

Office of Chief Information Officer
Public Safety Communications

NEBRASKA STATEWIDE RADIO SYSTEM



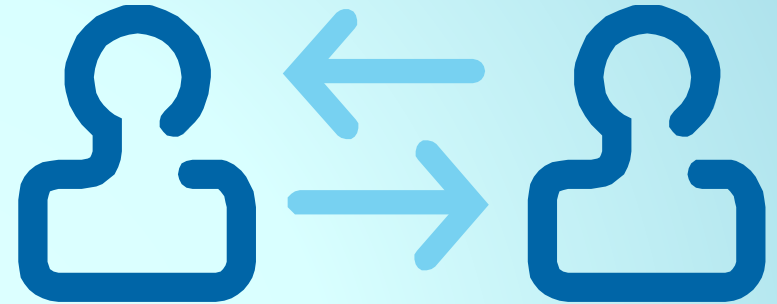
What is the System?

- 2 Master Switches: Lincoln and Kearney
- DSR (dynamic system resilience)
- 65 VHF towers networked to the masters on a closed secure network (including one mobile site)
- VHF Mobile-Coverage Radio System
- Digital “P25” radio standard
- Trunked (Statewide roaming)





Who owns and maintains?



- OCIO and NPPD:
Joint ownership and maintenance
- System Administrative Group (SAG):
OCIO Public Safety and NPPD Telecom
- System Operating Group (SOG):
State Chief Information Officer and NPPD Telecom Administrator
- System User Group (SUG):
All agencies using the system (local, state, federal)

Who is Using the System?



3000+ Full-Time Users & Growing

- **State Agencies**
- **Federal Agencies**
- **Local Agencies**
- **Public Utilities**
- **Railroad Police**

State Agencies



All state agencies that need public safety communications:

- **State Patrol**
- **State Fire Marshal**
- **Nebr Game and Parks Commission-Law Enforcement Div.**
- **Department of Corrections**
- **Department of Transportation**
- **Agriculture, Adult Parole, DMV, NEMA...**

Nebraska National Guard Civil Air Patrol



Nebraska National Guard – 72nd Civil Support

UNIFIED COMMAND SUITE - *Concept of Operations*



**Multi-Team
Communication**



**Incident
Command Post**



**CST
Command Post**



**Outside Agencies for
Reach-back Communications**

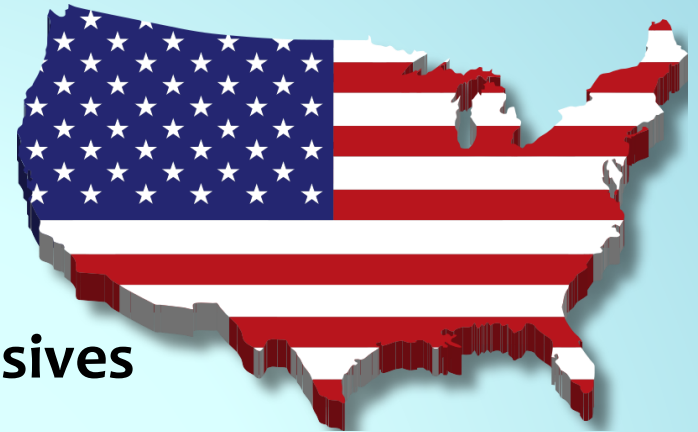


**Other DOD / Federal / State/
Local Agencies / Assets**



Federal Agencies

- FBI, IRS, UPS
- US Marshal Service
- Alcohol, Tobacco, Firearms, Explosives
- US Fish & Wildlife
- USAF OSI (Air Force Office of Special Investigation)
- USAF CAP (US Air Force Civil Air Patrol)
- DOJ DEA (Drug Enforcement Administration)
- DOI NPS (National Park Service)
- DHS FPS (Federal Protective Services)
- USFS (Forest Service)
- USHHS (Health & Human Services)
- US Dept. of Homeland Security/NPPD/CS&C/OEC



