

Meeting Summary
Next Generation Committee
October 30, 2003
Governor's Conference Room, Tatnall Building

KEY:

BOLD TEXT = corresponding PowerPoint text

REGULAR TEXT = summary of speaker's verbal comments

Italicized, underlined type = speaker providing the commentary

Welcome!

Greg Patterson: The Governor indicated, once the previous 800MHz project was done, that she wanted to undertake what we've now started calling the next generation of the 800MHz system.

As this system is one of the best in the country, it is not perfect, and the Governor's goal is to keep trying to make it better.

The purpose of this committee will be to make a recommendation to the Governor about what a program of improvements to the 800MHz system should be. It will not be the responsibility of this committee to figure out where the funding comes from.

To be fiscally responsible, the one-time federal-state stimulus package money should be used for one-time projects, and in the Governor's list of one-time projects, this is very high on her priority list.

There are other sources of funds, but that is not something that this committee needs to worry about.

We do have a timeline that does concern the committee. We would like to have a solid recommendation for the Governor by May 1st which will allow her to incorporate this into what we call the mark-up process.

Goals: The goals today will be to:

- **Kickoff Committee Participation in the 800MHz Program**
- **Bring members up to speed on** the state of the 800MHz radio system.
- **Establish plans and activities going forward, including requirements gathering** and talk about how we want you to give us the input on what you think the system needs to be improved.

This Meeting:

- **Agenda:** What we want to do is lay out the process for you, and we'll schedule our next meeting and keep them coming so we can get through this program on the time line that we've laid out.

Welcome

Greg Patterson

Personnel in room:

Elayne Starkey

Lynn Hersey-Miller

Richard Reynolds

Ed Smith

Dave Roberts

Jim Cabbage

Gene Donaldson

J.J. Davis

Joe Thomas

Bryant Baker

John Mancus

Bob Gates

Colleen Gause

Tony Lazzaro

Bob Furman

Phil Cabaud

Chip McDaniel

Bob Ross

Dan Cox (for Secretary Ford)

Jamie Turner

Tom Jarrett

Dick Dempsey

Bill Carrow

Burt Delaney

Tim Westbrook

Bill Streets

Bob Pedersen

Greg Patterson: There were some people invited that were not able to make it, among them Stephanie Ulbrich, chair of the 800MHz oversight committee in the House. We will look forward to having her participation as well. If there is anyone in the group who you think should be here, tell me, I'll make sure we try and have everybody represented.

- **System History/Lessons Learned** **Colleen Gause**
- **Current System Status and Capabilities** **Robert Pedersen**
- **Roles of this Committee** **Bryant Baker,**
Robert Pedersen
- **Project Management** **Lynn Hersey-Miller**
- **Summary and Next Meeting** **Greg Patterson**

Colleen Gause:

System History

- **Original 800 MHz Digital Trunked Radio System:**
- **Contract signed with Motorola on Oct. 15, 1993 to design and build a state-of-the-art, digital trunked radio system;**

(System History, cont.)

- **Provide statewide communications for all state, county and municipal government agencies, including fire and emergency medical services;**
- **System sub-divided into three geographic regions (three counties);**
- **14 channels - NCC, 10 channels each – Kent, Sussex;**
- **Digital microwave (6 & 10 GHz) backbone connects the three counties;**
- **The statewide system was fully operational in the fall of 1998.**

- **Original System Configuration:**
 - **28 tower sites throughout the State** with 14 primary transmitting radio towers;
 - **Console, management system sites, Intellirepeater (IR) sites for improved coverage in selected areas** such as Rehoboth, Hartley, Hockessin, Brandywine Valley with a bidirectional amplifier placed in the I495 corridor for improved coverage in Claymont;
 - **FCC Region 28 compliant to provide minimum of 95% area reliable** with a 3 watt portable radio equipped with a public safety speaker, amplifier, microphone and antenna;
 - **Provides radio communications for over 10,000 State, non-state agency users**

- **System Enhancement – May 2002:**
 - **New site for Rehoboth/Lewes area to replace IR site;**
 - **New site for DEMA location for Kent County;**
 - **New site for Claymont, replacing the BDA on the I-495 corridor;**
 - **Microwave upgrade added to the IR site in the Hartly area;**
 - **System enhancement improved area reliability to 98% in-street.**

We consider the project successful, but there were some lessons learned:

System History – Lessons Learned

- **Tower Site Locations:**
 - **More cognizant of Constituent concerns** particularly with tower placement.
 - **Avoid heavily populated/residential areas;**
 - **Consider antenna location on existing sites whenever possible.**

- **System Implementation:** DTI is managing the project, and is determined to:
 - **Set realistic timeframes;**
 - **Manage stakeholder expectations;**
 - **Keep the stakeholders informed with clear, consistent communications;**
 - **End-user and Constituent concurrence.**

Bob Pedersen:

Current System Status

Coverage:

- **Current State of Delaware (SOD) infrastructure provides reliable communications statewide**
 - **Coverage greater than 98% in-street with portable**
 - **Some in-building coverage** primarily for residential buildings and lightly constructed buildings.
- **Operational Concern**
 - **Insufficient in-building coverage.** The heavily constructed buildings do not have adequate in-building coverage per the trouble reports.

