

**Nebraska Regional Interoperability Network**  
**November 12, 2015; 9:00 AM – Noon**  
**Buffalo County EOC**  
**Kearney, NE**

**I. Participants**

<b>Name</b>	<b>Organization</b>
Clint Casper	Lancaster County
Mark DeKraai	University of Nebraska Public Policy Center
Kevin Garvin	Cedar County Emergency Management
Pat Gerdes	Southwest
Tim Hofbauer	Platte Valley Emergency Management
Sue Krogman	Nebraska Emergency Management Agency
Pete Peterson	Keith County Emergency Management and Communications
Ray Richards	Scotts Bluff County Communications Director
Matt Schnell	Nebraska Public Power District
Tracy Rocolle	Office of the Chief Information Officer
Jon Rosenlund	Hall County Emergency Manager
Raymond Ryan	City of Lincoln
Robert Tubbs	Buffalo County Sheriff's Office
Chip Volcek	Adams County Emergency Management Agency

**II. Welcome, Meeting Overview, Changes to Agenda, Approval of Minutes**  
Minutes from last meeting were approved. No additions or changes to November meeting agenda

**III. Open Meeting Laws**  
NRIN is a committee of NPSCC and is not required to follow Nebraska open meeting laws.

**IV. Update on NRIN Buildout and Regional Updates**  
The Giltner exchange is complete. Cornerstone is finishing the Southeast area and then will work in the South Central area. There is a meeting with Senator Flood to discuss use of towers for NRIN. A storage facility in Northeast will be needed soon since equipment from other regions will soon be gone from the Lincoln facility.

In the Panhandle, path calculations are being done and Cornerstone will soon be working on this. There was a meeting on November 10<sup>th</sup> in Sydney – Sue, Pete, Mark and Ray Richards attended. The basics of NRIN were discussed.

North Central is affected by the difficulties with the Angora to Alliance Hop in the Panhandle. The ring is only partially operational in North Central because of this.

Southwest – There was a temporary outage, but this was fixed. They are working on a connection between Keith and Perkins Counties.

South Central – There is no contract for the water tower in Doniphan. Matt and Sue will discuss the water tower and use of fiber.

East Central – 6 of 7 counties are on board. Boone County will be coming on and there will be a ring. They are working on the connection to Dodge County. Power was an issue at a grain elevator a couple months ago. Flies in the fan caused overheating. SRS used mesh to fix this problem. OCIO has set up a ring diagram that can be viewed on phones to see red and yellow flags for NRIN, and this system is working well. SRS is on the NRIN network and operational. Mutual aid base stations are on the network.

Southeast – This will be the next area for the build out. They are working to get more interlocal agreements signed.

Northeast – They are looking at storage options and understand they will need to find appropriate storage by the end of December. Sue, Tim, Mark Conrey, Mark DeKraai will be attending a Northeast meeting to discuss NRIN. Kevin, Nic and other emergency managers will be there along with elected officials and other stakeholders.

Tri-County – No news

## **V. Training Proposal/Maintenance**

Tim talked to Ceragon and they didn't know about NRIN. They offer training – first tier maintenance and trouble shooting. Could have up to 10 people trained for \$11,000. We would just need to provide the facility. There is an issue of training other radio shops since the two contractors have already had to pay.

There is an issue of what would include in the maintenance contracts. There is a need to have someone with access and keys to the rooms at the NRIN locations. We need a plan for expectations on annual maintenance including cleaning filters, replacing batteries, having generators for power outages. The contract will depend on the scope of work. Northcentral has been successful at having local

government people provide the first line of support. With SRS, NPPD is doing maintenance and will do filters and other routine stuff. Once 911 calls are on the system, maintenance becomes critical.

A model may be based on Paraclete maintenance where Bucky would call them up and ask them to flip a switch. The vendor did annual checkup and repair. There are environmental monitors at each site that set off alarms, notifying someone that something needs to be done. Pat does all the maintenance in the Southwest. The local radio shop doesn't do advanced work, so one of the current contractors would have to come out. We need to decide if there are different maintenance solutions for each region or standardize the process across the state. Is there a contractor on call 24/7 for all problems, or is there an expectation that someone local will take a look first to see if contractor services are needed? There was discussion about economy of scale with a statewide contract with better consistency and continuity. It would be great if someone could list the items/problems for maintenance and develop priority levels for different sites and regions. We need to define minimum capabilities at the local level to exclude from the contract. We also need to look at the statewide maintenance contracts for SRS, NPPD, 911 system contracts, IT contracts as templates.

**VI. NRIN Quality of Service**

There was discussion about the quality of service standards. It was decided to work on this language some more and defer a decision.

