



---

## **TRWC Board of Directors' Meeting**

Monday, December 3<sup>rd</sup>, 2012 from 1:30 to 3:00

Location: Town of Gilbert, Conference Room 300  
50 E. Civic Center Drive, Gilbert AZ 85296

### **Agenda**

- 1) Call to Order and Agenda Review – Chairman, John Kross**
- 2) Approval of the 3/19/12 TRWC Board Meeting Minutes – Chairman, John Kross**
- 3) Discussion and Possible Action on Pending Partner Agreements – Executive Director, Dale Shaw**
  - a. Maricopa County Community College District Associates Agreement
  - b. U.S. Marshals Service District of Arizona/Phoenix Interoperability Request
  - c. State of Arizona PSIC Cache Radio Interoperability Request
  - d. Gila River Indian Community Interoperability Request
- 4) Discussion and Possible Action on Network Administrator Updates - Executive Director, Dale Shaw**
  - a. Capital Projects and Network Performance Overview (Randy Thompson)
  - b. Recent System Software Performance Issues (Randy Thompson)
  - c. Year-to-date Budget Overview (Denny Fulton)
  - d. Budget/Finance Staffing Changes (Denny Fulton)
  - e. 2013/14 Budget Adoption Schedule (Dale Shaw)
- 5) Discussion and Possible Action on TRWC/RWC Joint Strategic Planning – Chairman, John Kross**
- 6) Executive Session**

Pursuant to ARS Sec 38-431.03, Discussion of pending vacancy and employment of Executive Director Position
- 7) Next Meeting – Executive Director, Dale Shaw**
- 8) Adjournment – Chairman, John Kross**



---

## **TRWC Board of Directors' Meeting**

Monday, December 3<sup>rd</sup>, 2012 from 1:30 to 3:00

Location: Town of Gilbert, Conference Room 300  
50 E. Civic Center Drive, Gilbert AZ 85296

Attendees: John Kross, Alex Deshuk, Chief Gary Bradbury, Jerry Ward, Marc Skocypec, Dale Shaw, Bill Anger, Randy Thompson, Denny Fulton, David Felix, Felix Melendez, Denis Murphy, Jayson Vowell, Mike Sumnicht, Ron Knight, Jim Smith, Nick Spino, Mike Sterl (Harris), Bruce McGregor, Bob Tribbensee, John Meza, Doug Mummert

## **Minutes**

*(Documents referenced in these Minutes are available for viewing at [TOPAZrwc.org](http://TOPAZrwc.org))*

Chairman, Kross called the meeting to order and reviewed the meeting agenda with the board members. Chairman Kross also welcomed new Town of Gilbert board member, Marc Skocypec.

Chairman, Kross asked for a motion to approve the 3/19/12 TRWC board meeting minutes. Alex Deshuk motioned to approve and Jerry Ward seconded. All were in favor; the motion passed.

### **Discussion and Possible Action on Pending Partner Agreements**

Executive Director, Dale Shaw reviewed the following with the board members:

1. Mesa Community College District Associates Agreement
  - Mr. Shaw recommended allowing MCCD access to the TRWC network in exchange for use of their training facility. Chief Bradbury motioned for approval as <recommended> and Vice Chairman Alex Deshuk seconded. All were in favor; the motion passed.
  
2. US Marshall District of Arizona/Phoenix Interoperability Request
  - Mr. Shaw recommended that the board authorize the development and execution of an Interoperability Agreement with the U.S. Marshal's Service District. Chairman Kross called for a motion to authorize the Executive Director to move forward with this request. Vice Chairman Alex Deshuk motioned and Jerry Ward seconded. All were in favor; the motion passed.
  
3. State of Arizona PSIC Cache Radio Interoperability Request
  - Mr. Shaw recommended that the board authorize the development and execution of an Interoperability Agreement with the State of Arizona. Chairman Kross called for a motion to authorize the Executive Director to pursue this request. Chief Bradbury motioned and Vice Chairman Alex Deshuk seconded. All were in favor; the motion passed.
  
4. Gila River Indian Community Interoperability Request
  - Mr. Shaw recommended that the board authorize the development and execution of an Interoperability Agreement with the Gila River Indian Community. Mr. Shaw will first contact GRIC to see if this is still desired by the Community. Chairman Kross called for a motion to allow the Executive Director to pursue this request. Chief Bradbury motioned and Jerry Ward seconded. All were in favor; the motion passed.

