Regional Wireless Cooperative
Board of Directors
Agenda
September 22, 2011

	ITEM	PRESENTER
1)	**Call to Order and Roll Call**	Chair Meyer – Tempe
2)	**Approval of Meeting Minutes from August 4, 2011** **This item is for information, discussion and action.**	Chair Meyer – Tempe Est. 2 min.
3)	**RWC Network Security Policy** The purpose of this item is to request approval of the RWC Network Security Policy. **This item is for information, discussion and action.**	Mr. David Felix – RWC Executive Director Est. 5 min.
4)	**Federal Communications Commission (FCC) Waiver** The purpose of this item is to request approval and submittal to the FCC of the waiver to delay or eliminate the 700 MHz narrow-banding deadline. **This item is for information, discussion and action.**	Mr. David Felix – RWC Executive Director Est. 10 min.
5)	**Executive Committee Member Selection** The purpose of this item is request approval of the nominee selected to serve as the law enforcement representative on the Executive Committee. **This item is for information, discussion and action.**	Mr. Bill Phillips – Phoenix / Chief Steve Campbell – El Mirage Est. 10 min.
6)	**Customer Model** The purpose of this item is to provide an update on the status of implementation of the Customer Model and the TRWC's use of two operational talkgroups on the RWC system. **This item is for information, discussion and action.**	Mr. David Felix – RWC Executive Director / Mr. Bill Phillips – Phoenix Est. 15 min.
7)	**Maricopa Police Department and Gila River Indian Community** The purpose of this item is to provide information on two potential new Members. **This item is for information and discussion.**	Mr. David Felix – RWC Executive Director Est. 10 min.
8)	**Strategic Plan** The purpose of this item is to provide an update on the development of an RWC Strategic Plan. **This item is for information and discussion.**	Mr. David Felix – RWC Executive Director Est. 10 min.
9)	**Call to the Public** **This item is for information only.**	Chair Meyer – Tempe Est. 1-5 min.

10)	**Announcements** The purpose of this item is to communicate any Board announcements and the date of the next Board Meeting: November 17, 2011 from 10:00 – 11:30 a.m. **This item is for information only.**	Chair Meyer – Tempe Est. 1 min.
11)	**Adjourn**	Chair Meyer - Tempe

Board of Directors
MINUTES
August 4, 2011

Phoenix City Hall Subcommittee Room
200 West Washington Street, 12th Floor
Phoenix, Arizona 85003

Board Members Present			**Board Members Absent**
Steven Campbell	Bob Hansen	Macara Underwood*	Bob Costello
Wayne Clement	Brad Hartig	Marc Walker	David Fitzhugh
Steven Conrad	Jim Heger	Paul Wilson	Charlie Meyer
Mike Frazier	Danny Johnson	Ed Zuercher	
Mark Gaillard	Mark Mann*		
Jim Haner	Susan Thorpe		

*Board Alternate

Staff and Public Present			
Tahir Alhassan	Dave Clarke	Rick Kolker	Larry Rooney
Karen Allen	Theresa Faull	Domela McHenry	Dave Scott
Tim Brandt	David Felix	Doug Mummert	Dale Shaw
Wade Brannon	Bill Fleming	Chris Nadeau	Wayne Smith
Brenda Buren	John Gardner	Mark Nichols	Shannon Tolle
Carol Campbell	Nolberto Gem	Cy Otsuna	
Jim Case	Loretta Hadlock	Bill Phillips	

1. **Call to Order**

   Vice-Chair Thorpe called the meeting to order at 10:05 a.m. and announced the following Board Member and Board Alternate changes:

   - Board Member Mr. Johnson replacing Mr. Dragos – Daisy Mountain Fire District
   - Board Member Mr. Melvin resigned his seat; seat vacant – City of Maricopa
   - Board Alternate Ms. Underwood for vacant seat – City of Maricopa
   - Board Alternate Mr. Mann for Mr. Costello – Town of Buckeye

2. **Approval of the Meeting Minutes from May 26, 2011**

   Vice-Chair Thorpe asked if the Board had any changes to the minutes. Mr. Felix responded that prior to the meeting, staff was informed of a typo; therefore, the minutes had been updated to reflect the correction. The minutes were approved as presented.

3.   **Tolleson Membership Request**

Mr. Felix explained that on July 14, 2011, the Tolleson City Council approved the City of Tolleson's request to enter into the RWC Intergovernmental Agreement (IGA). He stated that staff received all the required documentation including Tolleson's signed IGA. He added that the Executive Committee's recommendation was for Board approval of Tolleson's membership request.

