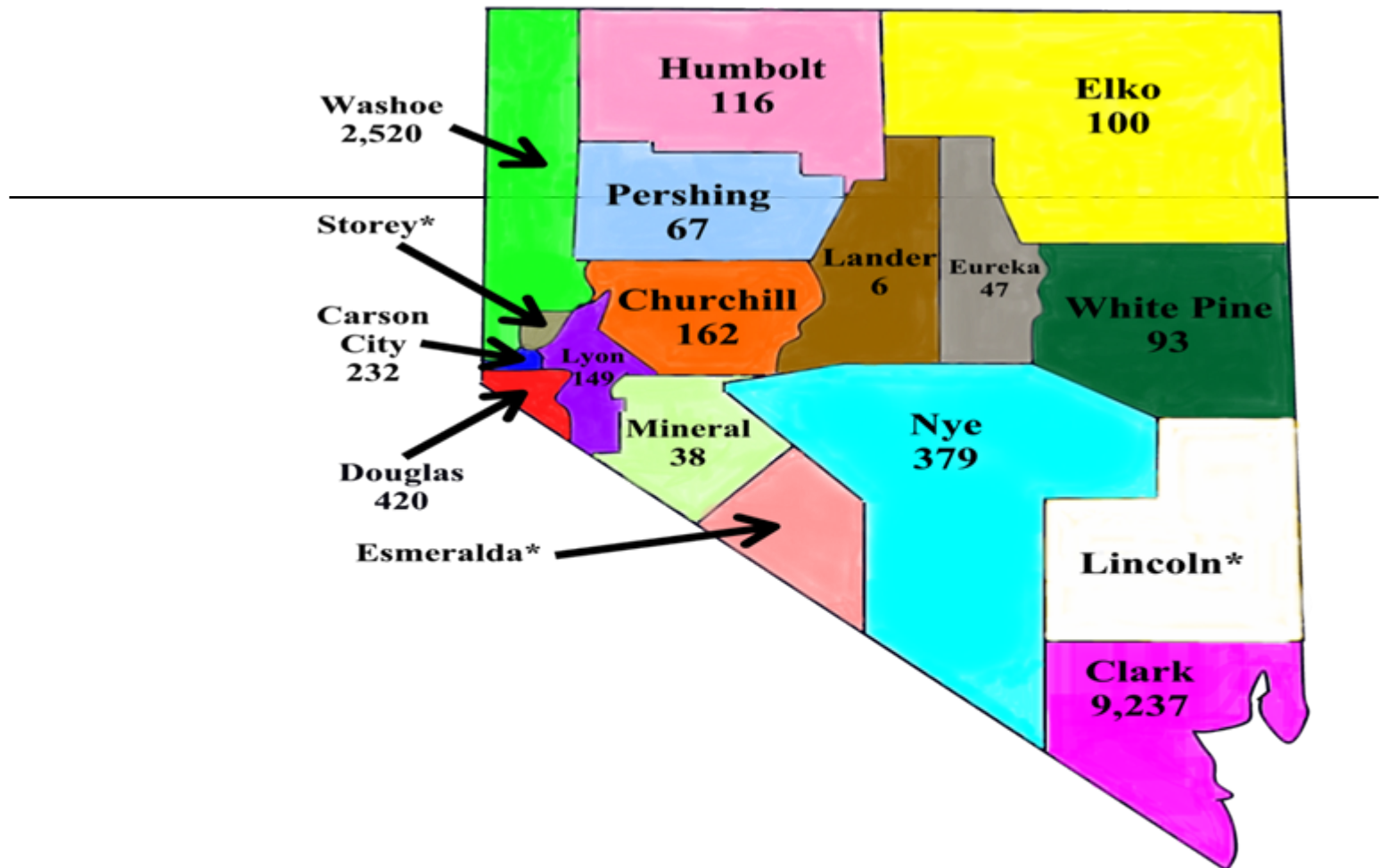
The Core Four Concept



-  Core Four Platforms
-  High-Level Interconnects
-  Gateways to Conventional Systems



