Nebraska Regional Interoperability Network

What is NRIN? What are the Benefits? What are the Next Steps?
What is NRIN?

- **Nebraska Regional Interoperability Network**

- IP Microwave network that connects 911 centers across the state through towers like grain elevators, water towers, government owned or existing communications towers.

Why?

- NRIN allows public safety centers to share large amounts of data and communications with each other over long distances in a way that is the most secure and reliable.
What has been done so far?

- 65% completed already
- All dollars are coming from Department of Homeland Security
- Complete by August 2017
- The Nebraska Public Safety Communications Committee oversees governance and planning for this project.
- NEMA (Nebraska Emergency Management Agency) manages the build-out of NRIN with multiple vendors.
What Does It Take?

- Initial agreement with the site owner to access the site
- An EHP with the Federal Government – use of grant dollars
- Mapping on the structure – what’s already up there
- Is there an existing shelter?
- Structural analysis – can it hold more dishes and coax
  - Pass – good to go
  - No Pass – find another suitable tower or remediate
- FCC licensing
- MOU with the site owner
- Installation of equipment
- County will receive an “As-Built” of the site with all parts and pieces listed as well as serial numbers for each.
How will it Improve Public Safety?

- Improve public safety by increasing the amount and type of information that can be shared as well as the number of participating agencies such as:
  - 911 dispatch
  - Sheriff’s office
  - Fire stations
  - Public power
  - Emergency Operations Center
  - National Weather Service
  - Crime information centers
  - Emergency Alert System (EAS)
  - Roads and motor vehicle agencies
  - Ham radio networks
  - Civil air patrol
  - Courthouses
  - Other public and private agencies
For Example:

- With the help of current mobile data technology and or FirstNet, pictures and data from a chemical spill could be transmitted from a first responder at the site to state or national experts to help identify the level of threat and determine the appropriate response.
For Example:

- An emergency operations center could receive real-time video, voice, and/or data from responders at the scene of a regional devastating natural disaster such as a tornado.
Potential future uses:

- 911 Equipment sharing – NRIN could provide the primary or backup communications link to allow for cost effective 911 equipment sharing across multiple counties or regions. The East Central Region is installing equipment to do this now.

- Conducting video arraignments – Multiple Courthouses and Detention centers use this technology and pay for dedicated data connections that could be eliminated.

- Expensive communications lines that connect radio repeaters and radio base stations could be moved to NRIN and costly monthly fees could be eliminated.

- Interoperable radio base stations that are currently being installed across regions could connect back to multiple dispatch centers. IE Vcall, Ucall, Vtac, Utac,
Potential future uses:

• Security cameras at remote locations can utilize NRIN to connect back to dispatch centers or other security centers.

• City and County Government can utilize NRIN to share data or provide off site backups as part of a COOP plan.

• Law Enforcement Agencies can connect their Records Management Systems together to share information.
NRIN Work Team

John Bomar Madison Volunteer Fire and Rescue/ Assistant Chief
Ike Brown McCook Police Chief
Mark Conrey Douglas County 911 Director
Pat Gerdes Southwest PET Region
Tim Hofbauer Platte Valley Emergency Management
Sue Krogman NEMA
Neil Miller Sheriff, Buffalo County
Pete Peterson Keith Co Emergency Management & Communications Director
Ray Richards Scottsbluff County Communications Director
Tracy Rocole OCIO
Jon Rosenlund GI/Hall County Emergency
Ray Ryan Lancaster County Radio Maintenance Shop
Matt Schnell NPPD
Jayne Scofield OCIO
Patrick Seim OCIO
Jim Sheets OCIO
Todd Thalken Columbus Police
Chip Volcek South Central
What is Needed to Support NRIN?