## **Discussion and Possible Action on Network Administrator Updates**

1. Capital Projects and Network Performance Overview (Randy Thompson)
  - Randy presented and discussed prepared documents to the Board members.
    - i. [Administrator Update](#)
2. Recent System Software Performance Issues (Randy Thompson)
  - Randy discussed the recent Console Software performance issue with the Board as outlined in the attached letter.
  - Randy introduced two new staff members; Denis Murphy, the new Wireless Communications Administrator and Felix Melendez, Communication's Engineer.
3. Year-to-date Budget Overview (Denny Fulton)
  - Denny reviewed the recent financial reports with the Board as outlined in the attached document.
    - i. [FY1213 Budget to Actual Comparison thru October 2012](#)
4. Budget/Finance Staffing Changes (Denny Fulton)
  - Denny introduced Jayson Vowell of Mesa. Jayson will be working alongside Denny on TRWC budget and finance in advance of Denny's upcoming retirement.
5. 2013/14 Budget Adoption Schedule (Dale Shaw)
  - Dale shared the draft [Budget](#) Adoption Schedule with the Board

## **Discussion and Possible Action on TRWC/RWC Joint Strategic Planning**

Chairman Kross and Chief Bradbury reported on the advances made during the Joint Strategic Planning sessions between the TRWC and the RWC.

- Two sub-groups have been formed to address technical and strategic governance.

## **Executive Session**

Pursuant to ARS Sec 38-431.03, Discussion of pending vacancy and employment of Executive Director Position. Chairman Kross called for a motion to go in to an Executive Session to hold a discussion regarding the pending vacancy of the Executive Director position. Vice Chairman Alex Deshuk motioned and Jerry Ward seconded.

## **Next Meeting**

The next TRWC Board of Directors meeting will be held via conference call sometime in February. The next meeting in Gilbert will be held in March.

## **Adjournment**

Chairman Kross adjourned the meeting.



## **TRWC Board of Directors Meeting**

March 19<sup>th</sup>, 3:00 pm to 4:00pm

Location: Conference Call (Conf Room A at Mesa Communications or TS Conference Room at Town of Gilbert)

Attendees: Dale Shaw, Jerry Ward, Alex Deshuk, John Kross, Dave Montgomery, Ajay Joshi, Gary Bradbury, Mike Sumnicht (Motorola), Denny Fulton, Randy Thompson, Denis Murphy, Bruce McGregor, Bill Anger, David Felix, Kim Scott

## **Minutes**

### **Action on the 1/26/12 TRWC Board Meeting Minutes**

A motion was made by Dave Montgomery and seconded by Jerry Ward to approve the 01/26/2012 TRWC Board Meeting [minutes](#). The motion unanimously passed.

### **Discussion and Possible Action to Adopt IGA**

Dale Shaw and Bill Anger reviewed the modifications and corrections that were made to the IGA [document](#). Bill Anger will send a redlined copy of the documents to the Board Members.

A motion was made by Alex Deshuk and seconded by Ajay Joshi to adopt the IGA as shared. The motion unanimously passed.

### **Discussion and Possible Action on Fountain Hills Interoperability Request**

Dale Shaw reviewed the Fountain Hills Interoperability request and requested authorization to execute an interoperability agreement with Fountain Hills as outlined in the [report](#).

A motion was made by Dave Montgomery and seconded by Chairman John Kross to approve execution of the agreement as requested. The motion unanimously passed.

### **Discussion and Possible Action to Adopt TRWC Budget**

Denny Fulton reviewed the Fiscal Year 2012/13 [budget](#) with the Board. Dale Shaw informed the Board that the Executive Committee has endorsed the budget, which now also includes the airtime billing model for both Capital and Operations & Maintenance.

A motion was made by Ajay Joshi and seconded by Dave Montgomery to approve the TRWC Fiscal Year 2012/13 Budget as recommended. The motion unanimously passed.

### **Network Administrator Updates**

No new items to report.

### **Administrative Updates**

Dale Shaw and Leslie Dibble briefly discussed the possible option utilizing Groupsite.com for TRWC materials. There will be further discussion in a future meeting.

### **Next Meeting**

This item was not discussed.

### **Adjournment**

A motion was made by Dave Montgomery and seconded by Jerry Ward to adjourn the meeting. The motion unanimously passed.



