

Nebraska Statewide Interoperability Executive Committee Interoperability Mutual Aid Plan

Governance

State of Nebraska Office of the CIO – Network Services

Official members of the Nebraska SIEC – Public Safety and others interested

Nebraska SIEC was formed through the Nebraska 700 MHz Regional Planning Committee authority. On November 26, 2001 Governor Johanns signed a letter indicating the state's intent to administer 700 MHz interoperability spectrum, designating the Division of Communications (now Office of the CIO, Network Services) to represent Nebraska interoperability interests. The Nebraska SIEC coordinates with Region 26 (Nebraska) 700/800 MHz Regional Planning Committees, the Regional Interoperability Advisory Board (LB 343, 2005), and the Nebraska Emergency Management Agency. The purpose of the SIEC is to adopt the statewide mutual aid frequency plan and facilitate improvements to interoperable communications through shared frequencies and coordination of communications assets available in emergencies.

Membership

Open to all public safety officials, elected and appointed tribal, local and state officials, and stakeholders with an interest in public safety communications issues.

Coverage Areas

Established through SIEC approval and local agreement to manage, operate and maintain shared communications through interoperability protocols.

Note: local jurisdictions have the flexibility to establish alternative mutual aid frequencies, coverage areas, and interconnect designated statewide mutual aid channels to other resources, as governed under the statewide interoperability plan or regional interoperability plan.

Mutual aid channel assignments in Nebraska

VHF Base TAC Channels – Simplex stations controlled by local PSAP

(Currently there is are no repeater pairs designated for national interoperability channels)

VTAC1 – Transmit 151.1375, Receive 151.1375, Tone 156.7

VTAC2 – Transmit 154.4525, Receive 154.4525, Tone 156.7

VTAC3 – Transmit 158.7375, Receive 158.7375, Tone 156.7

VTAC4 – Transmit 159.4725, Receive 159.4725, Tone 156.7

VHF Direct Calling – Mobile-to-Mobile On-Scene Ground Communications

First responders directed to “off-base channel” in local area for direct ground communications

(Statewide universal VHF direct calling)

VCALLD – Transmit 155.7525, Receive 155.7525, Tone 156.7

VTAC1D – Transmit 151.1375, Receive 151.1375, Tone 156.7

VTAC2D – Transmit 154.4525, Receive 154.4525, Tone 156.7

VTAC3D – Transmit 158.7375, Receive 158.7375, Tone 156.7

VTAC4D – Transmit 159.4725, Receive 159.4725, Tone 156.7

UHF Base TAC Channels – Repeater stations controlled by local PSAP
(Repeater pairs designated for national interoperability channels)

- UTAC1 – Transmit 453.4625, Receive 458.4625, Tone 156.7
- UTAC2 – Transmit 453.7125, Receive 458.7125, Tone 156.7
- UTAC3 – Transmit 453.8625, Receive 458.8625, Tone 156.7
- UTAC4 – Transmit 453.6500, Receive 458.6500, Tone 156.7 (Proposed !!!)

UHF Direct Calling – Mobile-to-Mobile On-Scene Ground Communications
First responders directed to “off-base channel” in local area for direct ground communications

(Statewide universal UHF direct calling)

UCALLD – Transmit 453.2125, Receive 453.2125., Tone 156.7

- UTAC1D – Transmit 453.4625, Receive 453.4625, Tone 156.7
- UTAC2D – Transmit 453.7125, Receive 453.7125, Tone 156.7
- UTAC3D – Transmit 453.8625, Receive 453.8625, Tone 156.7
- UTAC4D – Transmit 453.6500, Receive 453.6500, Tone 156.7 (Proposed !!!)

VHF and UHF Temporary Repeater Operations
VTACT (local VTAC mobile repeater assignment)
UTACT (local UTAC mobile repeater assignment)

VHF/UHF mutual aid frequency re-use and ground channel assignments

Geographic frequency re-use for local mutual aid base

VTAC1	VTAC4	VTAC3	VTAC2	VTAC1	VTAC4
VTAC3	VTAC2	VTAC1	VTAC4	VTAC3	VTAC2
VTAC1	VTAC4	VTAC3	VTAC2	VTAC1	VTAC4

Local mutual aid base

VTAC1	Uses these ground frequencies:
VTAC2	Uses these ground frequencies:
VTAC3	Uses these ground frequencies:
VTAC4	Uses these ground frequencies:

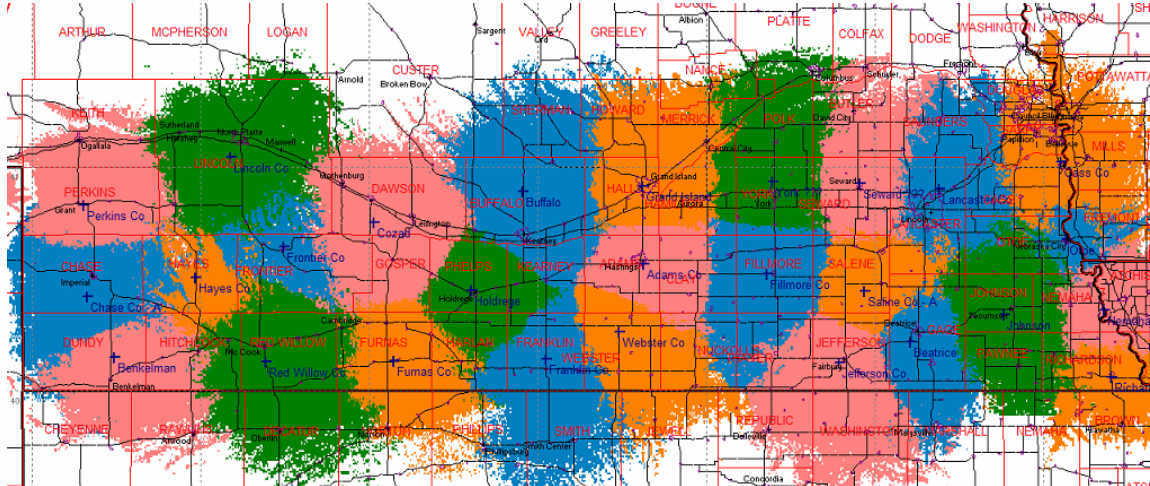
Off-base ground channel assignments

VCALLD	VTAC2D	VTAC3D	VTAC4D
VCALLD	VTAC1D	VTAC3D	VTAC4D
VCALLD	VTAC1D	VTAC2D	VTAC4D
VCALLD	VTAC1D	VTAC2D	VTAC3D

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UTAC mutual aid frequencies follows same scheme as above.

Mutual Aid Local Coverage Areas – Phase 1 Concept



700 MHz (700 MHz plan in progress)

800 MHz (NPSPAC mutual aid repeater assignments). 800 MHz ground channel assignments are talk-around using base transmit frequency. This would be in cases where no repeater is in operation, or for incident command ground assignments.

(800 MHz rebanding currently in process – frequencies will be moved 15 MHz down as indicated below)

ICALL Transmit **851.0125**, Receive **806.0125**, Tone 156.7 (NPSPAC Ch. 601)

ITAC 1 Transmit **851.5125**, Receive **806.5125**, Tone 156.7 (NPSPAC Ch. 639)

ITAC 2 Transmit **852.0125**, Receive **807.0125**, Tone 156.7 (NPSPAC Ch. 677)

ITAC 3 Transmit **852.5125**, Receive **807.5125**, Tone 156.7 (NPSPAC Ch. 715)

ITAC 4 Transmit **853.0125**, Receive **808.0125**, Tone 156.7 (NPSPAC Ch. 753)

Note: Interfering VHF and UHF adjacent wide band licenses are documented in the attachments. These systems will require a new frequency assignment, or license modification before the specific mutual aid channel can be established in the area. Adjacent wide band licenses are secondary and must cease operations if they cause interference to narrowband license. The intent of this plan is to facilitate system upgrades as necessary to implement the mutual aid plan statewide.

1. Mobile coverage will be defined throughout the state using standard talk-back criteria.
2. Common PL tone will be assigned – 156.7 Hz.
3. Nebraska SIEC rules will govern the use of the channels statewide.
4. Counties may use a tone panel if they have a plan to route various tones to designated local talk paths.
5. Base/repeater licenses through Nebraska SIEC approval.

Frequency coordination

The attached files show all co-channel and adjacent channel licenses in-state and adjacent state. The Nebraska map shows the regional areas for homeland security funding. There is a greater concentration of UHF systems south of I-80 and a greater VHF concentration north of I-80. Coverage will be coordinated according to “best site” availability and interoperability need. For example, Dawson County is VHF and has adjacent UHF counties. The county would probably put up at least one UHF repeater. The

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idea is to establish coverage footprints where they can complement the area systems and tie back to local dispatch centers. Interference will be minimized by tower selection and engineering the coverage for each site case by case.

Frequency Licensing

TBD

Operation and Use

TBD

Future Planning

Frequency and coverage modifications

CIO is doing these steps...

- Request to ICTAP through NEMA for planning coverage and technical details
- Coordinating frequency assignments and local towers
- Advising NEMA on costs and support needed to implement
- Coordinating adding a UTAC4 frequency for UHF coverage plan

Decisions for the SIEC

1. Tower locations and PSAP connectivity
2. VTAC/UTAC local designations
3. Rules for licensing and costs
4. Rules for operations and use