- Governance
- Management and Monitoring
- Maintenance/Equipment Repair
- Sustainable Financing
Governance

- Quality of service standards
- Priority of service guidance
- Data replication/backup
- Minimum security standards
- Minimum security & equipment standards
- Minimum maintenance standards
- Minimum grounding standards
- Minimum environmental monitoring
- Allocation of bandwidths

- Monitoring and testing policies/procedures
- Engaging & retaining expertise to carry out management function
- Contracting for administrative functions
- Policies & procedures for items & practices not allowed
- Service level agreements
- Service/performance reviews
- Financial sustainability
Governance

• Who should sit on board?
  • Elected officials
  • Managers/Users
  • Technical experts

• How should it be structured?
  • Interlocal Agreement – Counties, Cities, State Agencies
  • Executive Order
  • Legislation
  • Private/ non-profit
Monitoring & Management

- Implement decisions of NRIN governance
- Problem management
- Change management
- Proactive monitoring
- Disaster recovery
- Coordinate local networks
- Preventive maintenance
- Creating Routes
- Recommendations concerning traffic engineering
- Configure and implement circuits
- Monitor network usage and failure
- Take corrective action due to failures
- Testing to determine problems

- Problem resolution
- Manage connections to customers
- Update software and firmware as needed including version control
- Implement security policies
- Documentation of the system
- Manage implementation (do it directly or direct it to be done)
- Oversight of maintenance
- Recommendations on monitoring software or devices
- Recommend standards, practices, policies to governance and provide technical advice
Maintenance

What is it?
• Maintenance of towers
• Maintain spare parts
• Equipment replacement
• Environmental alarms
• Conform to NRIN Governance Decisions

Who will do it?
• Statewide contract
• Contracts with regional entities
• People with good hearts
• Combination
Sustainable Financing

The current estimated annual costs:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tower Leases</td>
<td>$171,750</td>
</tr>
<tr>
<td>Insurance (picked up by counties)</td>
<td>$0</td>
</tr>
<tr>
<td>Management/Monitoring</td>
<td>$279,484</td>
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<tr>
<td>Training*</td>
<td>$41,320</td>
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<tr>
<td>Maintenance/Equipment Repair</td>
<td>?</td>
</tr>
<tr>
<td>Fiscal Agent/Administration</td>
<td>?</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>?</td>
</tr>
</tbody>
</table>

* First Year Only
Sustainable Financing

• Dishes:
  • 6’ - $2500
  • 4’ - $1500
  • 3’ - $1200
  • 2.6’ - $1000
  • 1’ - $400
  • The (ODU) (RFU) is: $7500 © & $8500 (hp)

• Inside a cabinet or shelter:
  • Ceragon Radio – (IDU) $2000
  • Rectifier - $1200
  • UPS System (including Network Card and Battery Pack) - $1600
  • Routers:  
    • MX-5 - $12,000 – 3 or more dishes
    • SRX550 – $7200 – pass through sites
    • SRX200 series - $1000 – end points
Sustainable Financing

Potential Funding Options

• Per County (flat rate per county, by population, etc.)
• Per PSAP (city, county, state) – by population, call volume, flat fee, etc.
• Homeland Security Funds
• User fees (e.g., modeled after the State Radio System)
• User offset (e.g., trading tower rent for NRIN usage)
• Other cost offsets (e.g., Teletype)
• State appropriation
• Partnering with Next Generation 911, FirstNet, other initiatives – cost sharing
Proposed Interlocal Agreement

- Create NRIN & Board
- County/Municipality Members
- Governing Board – 2 per Region
  - Policies
  - Contracting
  - Financing Plan
Proposed Interlocal Agreement

- Feedback and Revise Interlocal Agreement – 6/15
- Membership/Signatories – 8/15
- Nominate/Select Board – 10/15
- Bylaws/Committees/Contracts – 12/15
- Governance Policies – 3/16
- Finance Plan – 6/16
Discussion

1. Questions about NRIN – benefits & build-out
2. Reaction to proposed Interlocal Agreement
3. Discussion about how NRIN interfaces with other initiatives
   • FirstNet
   • Next Generation 911
Questions / Contacts

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