



*Wyoming's Statewide Public-Safety Interoperable  
Radio Communications System*

**Wyoming Department of Transportation  
5300 Bishop Blvd, Cheyenne, Wyoming 82009 USA**

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## Project Status Report

Date: March 29, 2005

From: Tom Mahon, WyoLink Project Manager

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Please feel free to pass this message along to others who may have an interest in the WyoLink project. Subscription information for this mailing list can be found on the project web page: <http://WyoLink.wy.gov> where a great deal of other information regarding WyoLink is posted.

WyoLink is Wyoming's statewide public safety interoperable radio communications system.

### TOPICS IN THIS REPORT:

- A. Pilot Phase Development
- B. Frequency Acquisition
- C. Project Schedule
- D. System Management / Administration
- E. Information Resources
- F. Traceability Matrix / Plan Tracking

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### **A. Pilot Phase Development**

Work on the pilot phase is progressing. It is anticipated that the Detail Design Documents will be completed later this week. Thereafter, the factory order will be placed, which will then tell us when Factory Staging will occur. The Detailed Design Review process has resulted in fine-tuning of the implementation plan and the identification of a number of technical issues, which are moving toward resolution.

- 1) To control the cost of the Pilot Phase, the original proposal called for installing a zone controller capable of supporting up to 20 sites, which would have been upgraded to the full z in the course of later development. In reviewing budget, schedule, and technical issues, the decision was made to install the full zone controller during the Pilot Phase rather than later. This will allow the full capacity zone controller to be included in the factory staging and testing process and will remove the need for a field installed upgrade at a later date and the downtime required for installing the upgrade.

- 2) Motorola has conducted a testing process called "Frequency Fingerprinting" at each of the Pilot Phase sites. This process involves monitoring all of the frequencies to be used for WyoLink over a 24-hour period at each of the radio sites. The testing produced positive results at the 85 South site, the North Albin site, the Pine Bluffs site, and Whitcomb Hill site. Interference issues are identified at the Sherman Hill site and the Emerson Building site. The WyoLink Project Team will be working to resolve the identified interference issues in time for the Pilot Phase installation.
- 3) Approval was received from the State Buildings Commission for the WyoLink installation at the Emerson Building site. That approval is contingent upon structural engineering evaluation, which is currently underway. There are issues to be resolved related to the ongoing equipment space rent and leased T-1 circuit costs. Alternative locations are being explored in the event structural engineering or ongoing cost issues preclude the use of the Emerson Building.
- 4) An initial block of 20 talk-group-groups have been planned that will allow initial testing and operational exercises of the Pilot Phase. This block of talk-groups is but the first of many that will be programmed into the WyoLink system. Configuring and adapting talk-groups will be an ongoing issue throughout the life of the WyoLink system.
- 5) Work is underway to expand the equipment room where the WyoLink master site will be installed. (The master site includes the zone controller and other subsystems.) This equipment room expansion is required as the volume of equipment is greater than was anticipated when the room was initially planned. The equipment room expansion will also accommodate the future upgrade of the Wyoming Highway Patrol Dispatch communications console. The entire upgrade process will be handled with funds provided by the Wyoming Transportation Commission. The engineering, procurement, and construction time for the equipment room expansion has the potential to create a project delay, but not one that would extend beyond the goal proposed in the PSMC plan.

## **B. Frequency Acquisition**

- 1) An agreement has been executed between WyDOT and A&I General Services Division whereby the WyoLink project will acquire two VHF frequencies being used by General Services. Under this agreement General Services operations will be moved to a UHF frequency; a new repeater and portable radios will be provided. These costs are addressed as a contingency within the "FCC Frequency Licensing" portion of the project budget.
- 2) A frequency plan for the Cheyenne low-level radio site has been proposed. The frequency plan is such that would require only one that transmit antenna and one receive antenna. This will reduce in the tower loading the requirements and less the cost of the installation. Implementing this plan will require executing an agreement with to Cheyenne government agencies for the swap of three frequencies. Executing these agreements and the technical aspects of the frequency swap process could delay the activation of this radio site. (The Cheyenne low-level radio site was not in the original plan. Thus, the site development and frequency planning work were not addressed prior to completion of the procurement process, as was done for the other sites in the Pilot Phase.)

