SCAN ALERT2 Network Design

Project Status
16 October 2014
Project Scope

- **Task 1: Interview agencies**
  - Questionnaire

- **Task 2: Inventory existing network configurations**
  - Ventura Database

- **Task 3: TDMA Management Tool**
  - [http://tdma-scan.onerain.com](http://tdma-scan.onerain.com)

- **Task 4: Network Designs**
  - Phased Upgrades
    - Concentration
    - Full ALERT2
  - TDMA design
  - Equipment Required for each phase
Task Status

✓ Task 1: Interview agencies
  ✓ Questionnaire

✓ Task 2: Inventory existing network configurations
  ✓ Ventura Database

✓ Task 3: TDMA Management Tool
  ✓ http://tdma-scan.onerain.com

• Task 4: Network Designs
  – Phased Upgrades
    • Concentration
    • Full ALERT2
  – TDMA design
  – Equipment Required for each phase
Remaining Tasks

- **Task 4: Network Designs**
  - Phased Upgrades
    - Drafts have been distributed
    - Finalize
  - TDMA design
    - Each agency configured at http://scan-tdma.onerain.com
  - Equipment Required for each phase
    - Example draft
    - Each agency to review and verify
Discussion

• Communication for cross agency dependencies
  – How does an agency learn about the designs and dependencies of their neighbors
  – How do the agencies coordinate the scheduling upgrades
Thanks!

Comments and Discussion
Network Design Rules

- Network Design Rules
  - Two phase upgrade
    - Concentration
    - Full ALERT2
  - Separate dependencies across county agencies
  - NWS to receive data via SHEF
  - ALERT and ALERT2 not on same frequency throughout transition
  - Network/TDMA capacity to accommodate 5 years future growth
Equipment Requirements

- Equipment Requirements
  - Divided into two phases
    - Concentration
    - Full ALERT2

- Things we don’t know but recommend
  - Repeaters/Base Station require cavity filters in heavy RF environments
  - Reuse ALERT receivers for concentration if possible
  - Single antenna vs. dual antenna repeaters
    - May lose ability to receive during transmission times