Mr. Hansen expressed his appreciation and explained that Tolleson had contributed to the RWC infrastructure years ago. He stated he was thankful to finally be at this point in time.

Mr. Felix explained that Tolleson Fire would immediately transition to the RWC; however, Tolleson Police would not join at this time due to financial reasons.

A **MOTION** was made by Mr. Conrad and **SECONDED** by Mr. Frazier to approve Tolleson's RWC membership request. **MOTION CARRIED UNANIMOUSLY (15-0)**.

4.   **Executive Committee Member Recommendation**

Mr. Phillips explained that there would be a vacancy on the Executive Committee upon Carol Campbell's retirement. He stated that the Executive Committee discussed the process for replacing the position and agreed that consideration should be given to a qualified individual selected by the Law Enforcement community. He expressed that Ms. Campbell volunteered Chief Frazier to take the lead in putting together a selection committee.

Chief Frazier expressed that he would like the commitment of two or three others to assist in the selection process. He requested that interested Members contact him after the meeting or by phone.

Mr. Phillips invited Ms. Campbell to join himself and Vice-Chair Thorpe to the front of the room as he expressed words of commendation to Ms. Campbell and presented her with a plaque recognizing her service to the RWC.

Ms. Campbell expressed her appreciation and pleasure in having worked with everyone over the years.

5.   **Customer Model Update**

Mr. Felix introduced this item and explained that meetings had been held with the TRWC to review its counter proposal to the RWC Customer model. He added that this would be an informational item for discussion and update.

Mr. Phillips explained that the TRWC proposal consisted of four main assumptions: many systems will want to cross-share direct operational use; cost recovery attributed to actual expenses (O&M) and sustainability of the network (capacity); technical connectivity by mutually acceptable method, consistent and economical; and each system had sufficient "headroom" (that is capacity) to accommodate such use.

Mr. Zuercher left the meeting at this time.

Mr. Phillips expressed that the first assumption may also include users that do not have their own system, such as the State Liquor Board; therefore, it would not be actual cross-sharing. He added that there was not agreement on the fourth assumption with regards to the headroom built into the system. He stated that the headroom was paid for by RWC Members and consequently should be for the RWC's future growth and not for use by non-Members. He reviewed other assumptions that were not stated but implied: all users were treated the same; costs were applied proportionately; and membership may be based on proportion of use, meaning once a user reached a certain percent of use, perhaps 10%, the user may become a voting Member.

Mr. Phillips stated that the TRWC model was based on airtime use. He reviewed that the TRWC's use equated to approximately .06% when compared against the RWC's total use. He explained that the model also included a capacity reserve/capital fund to recover costs within four years to expand the capacity of the system by one channel across the whole system. He added that based upon 7 major subsystems and 54 sub-sites, it equated to approximately $4M that would need to be collected over the four years.

Mr. Zuercher rejoined the meeting at this time.

Mr. Conrad left the meeting at this time.

Mr. Phillips presented a chart which depicted the TRWC's share of costs for recovery. He reviewed a five-year breakdown of the following categories: RWC Budget, Capacity Reserve, Total RWC Airtime, TRWC Airtime, TRWC Percent Use, and TRWC Annual Charge. He explained that the TRWC's annual charge ($5,775 – $7,724) included O&M, special assessments and capacity. He added that $600 of the annual charge was for capacity and the remainder was O&M and special assessments.

Mr. Phillips reviewed a second chart which provided a summary comparison of the following 5 billing models, based upon 200 radios on the system: Annual Cost of Member (baseline), Annual Cost of Customer with Start-up Fee (RWC Customer model), Annual Cost as Customer without Start-up Fee, Annual Cost of New Member with Capacity Start-up Fee, and the TRWC Airtime Model.

Mr. Phillips explained that the Executive Committee and Operations Working Group (OWG) had reviewed the TRWC's proposal and outlined the following concerns: all users were to be treated and pay the same; airtime billing would be more expensive to administer; the model did not account for what Members have invested to build the system; the model assumed headroom was for all users, and Members were basically paying for capacity increase. He expressed that the Executive Committee and OWG were not in favor of the proposed TRWC model. He stated that the Executive Committee was still working towards the September 22, 2011 Board Meeting deadline to either identify a mutually acceptable solution or recommend adoption of the RWC Customer model. He added that if the Customer model was to be implemented, a change to Exhibit A of the Intergovernmental Agreement (IGA) would be required, per the recommendation of the Phoenix Law Department. He noted that City Council approval would not be needed; however, each Member would have to sign approval of the change.

