



# City Council Report

AGENDA ITEM 5h  
DATE 4-20-09

**Date:** April 20, 2009  
**To:** City Council  
**Through:** Christopher J. Brady, City Manager  
**From:** Alex Deshuk, Manager of Technology and Innovation  
**Subject:** Reconfiguration of TOPAZ Radio System

## Purpose and Recommendation

The City Council is requested to authorize the City Manager or his designated representative to execute an agreement with Motorola for the reconfiguration of the TOPAZ regional radio system used by Mesa and its partners. This is an upgrade for the operating software and portions of the hardware for the TOPAZ Regional Wireless Cooperative (TRWC) radio system at a cost not to exceed \$700,000. The reconfiguration will be funded by Public Safety Bond proceeds.

## Background

The cities of Mesa and Phoenix jointly use an 800 MHz radio system (Phoenix Regional Wireless Network - PRWN) that forms the foundation for valley-wide interoperable, two-way radio communications for fire, police, and municipal users. Final acceptance for this joint system was completed by both cities on December 31, 2005. Mesa and Phoenix have historically co-managed this 800 MHz communications system.

In the best interests of the City, we have been working towards establishing a communications system in Mesa (TOPAZ) that would generate redundancy and create self-governance for the city. In order to accomplish this, we went to the council in September 2008 and obtained approval for an Intergovernmental Agreement (IGA) establishing the TRWC with our partners the City of Apache Junction, the Towns of Gilbert and Queen Creek and the Apache Junction Fire District. This created a governance process for Mesa and our partners to jointly direct the management, maintenance, operations and future growth of the TOPAZ radio system.

To meet the goals of separation, a reconfiguration of the TOPAZ infrastructure as a standalone system is required. This will entail an operating software upgrade and the procurement of additional hardware, to be installed at the TOPAZ master site located in Mesa.

Realizing that the TOPAZ portion must be reconfigured into a standalone system, the TRWC Board of Directors has approved the costs, the technical direction for this reconfiguration, and the continued operations and interoperability for their partner's, as well as with other jurisdictions.

## **Discussion**

The Motorola reconfiguration will provide the necessary TRWC system infrastructure improvements to allow for self-governing operations and provide for continued growth and future enhancements. The reconfigured radio system will fully realize the goals of the TRWC's Governance Agreement and provide for true autonomy and self-control of infrastructure assets for all partners. This will include ownership of real property and the even more valuable ownership of assigned radio frequency licenses.

The existing termination clause in the IGA between the cities of Mesa and Phoenix requires either city to provide at least 2 year's notice. This requirement coupled with the need for the TRWC to implement certain system requirements, such as a planned rework of portable radios, indicate that now is the optimal time for Mesa and its partners to begin the reconfiguration process. The reconfiguration should be completed in March 2010.

## **Alternatives**


Mesa could take no action at this time and work on negotiating a new IGA with Phoenix for continued participation in the current joint radio network (PRWN). To date, Mesa has not been asked to rejoin the system so this may not be a viable alternative. This would also cause the TRWC radio system to stagnate in that it could not expand while still physically tied to the Phoenix system. The TRWC is regularly approached by potential partners, with active, official interest from the Town of Fountain Hills, Rio Verde Fire District, Gila River Indian Community and SRP.

## **Fiscal Impact**

The total cost will be funded from the November 2008 Public Safety bond item listed at \$700,000. The current Motorola proposal for the software and hardware upgrade and installation is \$671,838.84. As the administrative manager for the TRWC, Mesa will manage the purchase and installation of the systems for the cooperative. The TRWC Board of Directions has included the reconfiguration costs in their 2009 budget in which case each member would pay their apportioned amount in accordance with the TRWC Governance Agreement. Mesa is currently responsible for 74% of the TRWC costs as directed by the TRWC Governance Agreement, which could result in a cost to Mesa of \$497,160, with the balance coming from the other TRWC partners.

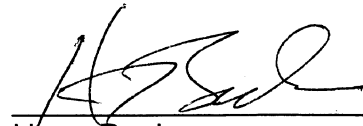
**Coordinated with:**

Police Department  
Fire Department  
Communications Department  
Information Technology Department  
TOPAZ Regional Wireless Cooperative (TRWC)




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George Gascon  
Police Chief



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Harry Beck  
Fire Chief



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Mike Brown  
Communications Administrator



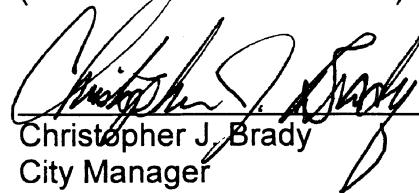
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Dale Shaw  
Assistant CIO  
(TRWC Executive Director)



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Alex Deshuk  
Manager of Technology and Innovation  
(Mesa's Board Member for the TRWC)



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Christopher J. Brady  
City Manager