**CORE FOUR
Operating
Systems
Areas**

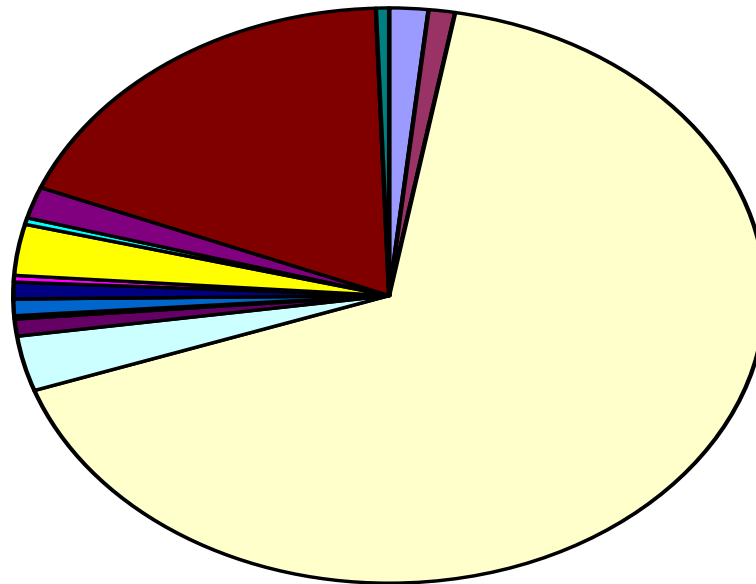


NV RADIOS BY DISTRIBUTION

Survey Responses as of August 2005

*= None Reported

NV Radios by Proportion

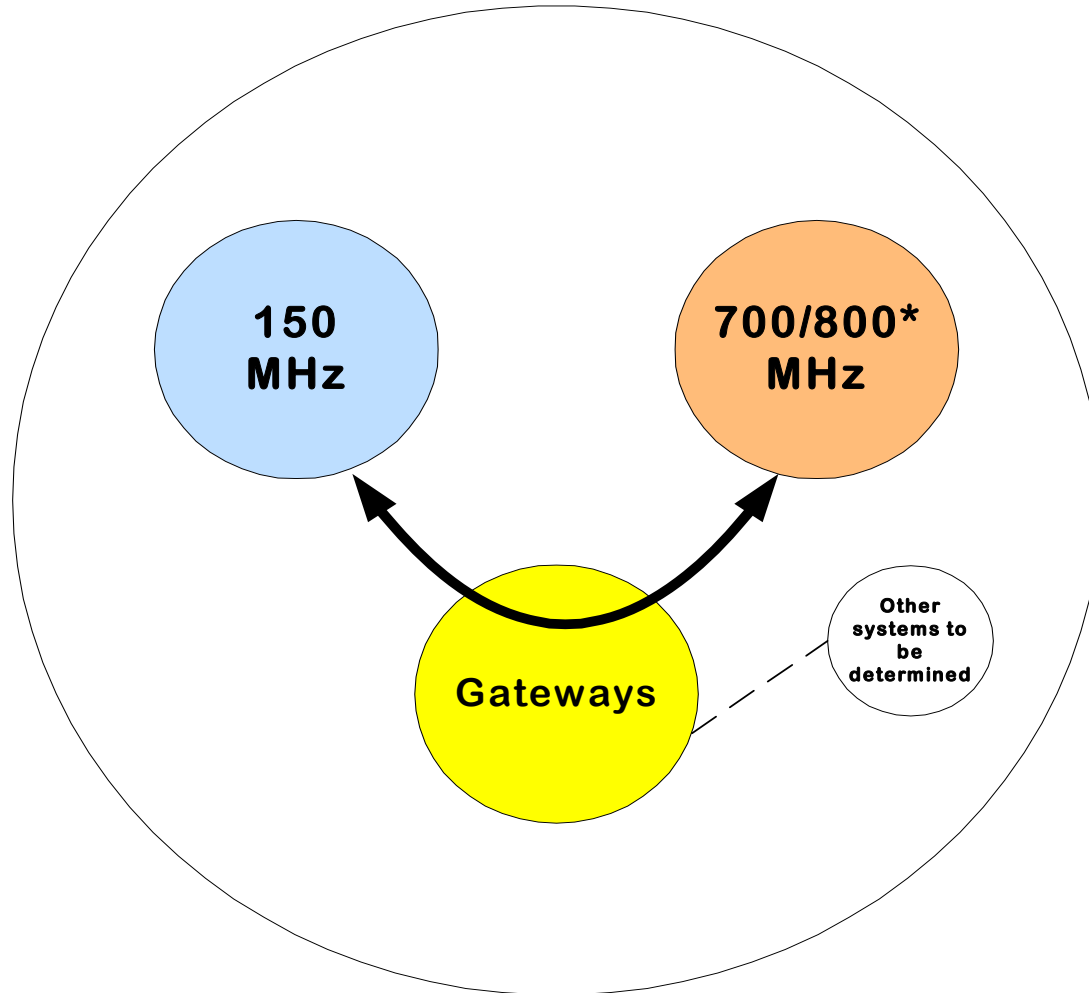


- | | | | |
|-----------|-----------|------------|----------|
| Carson | Churchill | Clark | Douglas |
| Elko | Eureka | Humboldt | Lander |
| Lyon | Mineral | Nye | Pershing |
| Statewide | Washoe | White Pine | |

Short-Term Gateways

- Short-term proposal is to link the two main components of the Nevada radio system:
 - 700/800 MHz (Core Four) & 150 MHz (rural)
- Some gateways currently exist, but need to be expanded statewide.
- Preliminary estimate for short-term: \$2.4M
- Cost **does not** include integration of other frequency bands.