Mr. Felix explained that if the Customer model was adopted, its definition would be added to Exhibit A, but any rules associated with it would be outside of the IGA.

Mr. Wilson inquired whether the statement on slide 3, "Membership MAY be based on proportion of use," was derived as a user benefit or an RWC requirement.

Mr. Conrad rejoined the meeting at this time.

Mr. Zuercher left the meeting at this time.

Mr. Phillips replied that it was a suggested idea that if proportionate billing was used, a threshold could be established that once a user reached a certain percent of use of the system, the user may gain voting membership status.

Vice-Chair Thorpe inquired whether this idea came forth from the TRWC.

Mr. Phillips replied in the affirmative.

Mr. Felix explained that the TRWC was considering a new billing structure based on airtime for its Members and that billing structure would be applied to this situation. He added that the concept of a user becoming a voting Member may fit into the airtime model once a user attains enough usage; however, it would not fit with the RWC model because voting rights were based on membership and not on amount of use.

Mr. Wilson expressed that there was some value to this concept as an interim step. He explained that use of the system up to 10% with a set time frame, such as 18 months, would allow interim use before a entity comes on to the system. He added that in the future some RWC agencies may want interim use of the

TRWC system. He stated that there might be value in allowing a certain amount of capacity for a short duration of time and then you have to become a Member.

Vice-Chair Thorpe commented that was sort of what has been done with the TRWC this past year, on an ad hoc basis, and at some point a decision must be made to become a Customer, a Member or find another solution.

Mr. Phillips stated that the IGA does contain a provision for a Conditional Participant which can serve for temporary timeframes.

Mr. Wilson expressed that it may be beneficial to have a transition step of allowing temporary usage in the cost model.

Vice-Chair inquired whether the Customer model could be implemented on a monthly basis.

Mr. Phillips replied in the affirmative.

Mr. Frazier inquired whether anyone else had requested access to either system; East to West or West to East.

Mr. Phillips replied that the Town of Gilbert had expressed interest (to access the West). He added that at the OWG meetings, the feedback had been that there was interest in having access to the East but that it was not critical.

Mr. Felix explained that Gilbert would like the same arrangement that Mesa currently has. He stated that Gilbert was programming radios with some Chandler-specific talkgroups, which was allowed, for use when working with Chandler. He added that Scottsdale had expressed that access to the Queen Creek area would be a nice to have, but not a need to have. He stated that no other interest had been expressed. He explained that the RWC coverage extends farther into the East Valley than, conversely, the TRWC extends to the West Valley and the coverage would be further enhanced when Thompson Peak becomes activated.

Mr. Wilson expressed that the access may not be needed for Law Enforcement or Public Works but it was for Fire, as Fire floats back and forth across both systems everyday.

Mr. Phillips explained that Fire operations would not change since Fire still had interoperability and that model was in place.

Mr. Wilson expressed that he has not seen anything in writing and potentially either Board could change that situation because it was a handshake arrangement.

Vice-Chair Thorpe suggested that a discussion regarding formalizing that arrangement should be a topic at a Joint Chair meeting.

Mr. Felix stated he made note of it.

Vice-Chair Thorpe stated that this item was just for information and that the Customer model would be coming back at the September Board meeting.

6. **RWC Lifecycle Planning and TDMA Conversion**

Mr. Felix explained that this topic, which was postponed from the last meeting, would be an item that the Board would be kept updated on.

Mr. Phillips explained that the accompanying report was a repeat of what was presented several Board meetings ago and his intent was to review the proposed timelines in relation to Lifecycle Planning and the TDMA conversion. He explained that RWC costs were displayed in yellow (in the presentation) and end user costs in magenta. He added that Motorola would be meeting with individual Members for specific equipment changes and subscriber costs.

Mr. Phillips stated that Option 1 was based on STR's going out of support in Fiscal Year 2013/2014 and a complete change out occurring; therefore, due to the amount of money needed to be raised in a short timeframe, this was not an option to be considered.

Mr. Zuercher left the meeting at this time.

Mr. Phillips reviewed Option 2 of the presentation and highlighted that equipment changes would need to occur in 2014/2015, at a cost of approximately $40M with an additional $10M needed in 2016-2017 to meet the TDMA conversion deadline. He explained that this was the most likely timeline. He stated that if a Federal Communications Commission (FCC) waiver was granted then the timeline would get spread out and extended possibly to 2019. He added that the 700 MHz was under the control of the Regional Planning Committee (RPC) and discussions were taking place by the National Regional Planning Committee (NRPC) to request the FCC to either eliminate the deadline or allow the region to decide when a transition needed to occur.