*Dean of Instruction*

*1833 West Southern Avenue*

*Mesa, Arizona 85202*

*Phone 480-461-7325*

*Fax 480-461-7804*

September 29, 2010

TRWC  
P.O. Box 968  
Mesa, AZ 85211  
ATTN: Dale Shaw

Mr. Shaw,

Currently, at Mesa Community College, we are creating a Virtual Incident Command Center (VICC) that will be a state of the art educational laboratory that will train emergency responders how to effectively manage major emergency incidents.

We have invested a great deal of energy and resources to create a very realistic environment that can duplicate what emergency responders experience in the real world. One critical piece that is missing is the ability to hear real world dispatches from a central alarm room and the ability to interact using the same radios and radio frequencies used in the real world. This added critical element would compliment the other visual and auditory stimuli that the participants will be subjected to.

We are hoping that through the TRWC, you could help us to gain limited access to the city of Mesa radio frequencies from our Virtual Incident Command Center. If this could be arranged, we would invest in the same radios used by the City of Mesa and have them programmed to function on a limited basis using your frequencies.

I hope that you see this project as a vital one not only for the City of Mesa Fire and Police Departments but also as an economic engine for the entire downtown area. Since this training center will be located at the Mesa Community College Downtown Center on Centennial Way, the thousands of students that this center will attract will add to the vitality of the area.

Please feel free to contact me should you have any questions concerning this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Lawrence D. Thacker".

Lawrence D. Thacker  
Dean of Instruction  
Career and Technical Programs



**Date:** December 3, 2012  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
**Subject:** Maricopa County Community College District Associates Agreement

### **Recommendation**

Authorization is requested from TRWC Board of Directors to allow the Executive Director (or appropriate delegate) to develop and execute an associates agreement with the Maricopa County Community College District (District) in support of limited educational use of the TRWC radio network in return for District training facility access by TRWC members.

### **Background & Discussion**

The TRWC Board of Directors previously authorized the exploration of limited use of the TRWC Radio network by the District for academic purposes. After considerable review, system configuration, and testing through a pilot implementation, staff has determined that limited use of the network by the District poses no significant risk to the normal operation of the network.

In return for limited and low priority access to the network, the TRWC members will be provided access to the simulation center training facilities that house radio and other public safety equipment for their own training purposes.

Knowing now that there is no anticipated significant impact to the operation of the radio network and that there is in-kind value associated with the access to District training facilities, it is recommended that the TRWC Board of Directors authorize the Executive Director to work with the District to execute the current standard associates agreement with minor modification where appropriate.

### **Fiscal Impact**

No fiscal impact is anticipated beyond normal forecasted expenditures.

From: Licea, Roel (USMS) [Roel.Licea@usdoj.gov]  
Sent: Friday, June 22, 2012 3:47 PM  
To: Dale Shaw; Darin Douglass  
Cc: Grizzle, Ernie (USMS)  
Subject: TRWC Letter

Dear Mr. Shaw:

The USMS is in the process of replacing our radio system in the District of Arizona. As a result of the new radio system, the District of Arizona is changing radios from the single band Motorola XTS-5000 (VHF) to the dual-band Motorola APX-7000(VHF/700/800), giving the USMS the capability of operating on the Topaz Regional Wireless Cooperative. The USMS District of Arizona respectfully requests to be admitted as an Interoperability Participant in the Topaz Regional Wireless Cooperative and to have the local District's radios added to the network.

If admitted, the USMS intends to have the Topaz Regional Wireless Cooperative's talk groups programmed into our radios for interoperability purposes only, as permitted by the respective talk group owners. The USMS requests a copy of the system key to permit USMS radio technicians to program and maintain the USMS radios that are on the TRWC. USMS radios on the TRWC will only be distributed to Deputy US Marshals and Task Force Officers, all of whom are sworn law enforcement officers. The USMS requests that the radios be allowed access to the network for as long as it is beneficial to all parties.

The USMS Tactical Operations Group, Office of Strategic Technology will be the service provider for the radios on the network. Please direct any technical questions to Senior Inspector Chris Siebert at (303) 799-3750 or via e-mail [chris.siebert@usdoj.gov](mailto:chris.siebert@usdoj.gov).