**VII. Interlocal Agreement**

The Interlocal Agreement has been signed by 45 counties and two cities. Seven of the PET regions are represented. Efforts are ongoing to get additional counties and cities to sign by December 15, 2015.

**VIII. NRIN Board Development Process**

The deadline for signing the Interlocal Agreement will be December 15, 2015. The nomination process will also be closed by December 15, 2015. We will ask for nominations from Interlocal Agreement members (counties and cities which signed the agreement) and from PET Region Boards. Mark put together a draft Candidate Solicitation and sent out for nominations. The group also discussed a process for elections including the following procedures:

1. The Interlocal Agreement with all signatories will be sent out the third week in December to all Members and PET Regions. We will check to make sure no one was missed.

2. All candidates for Board of Directors will be sent out at the same time with the nominating organization. We will make sure no one was missed.
3. If there are not at least two candidates for each of the eight participating PET Regions, the Region may have fewer board members than the two designated in the Interlocal Agreement
4. Once all candidates are verified, we will develop ballots for each PET Region to be sent by December 21, 2015.
5. Only county and municipality members will be eligible to vote. Each member will have one vote per board member position – two votes in the initial year. Ballots will need to be signed by the member board chair.
6. Votes will be due by January 31, 2016
7. The UNPPC will tabulate votes. The votes will be verified by the NRIN committee members.
8. Tie votes will be handled by flip of the coin
9. All candidates (successful and unsuccessful) and all NRIN Members will be notified of voting results by the first week in February.
10. At the first meeting of the Board of Directors, each Director will be randomly assigned by coin flip a Term of Office, to meet the Interlocal Agreement requirement for staggered terms as follows:

<b>PET Region</b>	<b>Director Number</b>	<b>Term</b>
Panhandle	Director 1	4 years
	Director 2	3 years
Southwest	Director 1	2 years
	Director 2	4 years
North Central	Director 1	3 years
	Director 2	2 years
South Central	Director 1	4 years
	Director 2	3 years
East Central	Director 1	2 years
	Director 2	4 years
Northeast	Director 1	3 years
	Director 2	2 years
Southeast	Director 1	4 years
	Director 2	3 years

Subsequent terms will be three years. The Board will develop procedures for subsequent elections and filling vacancies.

**IX. Updating NRIN Cost Estimates**

Sue handed out a list of NRIN equipment and a list of towers. She will update this list and provide to Quinn so he can send out prior to the next meeting. To get estimates from vendors for maintenance, the committee or Board needs to better define the maintenance expectations (see earlier discussion)

**X. Other NRIN updates**

No other issues were discussed

**XI. Next Steps**

Next meeting will be in Lincoln on December 16, 2015 at 1:00 PM.

**XII. Adjourn**

The meeting was adjourned at 11:00 AM.

**Nebraska Regional Interoperability Network  
November 12, 2015; 9:00 AM – Noon  
Buffalo County EOC  
Kearney, NE**

**Conference Call/Audio:**  
Number: 1-866-244-8528  
Passcode: 368830

**Video Conferencing will be available via ZOOM**

Join from PC, Mac, iOS or Android:

<https://zoom.us/j/233952866?pwd=x12U5TN5wQmwIumekTziMw%3D%3D>

**PASSWORD: NRIN2015**

Instructions on how to join attached to invitation email

**DRAFT AGENDA**

- 1. Meeting overview, changes to agenda**
- 2. Review and approval of meeting minutes**
- 3. Open Meeting Laws**
- 4. NRIN Build-Out Updates – Sue Krogman**
- 5. Technical Issues/Progress/Other Updates for each Region**
  - a. Panhandle – Ray Richards**
  - b. North Central – Pete Peterson**
  - c. Southwest – Pat Gerdes**
  - d. South Central – Chip Volcek**
  - e. East Central – Tim Hofbauer**
  - f. Southeast – Ray Ryan**
  - g. Northeast – Nic Kremnitz or Kevin Garvin**
  - h. Tri-County – Mark Conrey**

- 6. Training Proposal – Tim and Sue**
- 7. Proposed Quality of Service Standards – Decision Item**
- 8. Interlocal Agreement Updates**
- 9. Board Development Process**
- 10. Updated Cost Estimates**
- 11. Other NRIN updates/Issues**
- 12. Next meeting dates and locations**
  - a. December 16, 2015, 1 – 4 PM, Lincoln**
  - b. Meetings for 2016**
- 13. Summarize Next Steps and Adjourn**

## Proposed NRIN Quality of Service (QOS)

Quality of Service on the Nebraska Regional Interoperable Network shall be as stated below. It is understood that as the network is utilized that bandwidth allowances to each level may be changed to accommodate increased or decreased use. **It is understood the routing and network management will have highest priority by default.**

Level 1 – Life Safety. This level is reserved for data to include voice, video, and or data related to 911 telephony equipment and critical emergency related radio traffic. Because of our partnership with public power districts within Nebraska, low bandwidth utility equipment switching will also be include in this level. Initially 30Mbs will be allocated to this level.