Mr. Felix explained that a draft FCC waiver was complete. He stated that he received an email from the chairman of the NRPC that indicated there was interest in delaying or eliminating the FCC TDMA 700 MHz narrow-band mandate for the region. He added that there would be a conference call with the region this week. He stated that the draft waiver was sent to the RPC for review and his intent was to have it filed by October/November. He explained that the City of Phoenix Government Relations staff had a lobbying firm in Washington DC and, if appropriate, he would push the waiver in that area as well. He stated he would have a copy of the waiver for review at the next Board meeting. He

added that the TRWC, Arizona Department of Public Safety, Yuma Regional
Communications System, Pima County Wireless Integrated Network, RPC, the
State, Public Safety Interoperable Communications Office (PSIC), Maricopa
County, and NPRC have all expressed interest in supporting and signing the
waiver.

Mr. Hartig inquired that although the FCC timeline existed, what the end of life
was for some of the equipment beyond the Gold Elites.

Mr. Phillips replied that the biggest sunset was the STR base stations in the year
2013/2014. He added that they were being pushed out another year but needed
to be changed out on time because there would not be support for them
anymore. He requested confirmation from Mr. Fleming of Motorola regarding the
2018 sunset date for the Gold Elites.

Mr. Fleming responded that since end of new shipments was this year, the 2018
date was correct.

7.   **Annual Report Update**

Mr. Felix reviewed the Table of Contents for the RWC Annual Report and stated
that the report was almost complete. He requested that if a Member desired a
hard copy to let him know, otherwise it would be posted electronically on the
website.

Vice-Chair Thorpe requested that Members be sent a link to the report once it
has been posted.

8.   **RWC Financial Audit Update**

Mr. Felix explained that a kickoff meeting was held on July 21, 2011 with the
audit firm of Clifton Gunderson. He stated that staff was provided a list of
documents for compilation. He added that the auditors would be on site the first
two weeks of October and their audit report would be issued the first week of
December.

9.   **Project Updates**

Mr. Felix reviewed the following projects: COPS Grant – Capacity Increase;
PSIC Grant – High Sites; Buckeye/Goodyear; Chandler; Glendale/Avondale;
Phoenix In-Fill; Scottsdale; Fire Transition; Transit; 800 MHz Rebanding; and
various other. He explained that many projects were complete, operational and
awaiting final documentation. He stated that there were access and County
issues with the PSIC High Site at Thompson Peak but some of the issues have
now been resolved. He added that a February/March 2012 transition was
expected for the Buckeye/Goodyear project.

Mr. Zuercher rejoined the meeting at this time.

Mr. Phillips highlighted the project status of the Fire Transition. He stated that all but five Members have portables programmed for non-hazard operations. He added that Fire hired Buford Goff to assist in the hazard zone transition planning.

Mr. Felix explained that Transit had decided to narrowband its UHF system and would not be joining the RWC at this time. He also reviewed the 800 MHz Rebanding status.

In response to a question by Mr. Felix, Mr. Philips explained that the 800 MHz Rebanding project was divided into two parts: performing inventory and awaiting a border treaty with Mexico. He stated that the inventory portion, funded by Nextel, was already performed but may need to be done again by the time the treaty is put into place.

Mr. Felix stated that many projects would be coming off of the projects' list. He explained that Paradise Valley had funding issues and Maricopa County was implementing a new system. He added that conversations would continue to take place and stressed that interoperability was alive and well with non-RWC entities. He highlighted the total figure of $67.9M that was spent on RWC projects and commended Bill Phillips and the Information Technology staff for the great work performed to bring the projects to fruition.

10.   Call to the Public

None.

11.   Announcements

Mr. Campbell expressed his commendation for the work of all the policy makers involved in the process of interoperability. He conveyed that he had the privilege to sit on the Governor's Public Safety Communications Commission and see what others in the State were doing in the area of interoperability. He stated that many throughout the State were trying to get where we were today.

Mr. Zuercher expressed his apologies for leaving and returning several times during the meeting. He explained that he had been notified of a police shooting that required his attention.

11.   Adjournment

Vice-Chair Thorpe adjourned the meeting at 11:05 p.m.

Respectfully submitted,
Theresa Faull, Management Assistant I

REGIONAL WIRELESS COOPERATIVE POLICIES AND PROCEDURES	Regional Wireless Cooperative
	No.
Subject: **RWC Network Security Policy**	**Effective Date** **7/5/11**

1.0 Purpose

1.1. The purpose of this policy is to establish the security guidelines to assist in the development of specific RWC security policies.