Roel Licea  
Deputy U.S. Marshal  
District of Arizona/Phoenix  
(602) 761-2657 Office  
(602) 920-2849 Cell  
(602) 382-8760 Fax  
[\[cid:image001.gif@01CD508E.00E70290\]](#)





**Date:** December 3, 2012  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
Gary Bradbury, TRWC Executive Committee Chairman  
**Subject:** U.S. Marshals Service Interoperability Request

### **Recommendation**

The TRWC Executive Director and Executive Committee recommend that the TRWC Board of Directors authorize the Executive Director (or appropriate delegate) to develop and execute an interoperability agreement with the U.S. Marshals Service (USMS) District of Arizona/Phoenix.

### **Background & Discussion**

On June 22, 2012, we received the attached request from the USMS District of Arizona/Phoenix to become an interoperability participant with the TRWC to support radio interoperability with other TRWC law enforcement agencies.

Should the Board of Directors elect to approve this request, the Executive Director will work with the USMS to execute the current standard interoperability agreement with minor modification where appropriate.

### **Fiscal Impact**

No fiscal impact is anticipated beyond normal forecasted expenditures.





**Date:** December 3, 2012  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
Gary Bradbury, TRWC Executive Committee Chairman  
**Subject:** State of Arizona Interoperability Request

### **Recommendation**

The TRWC Executive Director and Executive Committee recommend that the TRWC Board of Directors authorize the Executive Director (or appropriate delegate) to develop and execute an interoperability agreement with the State of Arizona.

### **Background & Discussion**

On May 31, 2012, we received the attached request from the Arizona Department of Administration (ADOA) to become an interoperability participant with the TRWC to allow the programming of select talk groups on cache radios. Through discussions, it has become known that the Arizona Strategic Enterprise Technology Public Safety Interoperable Communications Office plans to reserve these units for distribution to appropriate State agencies for special events or emergencies to enable interoperable communications with TRWC public safety agencies.

Should the Board of Directors elect to approve this request, the Executive Director will work with the State to execute the current standard interoperability agreement with minor modification where appropriate. In conjunction with this, a process will be developed for any actual distribution and activation of subscriber units on the network.

### **Fiscal Impact**

No fiscal impact is anticipated beyond normal forecasted expenditures.

From: Karen Allen [Karen.Allen@azdoa.gov]  
Sent: Thursday, May 31, 2012 10:12 AM  
To: Dale Shaw  
Subject: PSIC Cache Radios

Good Morning Dale,

The PSIC office has a cache of 21 radios that we would like to program for interoperability. I would like to request the TRWC forms to become an Interoperability Partner. We would like to request permission to program the Trailer, V and X decks. We do not want include any encrypted talk groups. Please let me know what information I need to include to go before your Board for permission.

Thank you and hope you are having a good day,

Karen Allen  
PSIC Project Manager  
ADOA - Arizona Strategic Enterprise Technology Public Safety Interoperable  
Communications Office

100 N 15th Avenue, Suite 400  
Phoenix, AZ 85007  
kallen@azpsic.gov<mailto:kallen@azpsic.gov>  
602-300-2780

<http://www.azpsic.gov/>



**Date:** December 3, 2012  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
Gary Bradbury, TRWC Executive Committee Chairman  
**Subject:** Gila River Indian Community Interoperability Request

### **Recommendation**

The TRWC Executive Director and Executive Committee recommend that the TRWC Board of Directors authorize the Executive Director (or appropriate delegate) to develop and execute an interoperability agreement with the Gila River Indian Community.

### **Background & Discussion**

On June 26, 2012, we received the attached request from the Gila River Indian Community to become an interoperability participant with the TRWC to support radio interoperability with other TRWC public safety agencies.

Should the Board of Directors elect to approve this request, the Executive Director will work with the Gila River Indian Community to execute the current standard interoperability agreement with minor modification where appropriate.

### **Fiscal Impact**

No fiscal impact is anticipated beyond normal forecasted expenditures.



# GILA RIVER INDIAN COMMUNITY

SACATON, AZ 85147

## **POLICE DEPARTMENT**

Post Office Box 2186  
669 West Seed Farm Road  
Sacaton, Arizona 85147-2186  
Phone: (520) 562-7115

## **911 Communications Center**

Phone: (520) 562-3361  
Fax - Dispatch: (520) 562-7080  
Fax - Patrol: (520) 562-7050  
Fax - Admin & Criminal Investigations: (520) 562-7100

June 26, 2012

TOPAZ Regional Wireless Cooperative  
PO Box 968  
Mesa, Arizona 85211-968

Greetings,

Gila River Fire Department and Police Department is requesting authorization to utilize the TOPAZ Regional Wireless Cooperative trunking system as an interoperability partner. Our department's routinely responds to calls with the surrounding agencies that utilize the TOPAZ Network. For this reason, having the ability to communicate with responding units is paramount for incident mitigation.