Public Utilities & Railroad Police



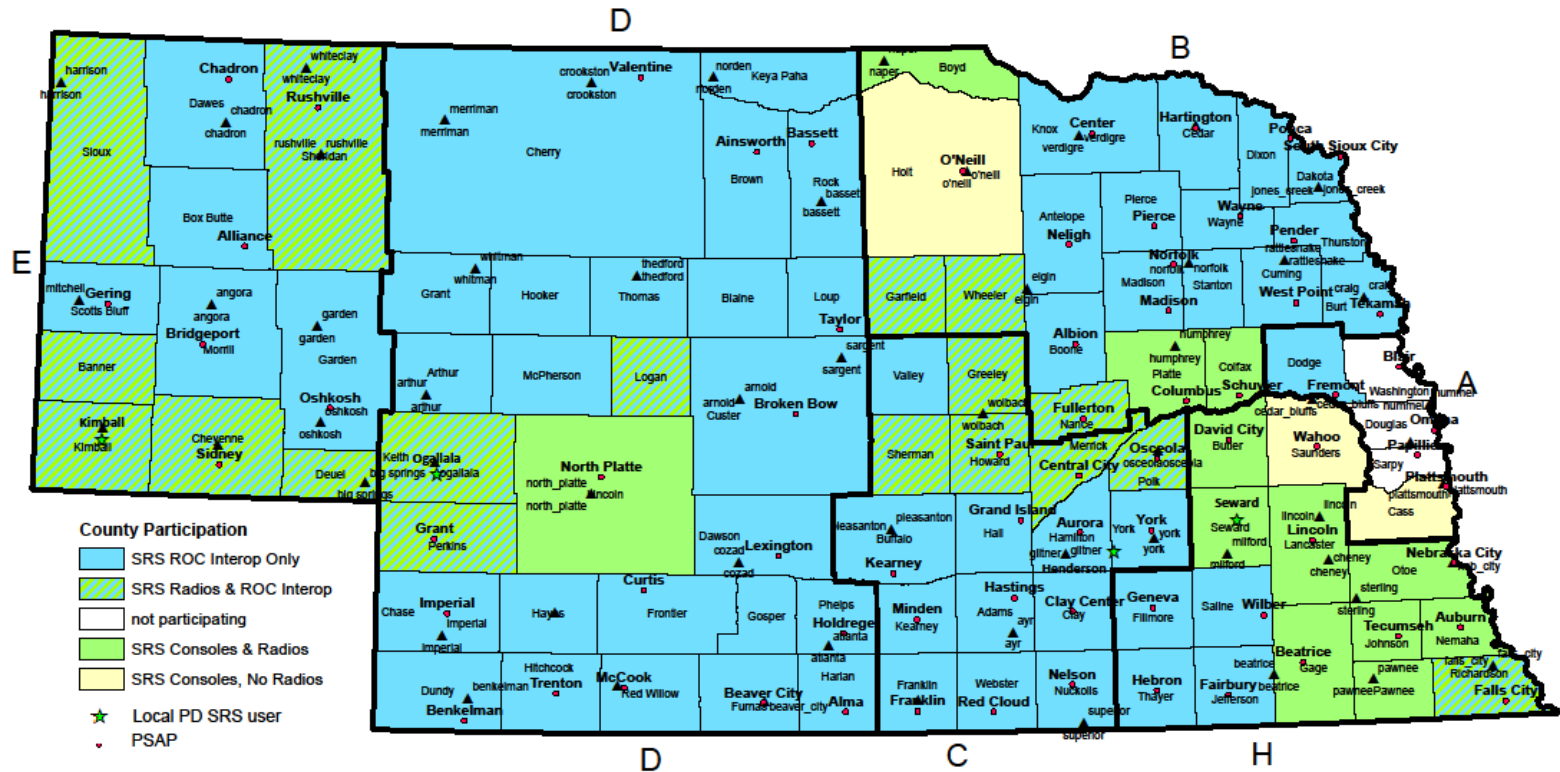
- Nebraska Public Power District
- Lincoln Electric System
- Burt County Public Power District
- Union Pacific Railroad Police
- BNSF Railroad Police