## **C. Project Schedule**

Overall, the project is on schedule. Installation of Pilot Phase equipment should begin in June, with the system ready for TRIAL use during Cheyenne Frontier Days. Coverage acceptance

testing and finalization of the Pilot Phase are slated for August. Should the two possible project delay is a mentioned above (master site expansion and Cheyenne low-level site or frequency plan) occur this date would be adjusted. However, no project issues exist at this time that would prevent reaching the goal established by the PSMC Plan, which called for completion of the Pilot Phase by October 1, 2005.

Based on available funds and the project development schedule, 16 radio sites and should be on the air by the end of 2005. These sites will provide coverage in Laramie, Albany, Platte, Goshen, Niobrara, Converse, Natrona, and Carbon counties. The upgrade of the City of Casper and Cheyenne Fire Department 800 MHz radio systems could occur in 2005, contingent upon those agencies readiness to upgrade their subscriber units.

The beginning of Full-Operational-Use will be influenced by several factors. To ensure ample opportunity to address operational planning and user training issues, a decision-point is scheduled for the beginning of January 2006. At that point the PSCC will review project progress, the results of operational exercises, and the status of system management issues to determine if WyoLink is ready to "Go-Live." If deemed necessary an additional three months of Pilot Phase time will be added. Public safety and the success of the WyoLink project will be best served through careful planning and ample opportunity to resolve issues during the Pilot Phase.

#### **D. System Management / Administration**

I would like to take a moment and define it to terms that will continue to be used in dealing with the WyoLink system.

- 1) SYSTEM MANAGEMENT will be used to refer to the rules and processes governing participation in the WyoLink system. For example, the PSCC WyoLink Operations Workgroup will be dealing with WyoLink system management.
- 2) SYSTEM ADMINISTRATION will be used to refer to the actual configuration and control of the WyoLink radio system, with all of the features and functions controlled through the system administration databases. The programming of talk-groups and the configuration of subscriber radios are issues associated with system administration.

My point in defining those terms is to arrive at a common language to describe these very different areas of responsibility. The PSCC will need to deal with System Management issues, which will be policy and procedural in nature. The WyoLink Project Team and WyDOT Telecommunications will deal with issues of System Administration, which will be technical in nature.

#### **E. Information Resources**

- 1) I hope you have had the opportunity to review the recent enhancement of the WyoLink web page. Dave Wesley from A&I information technology has done a fine job of reorganizing and updating the web page.
- 2) Also, as you may be aware, a new listserv feature has been added that will allow those interested in the WyoLink project to add themselves to the mailing list for status reports and to manage their own e-mail address on a distribution list. There were a couple of minor bugs when the listserv was first implemented resulting in the list acting like a discussion

group with replies being forwarded to all members of the list. Those initial issues were resolved.

- 3) Plans are underway to create a video of the WyoLink presentation that I have been delivering around the state. This video will become one more information resource to help explain the WyoLink project.

#### **F. Traceability Matrix / Plan Tracking**

I have recently completed an update of the WyoLink Traceability Matrix. This document provides a reference tool to ensure that features and functions defined in the PSMC plan have been carried forward into the WyoLink development project. The update takes the traceability matrix that was assembled during the PSMC plan, and was included in the WyoLink RFP, and adds a narrative describing how each feature is addressed within the contract with Motorola and the current system development project. You will find the narrative a useful summary of the WyoLink project, and it will provide a reference to use in looking back at the PSMC plan to understand the evolution of the WyoLink system.

The document, when finalized, will be appended as an exhibit to the contract with Motorola. I have asked the Motorola Project Manager to review the document. Once I have his concurrence, and once any final editing is completed, the document will be made public.