On the Gila River Indian Community the Communications Engineer is responsible for all Public Safety Radio Communications for the Community, thus I am making this request for the Gila River Fire Department, Office of Emergency Management, GRIC Emergency Medical Service and GRIC Police Department to utilize the TOPAZ's trunking system as an interoperability partner. The Gila River Police Department, Fire Department and Gila River Office of Emergency Management are already using the Phoenix RWC trunking system as interoperability partners as authorized by Jesse Cooper, Phoenix Police and with the DOJ PSAP and other agreements.

A handwritten signature in black ink, appearing to read "Mark Hill".

Mark Hill  
Communications Engineer



161 E Sixth Pl  
PO Box 1466  
Mesa, Arizona 85211-1466

**Date:** December 3, 2012  
**To:** TOPAZ Regional Wireless Cooperative (TRWC) Board of Directors  
**Through:** Dale Shaw, TRWC Executive Director  
**From:** Randy Thompson  
**Subject:** Administrator Update

### **Capital Projects**

**Network Reliability Improvements** – this project will replace the point-to-point wireless network backhaul (microwave radios) currently in use between the Twin Knolls site and Apache Junction Fire Station 264, and the TRW site and Apache Junction Fire Station 262. The existing microwave radios operate in unlicensed radio spectrum utilizing “spread spectrum” technology, which is susceptible interference, and causes reduced reliability of the radio network connectivity to the TRWC sites at Apache Junction Fire Station 264 and Apache Junction Fire Station 262, and to Apache Junction Police Dispatch. New microwave radios will be installed utilizing licensed microwave frequencies which are far less susceptible to interference. This project is scheduled to start in January, 2013, and be complete by June 30, 2013.

**Thompson Peak Communications Facility Improvements** – this joint project with the Arizona Department of Public Safety (DPS) constructed a new 180-foot radio tower, equipment building, and emergency generator on Thompson Peak, which is the TRWC’s primary backup and wide-area coverage site. This phase of the project is complete. DPS has completed the interior finishing of the building, and the Regional Wireless Cooperative (RWC) has installed antennas and transmission lines for their “high site overlay” project. Preparations for the move of the TRWC site, currently located in the Central Arizona Project building, is underway, with the actual move of the site equipment scheduled for December 18, 2012.

**System of Systems Networking** – this project would implement “Inter Sub Site Interface (ISSI)” technology to provide interoperability with other regional communications systems, such as the Yuma Regional Communications System (YRCS), which hosts DPS and the Arizona Department of Transportation, the RWC, and future systems, such as Maricopa and/or Pima Counties.

A simplified project utilizing talkgroups patched through an audio bridge hosted by DPS is in progress. The connection between the RWC and YRCS has been made. The connection between the TRWC, RWC, and YRCS is anticipated to be made in March, 2013, following completion of the MCC 7500 console upgrade project.

A full ISSI implementation with the current ISSI technology is has been part of the discussions with the RWC for networking of the TRWC and RWC. The next generation of proprietary ISSI will be available in 2013. This proprietary ISSI would allow automatic roaming between networks. However, the RWC network will not be capable of this solution until 2014.

**Public Safety Wireless Broadband** – this was the project utilizing Long Term Evolution (LTE) technology that would have provided wireless broadband services to Public Safety and other governmental users. A “Spectrum Act,” which was part of the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law 112-95), provided 10 MHz of additional radio frequency spectrum (the “D block”) to the 10 MHz already allocated to Public Safety and provided \$7 billion of funding to build out a nationwide interoperable broadband public safety network. The Spectrum Act also created the First Responder Network Authority, or “FirstNet,” to provide governance and oversight of the national network build out. FirstNet is set up as an independent agency under the National Telecommunications and Information Administration (NTIA). The FirstNet board was named in August, 2012, and is comprised of government, end user, and industry (both manufacturers and wireless carriers) representatives.