Short-Term Gateway (3-5 yrs)





Tech Standard for P25

- To move towards long-term convergence, a technical protocol/standard must be adopted.
- P25 is an open system, developed nationally for over 15 years.
- P25 establishes a common protocol, allowing radios from different vendors to effectively communicate.
- P25 does not address radios operating in different frequency bands or issues such as standard operating procedures.



P25 Recommendations

- Long-range plan includes long-term convergence of all radios within the state to digital, open standards technology, implementing current version of P25.
- A phase-in timetable will be used.
- Exemptions considered upon written notice showing good cause and approved by NV Homeland Security Commission.

Assumptions

- “Capable” is defined as the ability to be quickly upgraded via the loading of a software program to actual P25 Common Air Interface operation.
- “Capable” in this context does not mean the equipment must actually operating in P25 mode when purchased, rather that it be “capable” of simple upgrade to such operational mode at a future time.
- In every case where purchase of P25 capability is mandated, the equipment is for capability to accommodate the most recently approved version of the P25 standard.

TIMETABLE continued

Effective July 1, 2009

- All radio equipment purchased for use in systems operating below 512 MHz shall be P25 capable.
- Mobile radios and portable radios purchased for use in existing radio systems operating above 512MHz shall be P25 capable.
- Core Four systems and any system directly connected shall be P25 capable.

Effective July 1, 2011

- All radio systems and equipment in the State, regardless of operating frequency or the system it is purchased for, shall be P25 capable.

Effective July 1, 2013

- All radio systems and equipment in the state shall be operating in P25 mode for normal, operational voice communications. Multi-mode operating, for interfacing with out-state systems, may be retained and used as needed.

TIMETABLE

Effective October 1, 2005 (FED YR 2006)

- All radio equipment (end user, consoles and backbone) purchased using grant dollars shall be P25 Common Air Interface capable.
- The Core Four systems are exempt from mandatory compliance until July 1, 2009.
- Radio systems that do not use or apply for grant funding are exempt until July 1, 2007.
- Other exemptions granted by the Commission on a case-by-case basis.

Effective July 1, 2007

- All mobile & portable (end user) radio equipment purchased shall be P25 capable.
- All radio equipment (consoles & backbone) purchased shall be P25 capable.



Grant Funding Initiatives

- Working group established for DHS Homeland Security Enhancement Plans and Grant Funding
- 11 Investment Justifications identified
- Interoperability Communications identified as #1 among the 11 Investment Justifications

Grants (continued)

- Nevada Awarded almost \$20M in May 2006
- Interoperable Communications justification receives \$6.1M
- Funds became available in August 2006

Grants (continued)

- Communications Interoperability project consists of six modules:
 - Engineering
 - Standard Operating Procedures (SOP) & Training
 - Microwave Engineering
 - Gateways & Interconnects
 - Radio Cache
 - SNACC Simulcast



Engineering Module

- To complete technical data collection
- Perform detailed engineering for interconnects & gateways
- Produce comprehensive interoperable frequency plan statewide
- Produce individual system-oriented integration plans
- Lead agency: Dept of Information Technology
- Funding: \$556,400



SOP & Training Module

- To develop SOPs for use statewide by all public safety communications users
- Develop common nomenclature, terms & definitions
- Develop training materials & syllabus
- Develop policies for jurisdictions
- Lead agency: LV Metro Police Dept
- Funding: \$556,400



Microwave Engineering Module

- Complete detailed technical plans & engineering for expansion of multiple-user microwave systems within Clark County
- Lead Agency: Clark County Dept of Information Technology
- Funding: \$180,200



Gateways & Interconnects Module

- To procure, install and implement interconnections among major radio systems and geographically distributed gateways among radio bands
- Lead Agency: Nevada Department of Administration
- Funding: \$2,400,000



Radio Cache Module

- Procure, maintain and hold available for use statewide, a cache of portable radios
- Lead Agency: LV Metro Police Dept.
- Funding: \$500,000



SNACC Simulcast

- Engineer and implement a simulcast radio system for use with 16 or more designated interoperable talk groups (channels) within the Clark County Urban area
- Lead Agency: SNACC
- Funding: \$1,700,000



Today's Status

- Currently in the initiation stage of the project, defining requirements for RFPs
- Progress reports given at monthly meetings of NCSC
- Next Meeting: December 18
- Website:
http://nitoc.nv.gov//IT_NCSC.htm

Thank you



Questions?

Visit Website at
http://nitoc.nv.gov/IT_NCSC.htm