



**Nebraska Wireless Interoperable
Network (N-WIN) Council
2011 Annual Report
February 2012**

**2011
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Nebraska Wireless Interoperable Network Council 2011 Annual Report

Executive Order No. 08-03 (December 17, 2008) established the Nebraska Wireless Interoperable Network (N-WIN) Council, membership of the N-WIN Council, and its leadership responsibilities for interoperable public safety communications. The Executive Order charged the N-WIN Council with providing an annual report containing a current assessment of the Nebraska Wireless Interoperable Network that included recommendations for operation of and enhancements to the system. This report fulfills that requirement.

Background

The nine-member N-WIN Council consists of one appointee each from the following entities: A chairman appointed by the Governor; representatives designated by the Nebraska State Patrol; Nebraska Game and Parks Commission; Nebraska Fire Marshal's Office; Nebraska Office of the Chief Information Officer; Nebraska Emergency Management Agency; Nebraska Public Power District; and two people appointed by the Nebraska Council of Regions. The Nebraska Emergency Management Agency and the Office of the Chief Information Officer are also charged with providing administrative and technical support to the N-WIN Council.

The primary purpose of the N-WIN Council is to complete the charges listed in Executive Order No. 08-03. Accordingly, the Council will:

- Provide for the governance and policy level direction related to the planning and decisions regarding development and operation of the N-WIN;
- Provide leadership regarding the development of public safety communications within Nebraska;
- Adopt bylaws for the operation of the Council;
- Develop strategies and recommendations to improve operations of the N-WIN, including consultation with the Office of the Chief Information Officer (OCIO) regarding the use of new technology as it becomes available;
- Promote interoperability for public safety communications within Nebraska, and with border states;
- Provide oversight for the development of protocols, standard operating procedures and guidelines for use of the N-WIN;
- Coordinate and provide planning, training and exercise opportunities related to communications interoperability for all necessary and authorized public safety practitioners;

- Establish the terms of agreements and enter into agreements for public safety entities to operate on the N-WIN, in conjunction with the Office of Chief Information Officer (OCIO), when such arrangements are practical and in the best interests of the State and the regions; and
- Develop recommendations and strategies for best utilization of public funds, including grants, to improve public safety communications in Nebraska.

Cooperation with the Nebraska Council of Regions (NCOR) was instrumental to achieving the N-WIN goals in 2011. In addition to strong NCOR support and participation, three state groups provided support to N-WIN in 2011: the Nebraska Emergency Management Agency (NEMA), the Office of the Chief Information Officer (OCIO) and the University of Nebraska Public Policy Center (PPC).

NEMA assisted with N-WIN Council activities by: 1) providing administrative support for Council meetings including arranging for meeting space, providing copies of meeting materials, and creating sign-in sheets to record attendance of meeting participants and 2) providing resources for and coordination of environmental assessments for all installation of communication equipment purchased with federal funds. NEMA also agreed to take responsibility for coordinating exercise opportunities related to interoperable communications for Nebraska public safety practitioners.

The OCIO provided technical support to the N-WIN Council. The OCIO gave regular reports to the N-WIN Council about the development of interoperable communication infrastructure and implementation of the statewide radio network in coordination with NPPD. The OCIO is also responsible for coordinating the statewide interoperability strategy with NEMA, NCOR and regional leadership groups.

The University of Nebraska Public Policy Center (PPC) provided planning assistance for the N-WIN Council over the past year through agenda development, meeting facilitation, document preparation, note taking, and maintaining a website to centralize communication related to the N-WIN Council and related statewide activities (<http://www.homelandplanning.nebraska.edu>). The PPC also organized the interoperability newsletter and four statewide webinars.

2011 Milestones

Implementation of the Statewide Radio System (SRS). The statewide radio system, a VHF P25 digital trunked land mobile radio system, is a partnership between the State and Nebraska Public Power District (NPPD) and was installed in four phases. Phases became activated when towers were turned on and communication between sites was enabled. Phases became operational when state agencies were able to move their

daily operational traffic to the new radio system. Work progressed in 2011 to complete the SRS including installing and replacing antennas where needed, establishing tower leases, installing generators, installing and upgrading radio equipment, assigning and licensing frequencies, coverage testing, troubleshooting alarm systems, addressing illegal carrier issues, and training of key personnel. The final areas in the eastern part of the state are scheduled to go live in early 2012 with final coverage testing to be completed by Fall 2012. NPPD received the Apex Award from the Utilities Telecom Council for Partnership with Public Safety for its role in working with the state of Nebraska to develop the SRS. The Council believes NPPD's work with Nebraska should be a model for the rest of the United States. The SRS User Group (SUG) continued to meet monthly to discuss SRS project status, issues, resolutions and to agree about policies and procedures for its use.

Intent to Participate Form and New User Checklist. The OCIO and NPPD developed a form for potential SRS users to complete and then be presented to the N-WIN Council for approval. The form explains the purpose of the SRS, identifies the steps to participation, and asks for basic information about the interested organization. The OCIO and NPPD also developed an SRS New User Checklist to track progress at completing the steps to becoming an SRS user. The N-WIN Council worked on a process to accept new members on the SRS, and approved two new members. The new members are Lincoln Electric System (LES) and Lincoln County. New users could include local public safety entities or public power districts.

Establishing Final N-WIN Council Procedures. The N-WIN Council modified and approved procedures for the N-WIN Council in 2011. The procedures provide written documentation for the N-WIN Council to conduct business in accordance with its bylaws and to provide final approval for eligible organizations accessing the SRS. The procedures provide methods for conducting N-WIN meetings, processes for establishing committees and presenting reports, procedures for managing relationships among SRS subscribers, procedures for appeals, and procedures for approving SRS access.