NTIA took a very strong stance against early build out of Public Safety LTE networks, to the point they ordered the agencies building out these networks with Broadband Technology Opportunity Program (BTOP) funds to cease any further procurement or deployment of LTE equipment, citing concerns over “stranded investments” due to incompatibility with interoperability requirements. Given this strong position by NTIA, and faced with the expiration of the TRWC’s spectrum lease with the Public Safety Spectrum Trust (PSST) for the 10 MHz of Public Safety spectrum on August 31, 2012, all work on the Public Safety wireless broadband project was stopped, and the spectrum lease with the PSST was cancelled. We requested, but were denied, a prorated refund of the remaining lease fees from the PSST.

At this time, TRWC members requiring broadband services use cellular carrier data services. The Apache Junction, Gilbert, and Mesa Police Departments already utilize this method of connectivity for their mobile computers, and the Mesa Fire Department and the Mesa Fire Dispatch Partners are currently engaged in a project to utilize commercial data services to provide connectivity to their mobile computers.

### **Operations Summary**

**System Availability** – Since the last Administrator update on January 26, 2012, the availability had been at or above the goal of 99.999% every month except February, 2012. On February 17<sup>th</sup>, an unusual malfunction of the radio site at Mesa Fire Station 205 caused that radio site to interfere with the surrounding radio sites. This affected transmissions to portable and mobile radios in east Mesa and north Gilbert. This problem was corrected about five hours after it began. A four second event of “site trunking” occurred on October 24, 2012, due to a software defect “known” to Motorola (but not their customers). This problem was not reported as being noticeable to users. A letter (copy attached) was sent on October 31, 2012, to the Chairman and Chief Executive Officer of Motorola expressing concern about the quality and reliability of

Motorola's subscriber and infrastructure software given the number of service-affecting defects experienced during the past year.

**Peak Channel Usage** – During the period January through April, 2012, the simulcast cell had all channels in use on five occasions, although no system busies were reported. During this same time period, the White Tanks site had all channels in use on two occasions, but, no busies were reported. Since the upgrade of the TRWC network to software release 7.11 in May, 2012, data on peak channel usage has been unavailable due to a software defect. It is unknown if this data will be recoverable. There have been no reports of busies from users during the period of May through November, 2012.

**Other Significant Events** – the upgrade of the TRWC system from Motorola Astro release A7.7 to A7.11 was accomplished without incident between April 30<sup>th</sup> and May 10<sup>th</sup>, as scheduled. The upgrade of the dispatch consoles from Motorola Gold Elite to MCC 7500 was completed for the dispatch locations at Apache Junction Police, Gilbert Police, the Mesa Emergency Operations Center, and the Mesa Utilities Control Center.

The installation of the MCC 7500 consoles for Mesa Police was completed in June, 2012, and then removed and reverted back to the Gold Elite consoles in August, 2012, due to loss of telephone audio at dispatcher positions, and dispatch console resets. These problems were traced to software defects, which have been corrected according to Motorola. Motorola demonstrated those fixes to Mesa Police, Fire, and Communications personnel on November 27, 2012. With the success of the demonstration and assuming the successful use of the consoles during the evacuation of the Communications Building on December 4-5, 2012, for completion of generator exhaust stack work, the MCC 7500 consoles will be reinstalled beginning January 8, 2013.

As mentioned above, the City of Mesa Communications Building will be evacuated from 7:00 AM, Tuesday, December 4, 2012, until 7:00 PM Wednesday, December 5, 2012, to complete the work on the emergency generator exhaust stacks. The building is being evacuated as a precaution, following the issues with fumes experienced when the new generator exhaust stacks were tested on July 10 & 12, 2012. Emergency (911) and non-emergency calls will be routed to the City of Phoenix Public Safety Answering Point (PSAP), where law enforcement calls will be relayed to a temporary Mesa Police dispatch center in the basement of Mesa Police Headquarters. Fire and Medical calls will be transferred to Phoenix Fire Dispatch, where they will be answered and dispatched.

**Personnel** – as reported in the previous Administrator update, two key positions, the Wireless Communications Administrator, and the Communications Engineer, became vacant in December, 2011. **Denis Murphy** was promoted to the position of Wireless Communications Administrator effective February 6, 2012. In addition, **Felix Melendez** started work as Communications Engineer effective August 6, 2012.