2.0 Owner

2.1. RWC Operations Working Group (OWG).

3.0 Applies To

3.1. Anyone with RWC system equipment access, including Members and approved service providers.

4.0 Background

4.1. The RWC system is a radio communications network comprised of computer systems, devices, and applications that directly support mission critical communications. It is important that the RWC system be protected from potential security-related risks that can cause network disruption or outage.

5.0 Policy Statement

5.1. Personnel that have access to the RWC infrastructure, consoles, IP logging recorders or subscriber administrative terminals shall at all times employ appropriate network security practices to protect the RWC from internal and external sources of harm that could potentially cause disruptions or failures in service. Examples include, but are not limited to, external connections, devices, non-certified software and storage media.

6.0 Supporting Rules

6.1. Any computers that are used to connect to the RWC network, directly, will be clean and dedicated computers for the purpose of supporting the RWC system. The RWC system has a supported anti-virus server, and it should be encouraged for dedicated service computers to be set up with accounts on the anti-virus server for automatic updates.

6.2. Any media that is to be connected to RWC infrastructure, consoles, IP logging recorders or subscriber administrative terminals must first be scanned by an isolated computer that has up-to-date anti-virus.

6.3. The RWC Maintenance Manager(s), users and approved service providers are responsible for monitoring network incursions, which may be introduced by external media or non-certified software.

6.4. The Network Operations Manager shall have responsibility for ensuring that overall network security is consistent with current technology, and for ensuring that the RWC policies related to network security are followed.

6.5. RWC network users shall use due diligence in the protection of the RWC infrastructure, consoles, IP logging recorders, subscriber equipment and network resources.

6.5.1. Passwords must be protected and not shared with anyone without proper authorization.

6.5.2. User accounts will be created and managed by the RWC Network Operations Manager.

6.6. Any breaches in network security shall immediately be reported to the Regional Operations Center (ROC) who shall take immediate steps to minimize the danger to the operational capabilities of the RWC.

6.7. The Network Operations Manager shall, as soon as possible, inform the OWG of a confirmed security breach, the current situational status, any known or potential impact to RWC operations and the steps taken to mitigate the impact of the breach.

7.0 Responsibilities

7.1. The Network Operations Manager is responsible for the following practices related to the RWC network security:

7.1.1. Update anti-virus software and server in compliance with Motorola network standards.

7.1.2. Monitor, identify, and maintain information related to RWC infrastructure and components regarding risks, threats, and vulnerabilities to the RWC.

7.1.3. Develop plans for minimizing or eliminating security-related problems, and any actions necessary for the implementation of the plans.

7.1.4. Use the appropriate supporting organizations or approved contractors as required to maintain adherence to network security policies.

7.1.5. Provide periodic reports to the OWG on the status of network security, potential threats and risks, and actions involved in protecting RWC.

7.2. Member agencies are responsible for ensuring approved users and service providers adhere to this policy.

7.3. Any security breaches must be reported to the Networks Operations Manager as soon as possible.

8.0 Conditions for Exemption or Waiver

8.1. None.

9.0 Applicable Procedures

BOARD OF DIRECTORS REPORT

TO:	Regional Wireless Cooperative (RWC) Board Members	Agenda Date: September 22, 2011
FROM:	David Felix, RWC Executive Director	Item 4

SUBJECT: **FEDERAL COMMUNICATIONS COMMISSION WAIVER**

BACKGROUND

A Federal Communications Commission (FCC) mandate on the horizon is that all 700 MHz frequencies are to be narrow-banded. The requirement changes the current bandwidth of the 700 MHz channels, effectively doubling the number of channels available. The FCC has set January 2017 as the deadline for this requirement.

THE ISSUE

The Regional Wireless Cooperative, Topaz Regional Wireless Cooperative, Arizona Public Safety Communications Advisory Commission, Arizona Department of Public Safety, Maricopa County, Yuma Regional Communication System, and the 700 MHz Region 3 Regional Planning Committee (Region 3 RPC) intend to submit a Petition for Rulemaking to the Commission's rules for the mandatory transition deadline to be modified from December 31, 2016 to a date of December 31, 2020; or a yet to be determined date based upon certain criteria set forth by the Commission, in concert with the Region 3 RPC, representing the State of Arizona.

Five (5) main points for consideration:

1. 700 MHz frequencies are being allocated effectively and used efficiently in Region 3.