Nebraska Statewide Radio System

Local Agency Implementations

Nebraska Statewide Radio System (SRS) Implementations



Interoperability Across the State

All 3000 + of these SRS users have the ability to talk to each other on shared talkgroups required in every SRS user radio:

- Regional Operations Common (**ROC**) Talkgroups
- 16 Assignable EVENT (**EVNT**) Talkgroups
- LE Users: **LE1, LE2 and Encrypted LE3**

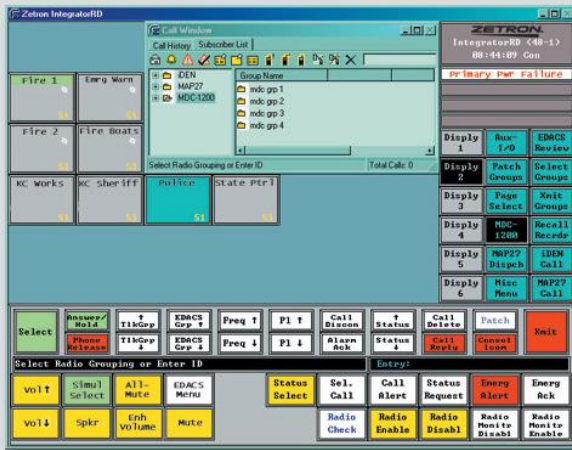
VHF National Interoperability Frequencies

Channel Type	Channel Name	Eligible Users	RX Freq	TX Freq	TX Tone	Mode
Simplex	VCALL10	All Public Safety	155.7525	155.7525	156.7	Analog
Note: VCALL is reserved for monitoring and remains silent, except for making initial contact. Users should be directed to a working channel as listed below.						
Simplex	VTAC11	All Public Safety	151.1375	151.1375	156.7	Analog
Simplex	VTAC12	All Public Safety	154.4525	154.4525	156.7	Analog
Simplex	VTAC13	All Public Safety	158.7375	158.7375	156.7	Analog
Simplex	VTAC14	All Public Safety	159.4725	159.4725	156.7	Analog

So... How do you communicate with those 3000 Statewide Radio System (“SRS”) users?

A radio has been installed at your dispatch center that operates directly on the SRS....

It can be connected to your radio console...