Development of a User Cost Model. The OCIO and NPPD developed a user cost model for participation in the statewide radio system. The statewide radio system was designed to serve the communication needs of the Nebraska Public Power District (NPPD) and the state's public safety and law enforcement agencies, as well as other organizations such as first responders, state and local officials, and local utilities. Rather than build two separate radio systems, state OCIO and NPPD officials entered into an agreement to equally share the cost of purchasing, installing and implementing the statewide radio system. The user cost model was designed to be as simple as possible, to correlate to the percentage of system utilization and to promote system

utilization. It was not intended as a cost recovery mechanism for the initial construction of the system, but as a funding mechanism to ensure its long-term sustainability. In 2011, the OCIO and NPPD successfully applied the cost model with two organizations and began work on a cost model for guest users. The NWIN Council provides final approval for each proposal.

Development of Communications about the N-WIN System. Recognizing questions about the implementation of the Nebraska Wireless Interoperable Network such as how the SRS relates to the other interoperability components (e.g., the Nebraska Regional Interoperability Network), the N-WIN Council disseminated information to key stakeholders. These included webinars and newsletters targeted toward public officials, local emergency responders, and emergency managers.

Coordination with NCOR on Other Components for Interoperable Communications. The N-WIN Council worked collaboratively with NCOR to monitor the implementation of other components of the Nebraska Wireless Interoperable Network including the following:

- 1) The *Nebraska Regional Interoperability Network (NRIN)*, an Internet Protocol (IP) high-speed microwave network connecting over 200 towers across Nebraska organized in eight regional, ringed networks that will carry wireless data relating to all aspects of emergency communications statewide, including voice, video and data. In 2011 implementation focused primarily on the Panhandle and North Central regions. Work included approving the system design, identifying and assessing tower locations, identifying alternatives when planned towers were not feasible, negotiating rates for usage of towers and other structures, identifying storage and staging locations for equipment, ordering equipment for the tower sites and installing equipment. Each potential installation site must undergo a review for environmental impact prior to installation of any equipment. NEMA has coordinated this effort. Work began in the Southwest, South Central and Southeast regions to identify and assess towers for NRIN.
- 2) The *Nebraska Mutual Aid System*, a planned network of analog radio base stations using common, nationally accepted frequencies to provide radio coverage across the state controlled by local/regional system operators. NCOR developed specifications for mutual aid and incorporated these into draft Standard Operating Procedures (SOPs). Regions and local areas assessed their needs related to upgrading public safety answering point equipment and connections to interoperate with the SRS for the purpose of achieving interoperability. Three pilot programs for mutual aid began planning and implementation in 2011 – one in the Tri-County Planning, Exercise and Training (PET) Region, one in the South Central PET Region, and one in the North

Central Region. A major focus of these efforts has been to achieve interoperability between local first responders and the Nebraska State Patrol.

- 3) *Paraclete*© is a computer software system that enables local, regional, and state emergency responders to communicate with one another using disparate radio systems in the event of a local emergency. Decisions about where Paraclete equipment should be located have been made by local emergency management and communications personnel in consultation with the State personnel working on this initiative. NCOR produced guidance for Memoranda of Understanding (MOUs) for sharing frequencies in Paraclete. NEMA designed a process for resolving technical issues with Paraclete, developing a user manual and providing training for dispatchers, supervisors, and emergency managers across the state.

Challenges

N-WIN involved multiple systems and networks and a variety of stakeholders and participants. Given this complexity, a significant challenge this year has been defining the scope of N-WIN and obtaining consensus on the role of the N-WIN Council and its relationship with other councils (e.g., NCOR), state agencies, and the overall interoperability plan. The N-WIN Council has made significant progress in identifying roles and responsibilities among partnering entities, but additional work in this area will be warranted as the network evolves and the state moves toward accomplishing its statewide interoperability goals.

Another challenge has been in the implementation of the N-WIN infrastructure, due to the complexity and scope of this project. There were some delays during the development of the four phases of the State Radio System which, in turn, resulted in delays in bringing sections of the system on-line. Timely coordinated communications with stakeholders about project status presented a challenge. This was remedied by the formation of the SRS User Group (SUG) by the System Operating Group (OCIO and NPPD) which conducts monthly meetings to which all SRS Users and potential users are invited. The SOG also created a SharePoint SUG Library to which all SUG members have access. Detailed meeting notes and project information is posted and updated in the Library. Weekly conference calls are conducted with the Motorola project manager providing project status details. Another challenge was developing a user cost model that balanced the need to cover system operational costs with the need for affordability to ensure maximum user participation.

The N-WIN projects involved a significant amount of activity and development of information about each of the four components. Communicating this information effectively to all stakeholders has been challenging. Persons involved in the development of the N-WIN components varied in their levels of experience, technical

knowledge and operations expertise. Given these diverse backgrounds and differing communications cultures and procedures among state and local system users, this challenge is not unexpected. However, effective communication with all stakeholders is vital for these projects to progress efficiently and effectively.

Recommendations

In 2011 the N-WIN Council will be incorporated into a new organizational structure to implement statewide interoperability. Current discussions are taking place surrounding the integration of NCOR and N-WIN through the Executive Order. Six recommendations are offered to move the state toward full interoperability:

1. Ensure transparency in development of the interoperability network that facilitates regional network development.
2. Provide leadership for development of administrative systems for subscribers of the State Radio System (SRS) and champion the change to plain speak radio traffic.
3. Continue to refine a functional and sustainable funding model for the SRS.
4. Continue to clarify the roles and responsibilities of agencies to foster communication among all collaborators.
5. Develop effective communications targeted toward potential users and other stakeholders to increase understanding about interoperable communications.
6. Build relationships with contiguous states to understand their experiences in governance and oversight of interoperable systems and to develop functional interstate interoperable communications.