Dispatch Consoles:

- **Current SOD infrastructure provides:**
 - **Primary dispatch centers with full statewide capabilities**
 - **Secondary dispatch centers with limited capabilities** for example, Rehoboth Beach. They have a console connected to an RF control station.
- **Operational and Maintenance Concerns**
 - **Secondary centers, especially “fall-backs”, need full capabilities.** For example, New Castle County’s fall-back center is Wilmington, who is actually on a different 800MHz system.
 - **Can’t add additional consoles.** It’s not just the 911 centers who are asking for more consoles; there are a lot of other agencies that do their own dispatching.
 - **Lifecycle support for current consoles ending.** The system is ten years old, and Motorola is no longer shipping some of the equipment that we have in our system.

Computer Platform. All of the networks comprising the 800MHz System (microwave network, radio network, multiple computers) are built on the computer platform – the main control computer, plus the three county control computers.

- **Current SOD computer network controls all radio functions**
- **Maintenance Concerns:**
 - **Does not support new software releases to enhance system reliability.** It is not just Motorola who is having trouble supporting us; it is also the software developers.
 - **Lifecycle support for 10 year old computers and software ending**

Interstate Interoperability:

- **Current SOD infrastructure enables:**
 - **Users from some surrounding states to operate on SOD system**
 - **SOD to operate in some surrounding states using their systems**
- **Operational concerns:**
 - **Can't communicate with users in all surrounding jurisdictions** including Maryland, Pennsylvania, and New Jersey.
 - **While in other states can't hear what is happening in SOD.** If something is going on in Delaware that seems to be more of a priority, we can't relocate resources back into Delaware.

Intrastate Interoperability:

- **Current SOD infrastructure provides:**
 - **Users with full intrastate interoperability;**
 - **Limited interoperability with City of Wilmington users; State enhanced City system providing limited capability.** Wilmington is still our one big island within the state because we only provided some interoperability.
- **Operational and maintenance concerns:**
 - **Users need full operability;**
 - **City system age, type prohibits full capabilities.** Wilmington's system is actually older than the State's.

These are some of the operational and maintenance concerns we have. There are others, and we are looking for input from you as we start moving forward so we can address those concerns and needs.

Bryant Baker:

Roles of this Committee

You are considered the leaders of the user community – you are “plugged in.” You are the best people to give use the users’ requirements.

Mission:

This Committee will:

- **fully represent the System Users, present and future, in specifying System Requirements;**
- **issue a Report to the Governor’s Office recommending the Program Strategic Direction;**
- **resolve conflicts within project task and specifications priorities.** For example, we may have a funding constraint.

Roles of this Committee

Focus on Requirements:

- **Establish the System Specification;** The system spec is going to be an operational, functionally based spec that says “This is how we operate, and these are the things we want the system to continue to do.”
- **To do this, the Program Team needs:**
 - **To determine what are the operational, functional requirements for this System**
 - **Your users’ lists of requirements by the next meeting. Email your users’ requirements to the Technical Team Leader, Richard.Reynolds@state.de.us.** Richard’s job is to collect these requirements and eventually turn them into system specifications.

Roles of this Committee

Diagram of the process – more than two “user communities,” this is just a sample, what is shown here.

Our Path Going Forward – Specifications: We will have at least one more meeting where we are going to have these requirements, lay them out in front of you, and agree on them. There may be conflicting requirements from different users, and we are asking you to prioritize and resolve these conflicts.

- **Generated from your Requirements;**
- **Technical Team will convert the Requirements into Specifications to obtain accurate cost estimates, test requirements;** allows us to break the specs down into components, manageable chunks.
- **System specification will be further broken down into component specifications.**

Bob Pedersen: This one project will actually be addressed by multiple projects.

Roles of this Committee

Our Path Going Forward – Requirements Considerations

Coverage

Need input to ensure specifications meet your users’ expectations: What buildings do we need to have in-building coverage?

- **Determine coverage in Delaware**
 - **Primary Goal – 100% of buildings in SOD**
 - **Alternate Goal – Some percentage of all critical buildings or other.** We definitely want to have something that we can give to the Governor’s office by May 1st that will be accepted so we don’t have to repeat this process all over again.