← Console User Interface

Console back-room electronics



Consolette®



**... or can be installed as a
stand-alone radio near
your radio console**

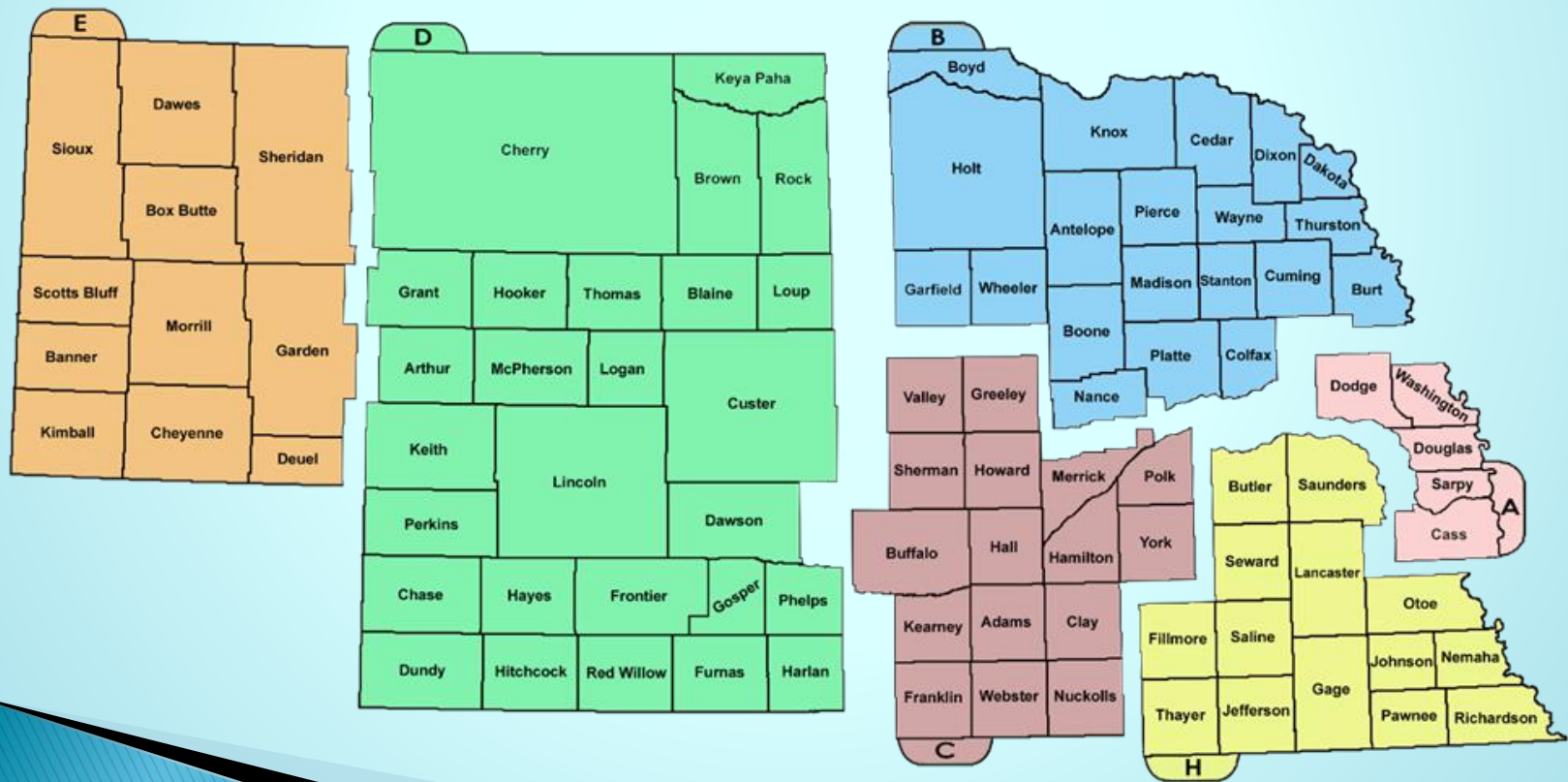


Consolette®



Interoperability Plan:

“ROC” Talkgroups
Regional Operations Common
(Based on Patrol Troop Areas)



ROC Talkgroups by region:

H ROC CALL

H ROC1

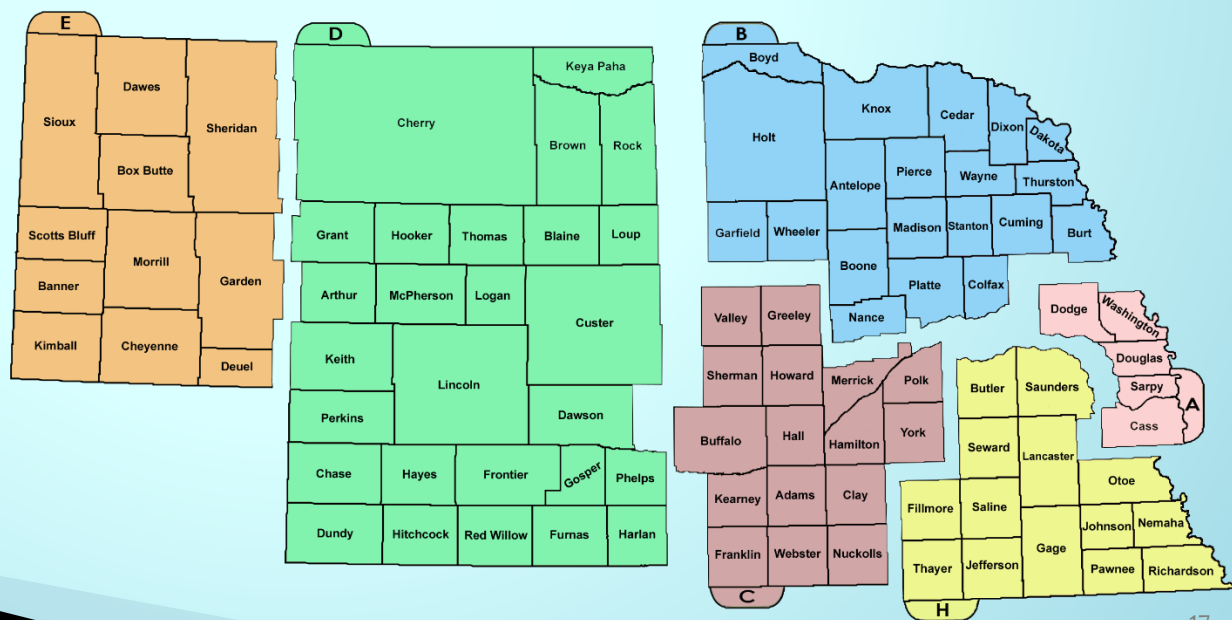
H ROC2

B ROC CALL

B ROC1

B ROC2

Etc....



User Definitions

- ▶ SRS User:

The SRS is their radio system for their daily operations. They have all the interoperability talkgroups in their dispatch centers and their radios PLUS their own proprietary agency talkgroups that can be encrypted.

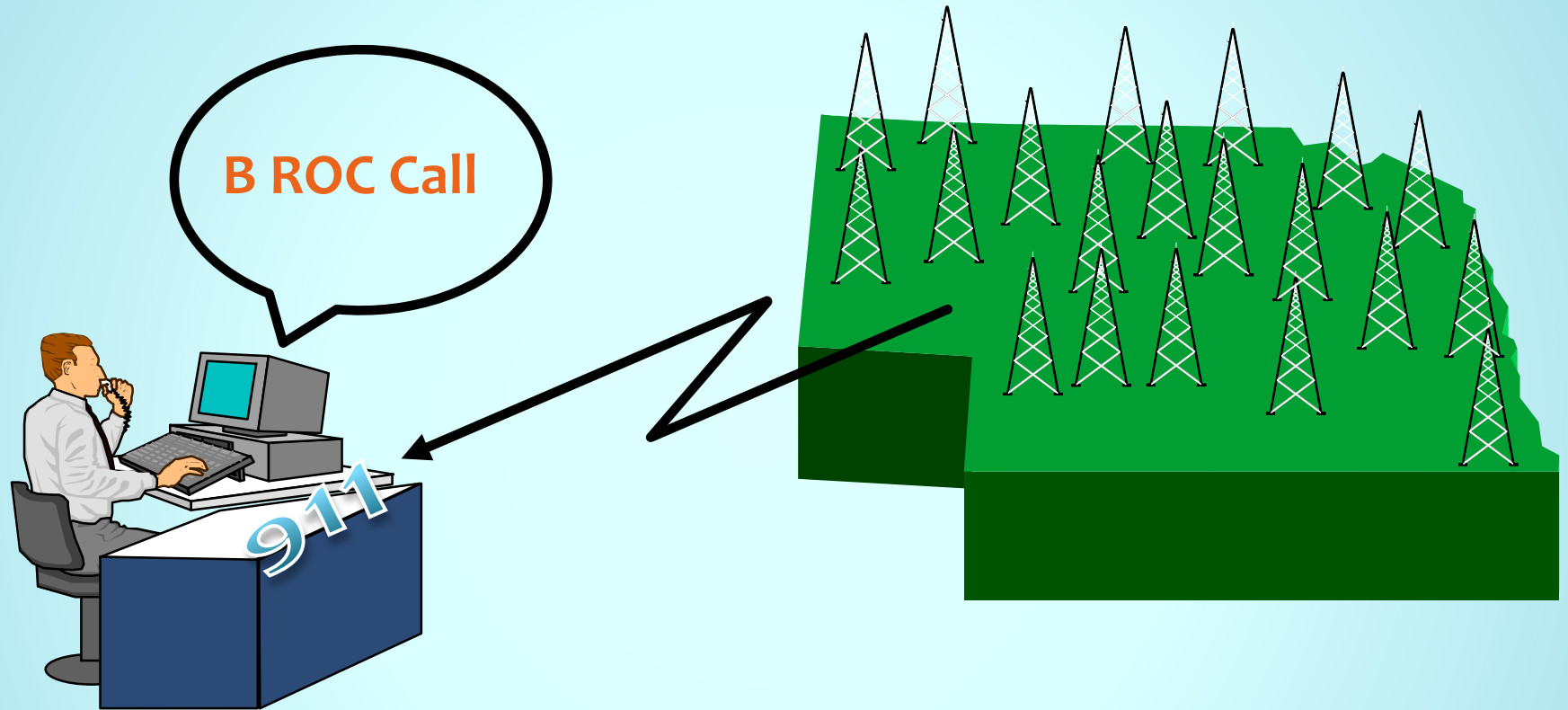
- ▶ Non-SRS User:

An agency that has their own radio system for daily operations. They only use the SRS for interoperability with SRS-users and other interoperability-only users. They only have the SRS interoperability talkgroups in their dispatch consolettes.

ROC Talkgroup Basics

- Designed specifically for interoperability between SRS users and non-SRS users
- Each region has at least one CALL talkgroup (ROC Call) and two tactical talkgroups (ROC 1 & ROC 2)
- Creates an intercom system –all users on the same ROC talkgroup can hear each other
- If you have them, you can initiate a call on them
- You do not need permission to use them
- You should follow the standard ROC protocol

ROC Talk Groups - where they are:

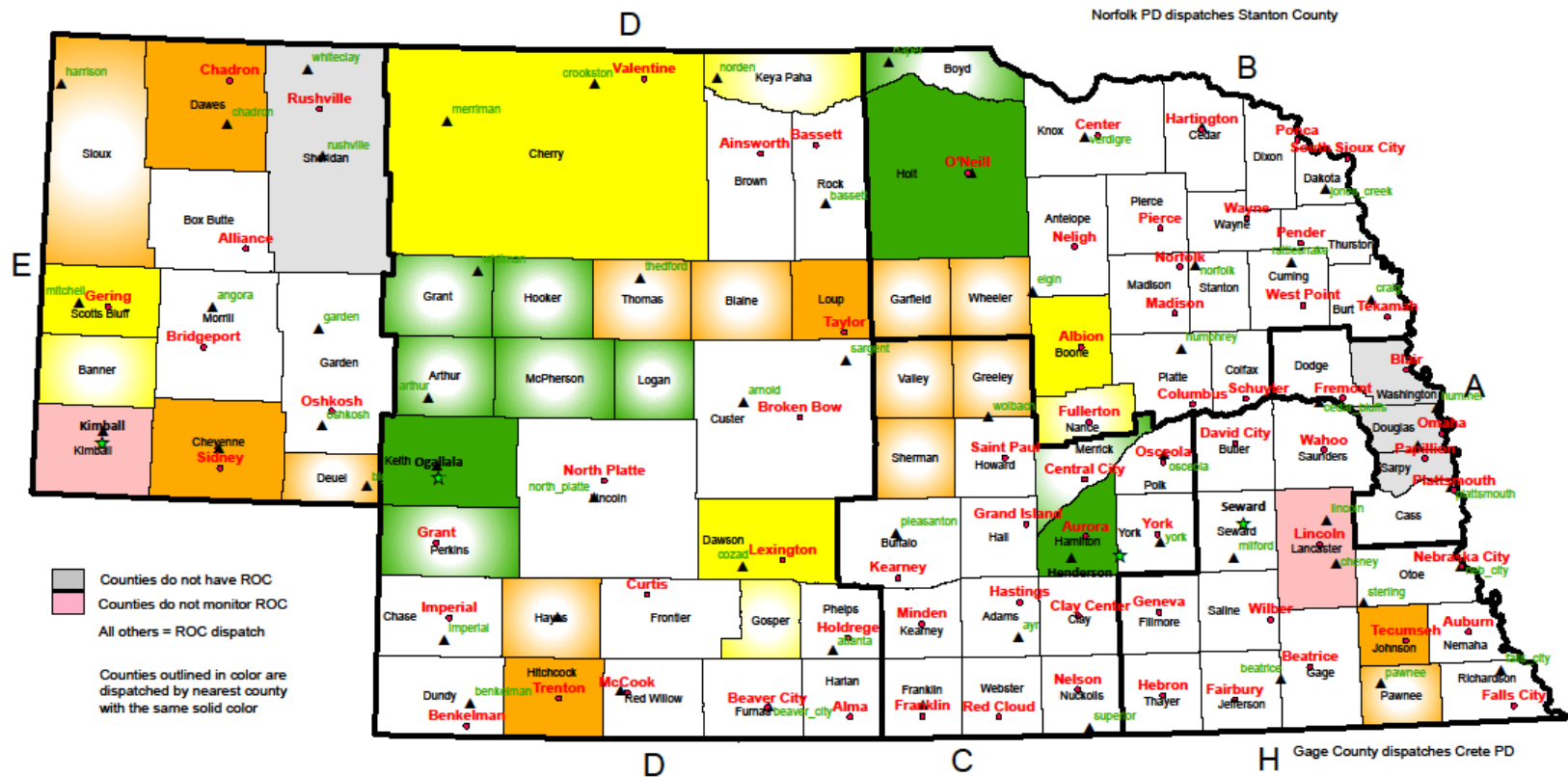


ROC talk groups at local dispatch centers
(Also in all Patrol consoles, all state radios & some local radios)

Nebraska Statewide Radio System

ROC Talkgroup Implementations [6/10/2019]

Nebraska Dispatch & ROC Regions



ROC Talkgroup Basics

- Nebraska State Patrol dispatchers have all the ROC talkgroups in their consoles and monitor the ROC CALL talkgroup for their troop area.
- SRS users have the ROC talkgroups in their portables and mobiles but do not monitor them.
- ROC plan is dispatch-centric. ROC calls should be initiated through a dispatcher.







ROC Talkgroup Basics

- SRS consolettes can only do one thing at a time, so always have a back-up protocol for a 2nd incident or event requiring interoperability with another SRS ROC agency.

TRAINING POINTS:

- When pushing-to-talk, dispatchers need to wait a second before speaking or the first few words they speak will not be heard. For example: the other end could hear “shoot” instead of “don’t shoot!”