161 E Sixth Pl  
PO Box 1466  
Mesa, Arizona 85211-1466

October 31, 2012

Mr. Greg Brown, Chairman and Chief Executive Officer  
Motorola Solutions, Inc.  
1303 E Algonquin Road  
Schaumburg, IL 60196

Dear Mr. Brown:

The City of Mesa, Arizona, has owned, operated, and maintained a Motorola SmartZone Astro P25 radio network for 9 years. The City is also the Administrative Manager for the TOPAZ Regional Wireless Cooperative, which includes the City of Apache Junction, the Apache Junction Fire District, the Town of Gilbert, the Town of Queen Creek, and the Rio Verde Fire District. There are over 3,700 users on the network, with over 3,100 being Motorola mobile and portable radios. All of the first responders for the City of Mesa utilize Motorola portable and mobile radios.

During the past year, we have experienced major software quality problems that have shaken our first responder's confidence in their portable and mobile radios. In addition, we have experienced software quality problems with our SmartZone Astro 7.11 infrastructure that have caused brief system-wide outages and made the management and administration of the network more difficult. The software defects with the new MCC 7500 consoles installed in our Public Safety dispatch center were so severe that we removed the new consoles and went back to our 12 year old Centracom Gold Elite consoles. This is not what we expect from Motorola Solutions.

I am sure that your Motorola support organization can bring you up to date on the problems, but to summarize, the problems with the portable radios began in 2009, when a new software version was installed in our XTS5000 portables during a "rework" of the radios to fix a variety of hardware defects. During 2010, we began receiving reports of XTS5000 portables that would begin transmitting on a random channel without user initiation, and would continue transmitting until the battery died or the radio was turned off (case no. 22616825). The solution to this problem was to install a new software version, which was accomplished in late 2011. Soon after that software was installed, we began receiving reports from our law enforcement personnel that the radios were showing an "09/10" error code and were not operable (case no. 22951377). Once again, we were informed that the solution to this problem was to install a new version of software in our mobile and portable radios, which was completed during the summer of 2012.

About six weeks ago, we began seeing front-line law enforcement vehicles brought in to our service shop because the radio was resetting while being used by the officer. We once again opened a case with Motorola (23234915), and after several weeks of analysis by Motorola, it has been determined that the latest version of software installed in our XTL5000 mobile radios is incompatible with the hardware, which is causing the resets. We are now faced with the replacement of a hardware component in over 600 of our mobile radios.

While the local Motorola personnel have apologized profusely for these problems, and have supplied personnel (and will supply parts for the most recent mobile radio problem) at no charge to the City and our partners in the TRWC, the real problem is the downtime and inconvenience to our Police and Fire Department operations, and the lack of confidence by first responders in their Motorola two-way radios. I'm sure I do not have to tell you that radio communications is the life-blood of our public safety personnel.

The radio network infrastructure has experienced similar software quality problems. Our practice is to upgrade the P25 network infrastructure annually through the Motorola Solutions Upgrade Assurance Program (at an annual cost of \$641,000). We completed the upgrade to Astro SmartZone 7.11 in May, 2012.





161 E Sixth Pl  
PO Box 1466  
Mesa, Arizona 85211-1466

In June, 2012, we noticed some of the reports we utilize from the system were “scrambled” (cases 23131677 and 23152583). We use these reports to analyze network performance to proactively manage the capacity of the network so users will not experience “busy” conditions, and it is one of our performance metrics that is reported to the City Manager’s Office and the Board of Directors of the TOPAZ Regional Wireless Cooperative.

In July, we began receiving alarms from the system’s Packet Data Gateway, which enables Over The Air Rekeying of encryption (case no. 23165178). The solution was to load software patches and updates to solve the problem. Our most recent infrastructure event occurred October 24<sup>th</sup>, when a site controller reset, causing the system to be in “site trunking,” which disconnects wide-area coverage and severs the dispatch consoles from the radio network, for a brief period (case no. 23273738). The most disturbing part of this event was when we opened the case with the Motorola System Support Center, we were informed this was a “known problem,” even though no Field Service Bulletins or other communications to customers have been sent – this is inexcusable.

The two most serious software issues with our new MCC 7500 dispatch console subsystem are the resetting of the console (case no. 23159412) and the audio disappearing from the operator’s headset ( case no. 23126170). The resetting problem frequently occurred during the dispatch of “hot” calls, which resulted in delays in dispatching major crimes which frequently involve the use of weapons. These problems caused both the Mesa Police dispatchers and officers in the field to lose confidence in the Motorola radio system.