Presentation of Maps – We have maps already made of the entire state. We have already identified what we consider some of the critical buildings in Delaware – schools, prisons, assisted living facilities, child care centers. These maps have been arranged by fire districts, and we would like you to get this out to the user community and have the users look at these maps to agree or disagree.

Our software program allows us to develop a county composite or to zoom in to a four-block area to start thinking about where to put towers. We need to also start looking at zoning, developments, potential future commercial establishments (Wal-Mart for example) so that future construction will have coverage. We will start working through the tower site selection process with you to decide what buildings get covered by the tower.

This will take more than just towers. It may not be worth erecting a tower just to cover one school; a more effective coverage may be provided by bidirectional amplifiers or a vehicular repeater in a fire truck in order to provide that coverage.

Roles of this Committee

Our Path Going Forward – Requirements Considerations

Coverage

- **Determine coverage within each building, cont.:**
 - **Primary goal – 100% of all areas inside buildings.** Even though basements can be difficult, that’s where the boilers are, or the power panels.
 - **Secondary goal – Some percentage or critical areas or other**
 - **Examples of Challenges:**

Elevators	Basements	Tunnels
Bank Vaults	Jails	X-Ray Rooms

We will need your input – for example, are elevators really critical? They have their own communications, they may be the last thing that is destroyed during a fire, and we’re not supposed to be using elevators during a fire – we’d be using stairwells instead.

Roles of this Committee

Our Path Going Forward – Requirements Considerations, cont.

Dispatch Consoles

Need input to ensure specifications meet your users’ expectations:

- **Identification of fall-back centers.** Where will SUSCOM, KENTCOM, and RECOM relocate to set up their operations?
- **Identification of additional consoles needed.** Are you planning to move your 911 center from its current location?

Roles of this Committee

Our Path Going Forward – Requirements Considerations, cont.

Interstate Interoperability

Need input to ensure specifications meet your users’ expectations:

- **Identification of 911 centers in surrounding jurisdictions.** Who are the points of contact for these centers?
- **Identification of other interstate needs.** An example would be a Hartly RF link into Maryland.

Roles of this Committee

Our Path Going Forward – Requirements Considerations, cont.

Intrastate Interoperability

Need input from users of both systems: not just fire or police, but DeIDOT, DTC, DRBA for example.

- **Upgrade or replace city systems...**
- **Add city users to SOD system...** the more users we bring onto the system, the more potential for busies also.

Besides those that we have identified here, you may have other needs also that are unfulfilled. We want to channel this into this committee so we can address everything towards a strategic plan for the system.

Lynn Hersey-Miller: We are using a pretty fundamental project management process for this program.

Project Management

Program Structure. The 800MHz program will actually consist of multiple projects to inflict some management structure and discipline. Two are presently listed – Rehoboth could be a project, and First Responders could be a project. There could be a series of projects rolled into this program, each with its own set of deliverables, scope, and specifications. Each of these projects gets mapped back to the program to ensure that the statewide requirements are being met.

A project is part of the 800MHz Program if its scope results in additional usage of the 800MHz system.

Project Management

Methodology

We're taking these projects through the typical project life cycle. Business case establishment captures the business requirements for each project. The Project Initiation phase is what we are actually kicking off today.

You'll see the dotted lines around the project execution and control phases. That was where DTI got involved in the last 800MHz project. Because we are early on in this project, our involvement starts at the beginning of the cycle, which is at the initiation phase.

Project Management Roles

State Agencies

- **Division of Communications**
 - **Technical Team Members**

- **NextGen full committee members**
- **Project Management Team Members**
- **Governor's Office**
 - **NextGen full committee members**
 - **Funding Allocation Sponsors** to present the budget requirements to the General Assembly.
- **Department of Technology and Information**
 - **Project Management**
 - **Technical Team Members**
 - **NextGen full committee members**

Project Management

Consultants Roles:

- **Technical Team Members**
- **Project Management Team Members**

Someone from the Consultant's company will also reside on the NextGen committee once a contract is signed to keep you informed.

Bob Pedersen: One of the things I would like to do is to give these maps out to someone to get started. The maps are for Sussex, Kent, and New Castle. The homework assignment is for fire companies, police stations, to take a look at these to agree, disagree with the categories of buildings that we say are criticals, and to see if buildings need to be added to the list. I want to assure you that this information not going to be on any website for general viewing, it is only to develop the specifications for this system.

We need to have this information by November 18th. Our next meeting is November 20th, three weeks from today.

Greg Patterson: 3:00 on November 20th, we'll do it here, either in this room or in one of the rooms downstairs. I'll check to see what's available.

Bob Pedersen (in response to Gene Donaldson's question): We should look at voice, data, and video because DelDOT has a lot of wireless projects that they would like to use the infrastructure for.