- If patching is used, dispatchers will hear the SRS push-to-talk tones but field personnel will not.

Trunking Status Tones

Tone Name	Tone Information
No Acknowledge	 A call to the central controller was not acknowledged
Out of Range	 Radio is out of range of the system
Power-up	 Radio has successfully powered on
Private Call I	 Receipt of a Private Conversation call sent to your radio
Private Call Enhanced	 Receipt of a Private Conversation call sent to your radio
Prohibit	 Talkgroup or channel is not accessible
System Busy	Channel, system or target radio is busy
Talk Permit	Channel is ready to use
Time-out Timer	Time-out timer limit has been reached

ROC Talkgroup Protocol

- 7/24 dispatch center monitoring of the ROC CALL talkgroup for the region in which your dispatch center is located
- ROC CALL is for initiating contact with another ROC CALL dispatch agency (state agency or local agency)
- Move to ROC 1 or ROC 2 to continue the communications after the initial contact
- **Do not carry on operations on ROC CALL. It is for initial contact only.**
- **Exceptions – Weather Warning, BOLO's, etc.**

ROC Talkgroup Protocol

- Identify yourself, the party you are calling, and the talkgroup you are calling on.
- **BEFORE** you change talkgroups, identify the talkgroup you are moving to.
- See sample scripts at the end of this presentation for detailed examples.
- Use clear speech – not all agencies on the SRS use or understand 10 codes!
- 10 codes can mean different things to different agencies. The national standard is clear speech.