2. TDMA standards have not yet been fully ratified and consequently, there is a lack of available products, specifically subscribers, which comply with the standard.

3. Product lifecycles, costs and availability are such that agencies are significantly challenged to maintain their infrastructure and subscribers in sound, up-to-date working order.

4. Frequency management, including narrow-banding is best managed regionally by the local agencies to best fit the needs of their area.

5. TDMA conversion for systems using a combination 700 MHz and 800 MHz require more changes than just to the 700 MHz frequencies.

RECOMMENDATION

The RWC Executive Director requests Board approval to obtain signatures from the entities listed below and to submit the attached waiver to the FCC. The RWC Executive Committee concurs with this request.

Joint Waiver Partners
Regional Wireless Cooperative
Topaz Regional Wireless Cooperative
Arizona Department of Public Safety
Maricopa County
Yuma Regional Communications System
Arizona Public Safety Communications Advisory Commission
Region 3 – Arizona Regional Planning Committee

Attachment: Federal Communications Commission Waiver

BEFORE THE FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of:

The effect of Federal Communications Commission (FCC) Rule 90.535d(2)(3)
"Modulation and spectrum efficiency requirements" on the future efficiency,
budgetary impact and sustained viability of the Regional Wireless Cooperative (RWC),
Topaz Regional Wireless Cooperative (TRWC), and other public safety agencies and
radio systems in the Region.

Petition for Rulemaking

The Regional Wireless Cooperative (RWC), Topaz Regional Wireless Cooperative
(TRWC), Arizona Public Safety Communications Advisory Commission (PSCC),
Arizona Department of Public Safety (DPS), Maricopa County, Yuma Regional
Communication System, and the 700 MHz Region 3 Regional Planning Committee
(Region 3 RPC), submit this Petition for Rulemaking to the Commission's rules for the
mandatory transition deadline to be modified from December 31, 2016 to a date of
December 31, 2020; or a yet to be determined date based upon certain criteria set forth by
the Commission, in concert with the Region 3 RPC, representing the State of Arizona.

Background

The entities listed above are diligently working together to promote interoperability
between the various systems and to develop a "system-of-systems" approach to link
systems together for even greater interoperability and direct operability across wide
geographic areas. Two of these regional systems impacted by the 2017 deadline and
supporting public safety operations in the Phoenix metropolitan area are described below
to provide a background and a clear perspective on the impact of 700 MHz narrow-
banding on these two large systems.

The other regional systems currently operating or in development within the State of
Arizona include the Pima County Wireless Integrated Network (PCWIN), Yuma
Regional Communications System (YRCS), Maricopa County's Regional Public Safety
Radio System and the State of Arizona's Department of Public Safety representing all
state-level public safety and transportation agencies' radio system. These systems,
although geographically separate and diverse, are interdependent and supportive of
enhanced interoperability as a core component of modern, contemporary public safety
operations statewide.

The RWC and TRWC are separate, but cooperative bodies formed under
Intergovernmental Agreements whose purpose is to provide seamless, wide-area,
operational and interoperational communications for all their Members through a
governance structure founded on the principle of cooperation for the mutual benefit of all
Members. Membership is open to all local, county, state, tribal and federal governmental

entities. Additionally, each system provides for use by critical public safety support entities such as private ambulance services.

Governance oversight is managed by a Board of Directors consisting of one executive representative from each Member. The boards direct the operation, maintenance, planning, design, implementation and financing of the RWC and TRWC. Membership includes the majority of cities, towns and fire districts in the greater Phoenix metropolitan area. Current membership to the RWC and TRWC, as of September 1, 2011 includes:

City of Apache Junction	City of Phoenix
City of Avondale	Rio Verde Fire District
Town of Buckeye	City of Peoria
City of Chandler	Town of Queen Creek
Daisy Mountain Fire District	City of Scottsdale
City of El Mirage	Sun City Fire District
City of Glendale	Sun City West Fire District
Town of Gilbert	Sun Lakes Fire District
City of Goodyear	City of Surprise
Town of Guadalupe	City of Tempe
City of Mesa	City of Tolleson
City of Maricopa	

The RWC and TRWC radio networks are large, public safety systems based on the Project 25, Phase I Standard. The networks are ASTRO 25™, Integrated Voice and Data, trunked radio systems. They operate in the 700/800 MHz frequency bands and use standard simulcast, IP simulcast, and individual site trunking. The networks consist of eight (8) major simulcast subsystems and ten (12) Intelligent Site Repeaters (ISR's). Over 18,200 Member subscriber units (radios) are currently supported on these networks. Additionally, there are more than 55 non-Member agencies on the network with over 11,600 radios, which use the networks as interoperability participants.