These problems cause us to question the effectiveness and thoroughness of Motorola Solutions’ testing of software before it is released for use by customers. Our Communications Department, which is responsible for the maintenance and technical operations of the P25 network, is small; we do not have the resources to continue to be Motorola Solutions software test lab, and *our* customers, the first responders, will not tolerate these disruptions to their operations. When we call to report a problem that is not “known” and not readily reproducible, we have to escalate and plead to get Motorola engineers on site, yet every time Motorola Solutions’ engineers have come to Mesa, they have observed the reported failure(s).

My hope is that by bringing these serious problems to your attention you can emphasize to the Motorola Solutions organization the need to deliver a (software) product that is thoroughly and effectively tested in real-world configurations and scenarios so our Police Officers, Firefighters, and Dispatchers are not the ones to discover the defects.

I am willing to discuss this matter in more detail with you or your staff; I may be reached at 480-644-3828.

Sincerely,

Randy Thompson  
Communications Administrator  
City of Mesa, Arizona

CC: John Kross, Chairman, TOPAZ Regional Wireless Cooperative  
Alex Deshuk, Vice-chairman, TOPAZ Regional Wireless Cooperative  
Dale Shaw, Executive Director, TOPAZ Regional Wireless Cooperative



**YEAR TO DATE ACTUALS THRU OCTOBER 2012**

**OPERATIONS, MAINTENANCE AND CAPITAL**

**PRESENTED TO THE BOARD OF DIRECTORS XXXXXXXX, 2012**

**VOICE**

**TOPAZ BUDGET TO ACTUAL COMPARISON**  
**Fiscal Year 2012 / 2013**

**VOICE**

**Operations and Maintenance Costs**

**1. Budgeted Airtime Units**

	Original Budget	Transfers
COM	74.29%	
TOG	18.22%	
AJFD	0.45%	
CAJ	5.85%	
TQC	0.23%	
RVFD	0.23%	
SWA	0.73%	

<b>Total Airtime</b>	<b>100.00%</b>	
----------------------	----------------	--

**2. Total Monthly Operating & Maintenance Costs**

<b>Monthly Budget</b>	<b>Transfers</b>
\$147,569	

**3. Operating & Maintenance Costs**

	Original Budget	Transfers
COM	\$1,315,549	
TOG	\$322,645	
AJFD	\$7,969	
CAJ	\$103,593	
TQC	\$4,073	
RVFD	\$4,073	
SWA	\$12,927	

<b>Total Operating &amp; Maintenance Costs</b>	<b>\$1,770,829</b>	
------------------------------------------------	--------------------	--

**Capital Projects**

**1. Total Monthly Capital Costs**

<b>Original Budget</b>	<b>Transfers</b>
\$75,000	

**2. Capital Costs**

	Original Budget	Transfers
COM	\$56,115	
TOG	\$13,770	
AJFD	\$345	
CAJ	\$4,425	
TQC	\$173	

RVFD

\$173

Total Capital Costs

\$75,000

\$0

Revised Budget	Thru October YTD Actuals	% Used	YTD Variance
74.29%	\$84,141		
18.22%	\$21,449		
0.45%	\$636		
5.85%	\$6,462		
0.23%	\$351		
0.23%	\$65		
0.73%	\$955		
<b>100.00%</b>	<b>\$114,060</b>	<b>6%</b>	<b>-476,216</b>

Revised Monthly	Current Month Actuals	% Used	Monthly Variance
\$147,569	\$72,073	49%	-\$75,496

Revised Budget	Thru October YTD Actuals	% Used	YTD Variance
\$1,315,549	\$84,141	6%	
\$322,645	\$21,449	7%	
\$7,969	\$636	8%	
\$103,593	\$6,462	6%	
\$4,073	\$351	9%	
\$4,073	\$65	2%	
\$12,927	\$955	7%	
<b>\$1,770,829</b>	<b>\$114,060</b>	<b>6%</b>	<b>-\$1,656,489</b>

Revised Budget	Thru October YTD Actuals	% Used	YTD Variance
\$75,000	\$0	0%	-\$75,000

Revised Budget	Thru October YTD Actuals	% Used	YTD Variance
\$56,115	\$0	0%	
\$13,770	\$0	0%	
\$345	\$0	0%	
\$4,425	\$0	0%	
\$173	\$0	0%	

\$173	\$0	0%	
\$75,000	\$0	0%	-\$75,000