ROC Talkgroup Protocol

- Three levels of ROC Interoperability:
 - Patch/join your field personnel to a ROC talkgroup: your field personnel can talk directly to SRS users
 - Multi-Select: Your field personnel can hear you, but not the other side of the communication
 - Dispatcher Relay: Your field personnel cannot hear either side of the ROC communication. Dispatchers will need to relay messages to their field personnel.

ROC Roll Call

Weekly ROC Roll Call

▶ Day Shift

- Every Wednesday (except Holidays) begins 10:00 a.m. Central time
- Starts with H ROC CALL, then A ROC, B ROC, etc.

▶ Swing Shift and Night Shift

- Done by volunteers from various dispatch centers
- Weekly on any day and any time during the shift
- OCIO provides the script and check list

OCIO follows up on non-responders with a phone call.

ROC Talkgroup Example Scenarios

Car Crash Scenario

NSP-H ROC Call: “NSP Lincoln to Seward on H ROC Call”

Seward-H ROC Call: “Go ahead NSP Lincoln”

NSP-H ROC Call: “Have report of a crash Hwy __ and Co Rd __.
Switch to H ROC 1 and go ahead.”

Seward-H ROC Call: “Seward going to H ROC 1”
[Patrol and Seward go to H ROC1]

NSP-H ROC1: “ NSP requests two units for traffic control.”

Seward-H ROC1: “Seward units will be 272 and 119”

NSP-H ROC1: “ Trooper 911 arrived on scene and advised the vehicle is off the
roadway in the south ditch, no injuries. You can cancel units.”

Seward-H ROC1: “Copy, Seward Clear on H ROC 1,
going back to H ROC Call <time> ”

NSP-HROC 1 “Patrol Clear on H ROC 1 going back to H ROC Call <time>”
[Seward and NSP go back to H ROC CALL]

Seward – H ROC Call: Seward back on H ROC Call” <time>

Test Script: Call Same ROC CALL TG

Your Dispatch: “[Your Dispatch Name] calling [Name of Dispatch You Want to Contact] on [name of ROC CALL you are on] for a test.”

They acknowledge you.

Your Dispatch: “Advise signal.”

They respond.

Your Dispatch: “[Your Dispatch Name] clear on [name of ROC CALL you are on].
<time>

Test Script: Call Different ROC CALL TG

Your Dispatch: “[Your Dispatch Name] going to [name of ROC CALL you are going to select].”

You Select ROC CALL TG of dispatch in neighboring region you want to contact.

Your Dispatch: “[Your Dispatch Name] calling [Name of Dispatch You Want to Contact] on [name of ROC CALL you are on] for a test.”

They acknowledge you.

Your Dispatch: “Advise signal.”

They respond.

Your Dispatch: “[Your Dispatch Name] clear on [name of ROC CALL you are on]. Going back to [name of your home ROC CALL.] <time>

You select your home ROC CALL and announce: “[Your Dispatch Name] now back on [name of your home ROC CALL.] <time>

Patching Your Frequencies to ROC TG's

- ▶ Announce to all parties that you are going to patch them together and to standby for the patch
- ▶ Set up the patch
- ▶ Announce that the patch has been created and to go ahead
- ▶ If multiple parties are involved, each should identify themselves at the beginning of each communication
- ▶ Announce to all when you are going to take down the patch before you take it down

Practice, Practice, Practice

- ▶ ROC Interoperability Plan is used across the state.
- ▶ Your radio system continues to operate as it always did. ROC plan does not replace it or change it.
- ▶ ROC Plan adds a new resource and new capabilities.
- ▶ Plan out scenarios with other ROC Plan users and role play the scenarios.
- ▶ Schedule practices with other ROC users.
- ▶ Get used to waiting for the permit tone before speaking.
- ▶ Get used to announcing the talkgroup you are on, going to or clearing, and the talkgroup you are going back to

How to Contact Us:

Please let us know how we can assist!

Mike Jeffres
Public Safety Systems Manager
Office of the CIO
501 S 14th Street
Lincoln NE 68508
402-471-3719
mike.jeffres@nebraska.gov

Pam Kemper
Systems Coordinator
402-471-0209
Pam.kemper@nebraska.gov