The systems provide seamless, wide-area coverage across the entire metropolitan area. They are data capable, but at the current time are only used in a data capacity to provide encryption services. The RWC and TRWC systems have provided platforms on which to build interoperability with many other agencies. Because of the regional nature of the systems, participating members have invested in excess of $164.5 million as well as over $19.2 million in state and federal grant funding to increase the regional use of the systems and reduce the cost of membership in the RWC and TRWC. Obviously, with the current fiscal environment of the country and impact on state and local agencies, any significant increase in infrastructure or subscriber unit costs would be detrimental to maintaining these networks or unachievable for already highly stressed budgets.

Grants have been used to link the many dispatch centers (PSAP's); add the City of Tempe to the network, increase system capacity to allow greater roaming and interoperability; add several mountain sites to be used for improved wide-area coverage, emergency backup and wide-area interoperability; provide connectivity to the City of

Peoria's new system; provide cache radios to be used for emergencies, and an emergency hospital emergency intercommunications network.

The RWC and TRWC systems have been effectively used to provide interoperable communications for several special events in the metropolitan area. The systems were used during the 2004 Presidential Debates linking motorcade officers, providing interoperability for the City of Tempe and Arizona State University (ASU), and provided administrative communications for the ASU staff coordinating the debate.

The systems provided support for the annual Fiesta Bowls, BCS football games, the 2008 Super Bowl, 2009 NBA and 2011 MLB All Star games. The Super Bowl, in particular, clearly demonstrated the need for a truly regional radio system and has prompted more discussions between the metropolitan cities on how to effectively use the two systems while minimizing the costs associated with maintaining individual, disparate systems.

Problem

As is the case with most governmental entities across the country, the above agencies are facing significant budgetary challenges due to the declining economy. Reductions in revenue have prompted corresponding consolidations and even reductions in service delivery. Maintaining basic government services as well as radio system infrastructure and subscriber equipment (radios) are major challenges for the above agencies' members for many years to come. System changes of this type require agencies to plan ahead extensively, for a minimum of 5 years and generally much longer, when budgets are being significantly reduced due to major economic conditions.

Additionally, in systems of this size, a conversion requires several years of coordination. This rule requires that a majority of existing system equipment and subscriber handheld units are not just converted, but replaced. Even when considered on a system-by-system basis, the impacts to each system are large, but when the number of interoperability users is also considered, the changes to one system may significantly impact users in many other agencies.

For these reasons, the supporting signatories request the Commission modify the current rules addressing spectrum efficiency as cited above. If the current December 31, 2016 deadline is not extended, it will have a significant negative impact for all members and users of the systems named above.

Considerations and Proposed Solutions

Our position has five (5) main points for consideration:

1. 700 MHz frequencies are being allocated effectively and used efficiently in Region 3.

2. TDMA standards have not yet been fully ratified and consequently, there is a lack of available products, specifically subscribers, which comply with the standard.

3. Product lifecycles, costs and availability are such that agencies are significantly challenged to maintain their infrastructure and subscribers in sound, up-to-date working order.

4. Frequency management, including narrow-banding is best managed regionally by the local agencies to best fit the needs of their area.

5. TDMA conversion for systems using a combination 700 MHz and 800 MHz require more changes than just to the 700 MHz frequencies.

Discussion

1) 700 MHz frequencies are being allocated effectively and used efficiently in Region 3:

The Region 3 RPC has not yet seen enough requests for 700 MHz narrowband channels to require a migration to TDMA two-channel equivalency to support any outstanding applications for channels. The RWC and TRWC have made several large deployments on 700MHz narrowband voice channels in the region; however region-wide deployments are few. No channel contention exists in Region 3 at this time, thus the immediate need to begin costly upgrades to TDMA two-channel equivalency by the December 31, 2016 deadline does not exist. While financial planning for these upgrades has begun within Region 3, the current deadline is simply an unreachable goal for a majority of the public safety agencies within this region at this time and does not appear to be necessary as we have constructed unified systems, as was the apparent goal and intent of creating this band for public safety's use.

2) TDMA standards have not yet been fully ratified and consequently, there is a lack of available products, specifically subscribers, which comply with the standard:

The Project 25 Phase 2 TDMA TIA-102 Core definition documents have been published. Some work still remains, however, to complete the suite of testing and compliance documents which are vital to verify system implementation. While it appears these compliance documents may be complete by 2012, beginning the financial planning process for an upgrade with unfinished standards can be problematic from the perspective of stakeholders' perceptions. The degree of difficulty for system planners seeking the financial buy-in of key stakeholders not well versed in technical issues is thus raised. This air of uncertainty created by incomplete standards documents makes the high financial hurdle of the 2016 date even more difficult.