Level 2 – Video and VOIP. This level will include any traffic that would suffer intelligibly for voice or video conference. This could include video court, day to day radio over IP traffic, or videoconference. Initially 30Mbs will be allocated to this level.

Level 3-Data. This level will include data that is not critical and is not time sensitive. This could include database backup/update, normal data related to computer communications. Initially this level would utilize the balance of bandwidth.



**NRIN – Lessons Learned**  
**Tim Hofbauer**  
**September 18, 2015**

I would like to pass on some lessons learned related to operational issues we are seeing as we utilize NRIN in our region with the hopes that other regions can learn from them.

Grain Elevators may not be the best location for NRIN equipment as they seem to have the most power issues. We have 3 in our region and we have had problems with each of them. Also, it is not uncommon for the elevator operator to just cut the power when construction cranes are operating. In our case one elevator had a planned outage and failed to tell us. We found out when that site went down after the UPS batteries ran down.

While this situation is still ongoing there are a number of things to plan for especially if you have equipment located in the NRIN aluminum self-contained equipment cabinets. Many of these are at water towers and grain elevators. Because we have quite a few in our region we started planning for power issues as they were not on a standby generators. We purchased a couple 2000 Watt Inverter generators and made up special cords that plug into the generator receptacles on the cabinets. The breaker panel is actually a manual transfer switch which allows you to shut off the main breaker and turn on the generator breaker to run on generator power. This is a safety feature for the power companies. Here is what we found.

Newer open framed construction generators that have built in ground fault breakers (GFCI) will not work without some modification. The neutral line is bonded to ground in the equipment cabinets and the generator, this will cause a ground loop and instantly trip the GFCI breaker and not work. There is a way to remove the neutral bonded ground at the generator but that can cause a safety and liability issue as the generator frame can become energized. The best solution is to purchase a “inverter generator”. They put out cleaner power and don’t have the floating ground issue and aren’t neutral bonded. Honda makes a good 2000 watt generator. I purchased our regions at Ace Hardware. They were \$999 each.

The generator receptacle on the NRIN equipment is a standard 4 wire 30 amp twist lock. Since the generator only puts out 110 volts and the cabinets are 240 volts I had to tie the two phases together in the plug. Otherwise either the air conditioner or NRIN equipment would operate depending on what phase was connected. By tying them together both the equipment and air conditioner could be run. This may not be kosher with the electrical folks so only use this cord for the NRIN equipment.

The Honda generators hold less than one gallon of fuel which requires a refill every 4-6 hours. Fuel extension kits can be purchased. In our case we had to have the generator at the top of the

elevator and haul fuel up when needed. Because the power was out that meant no man lift so the ladder was utilized, not fun. Ask me how that went and I'll tell how being old and fat isn't a good thing. We did not run the air conditioner unit to lower the load on the generator but had to keep the cabinet door open but the equipment still was hot. Rain was forecast so we couldn't keep the door open too long so the AC had to be hooked up.

If you do have a NRIN equipment cabinet located at the top of an elevator or any other inaccessible place plan for a way to get generator power UP TO the cabinet at the top. We purchased 125' of 10/4 SO extension cord and twist lock ends and made up a cord with a cost of over \$350. We ended up 10' short so we improvised a short extension cord. In this situation are using an older open frame generator without a GFCI so we would have longer run times between fueling. With the generator on the ground it is much easier to fuel and monitor. We plan to have a conduit ran to the top just to power the NRIN equipment cabinet and air conditioner and include a transfer switch and generator receptacle at the base of the grain elevator in the very new future. We also are putting together a tote with the cords, rope, wire ties, and anything else we would need.

In our case construction was supposed to go only one day but now they are on their third day and it's raining today so I'm guessing we will need to babysit and fuel the generator over the weekend to.

If you have questions about what I just wrote get ahold of me. If you feel uncomfortable about any of this I would suggest getting an electrician involved.

Also the filters on the NRIN cabinets are washable and spare ones are available, we ordered 6 of them so they can be swapped out and cleaned and used the next time. On grain elevators they would need to be cleaned monthly.

Tim Hofbauer – Director  
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