3) Product lifecycles, costs and availability are such that agencies are significantly challenged to maintain their infrastructure and subscribers in sound, up-to-date working order:

While current systems and subscribers are very advanced and well structured to meet the frequency efficiencies required by the FCC, these systems are very expensive. Very significant investment is needed to implement such systems and maintain them up to date and compliant with the emerging standards. Manufacturers do not support these systems once they become more than 3 or 4 software versions out of date. In the present era, that translates to 2 to 4 years at the most. These systems are also very complex technically, and while some agencies may be able to self-maintain their systems, for the most part, support from the manufacturer is an integral part of keeping the systems operating properly. Consequently, agencies must maintain software and hardware maintenance contracts with the manufacturers. These contracts typically do not include system transformations such as moving to the TDMA two-channel equivalency.

Agencies are also used to replacing their subscribers every 5 to 7 years, but the current economic climate is forcing agencies to make their subscribers last much longer. Further, due to the complexity of the current subscribers, they cost significantly more than those agencies previously used (conventional). The RWC and TRWC, for example, are trying to extend the useful lifecycle subscriber units to 7 to 10 years; but even that time frame is proving to be unachievable financially.

The current narrow-banding mandate means that most of the agencies in Region 3, in addition to upgrading their infrastructure, must replace all of their subscribers. This is proving to cost more than twice the amount necessary to simply upgrade the infrastructure.

Based on the above, the RWC alone has projected that it will cost about $40 million to upgrade its infrastructure, and another $103 million to replace its fleet of subscribers. Other agencies are facing similar costs.

4) Frequency management, including narrow-banding is best managed regionally by the local agencies to best fit the needs of their area:

In lieu of the 2016 TDMA requirement date, the signatories and the Region 3 RPC would like to propose that the Regional Planning Committee (RPC) which contains membership of all qualified applicants for 700 MHz channels, determine when an actual date to convert to TDMA 6.25 kHz channels is required. This change will allow technology changes to take place as budgets allow and new equipment becomes available, and will be also based on regional need and coordination, not simply on a fixed date. For example, when 60 percent of the available Arizona 700 MHz public safety channels are in use, the RPC would generate a notice to all appropriate public safety frequency owners of a 5-year period to convert to TDMA 6.25 kHz. We believe this meets with the intent of Commission's actions by allowing RPC's optimal flexibility to meet state and local needs. Since the RPC's are closely in tune with local needs and actual channel usage we believe that that proposal has merit and deserves consideration.

5) TDMA conversion for systems using a combination 700 MHz and 800 MHz require more changes than just to the 700 MHz frequencies:

Agencies, such as the RWC and TRWC have been planning for the FCC narrow-banding mandate. All of the equipment purchased for new 700 MHz portions of the system are narrow-band ready. However, while the TDMA and FDMA protocols may be mixed on a single system, they may not be used simultaneously on the same talk group thus limiting roaming across the system. This inability to roam across the system, limits both direct operations and interoperability among users, and thus defeats the major premise of having a large regional system. In order to preserve the full capabilities of the regional system, all FDMA components of the system must also be converted to TDMA. This, of course, adds to the cost of meeting the narrow-banding mandate.

Summary

All of the above points come together to support our request to delay the narrow-banding mandate to December 31, 2020; or a yet to be determined date based upon certain criteria set forth by the Commission, in concert with the Region 3 RPC, representing the State of Arizona.

This is a critical time in the short success stories of these systems. The signatories request swift review, decision and response from the FCC. This will allow system managers and budget and policy makers sufficient time to plan and fund only those portions of the affected systems that require immediate, necessary upgrades and normal lifecycle replacement.

_____   _____
Regional Wireless Cooperative   Topaz Regional Wireless Cooperative

_____   _____
Arizona Department of Public Safety   Maricopa County

_____   _____
Yuma Regional Communications System   Arizona Public Safety Communications
                                               Advisory Commission

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Region 3 - Arizona
Regional Planning Committee

Regional Wireless Cooperative

BOARD OF DIRECTORS REPORT

TO:	Regional Wireless Cooperative (RWC) Board Members	Agenda Date: September 22, 2011
FROM:	RWC Executive Committee	Item 6

SUBJECT: **CUSTOMER MODEL**

BACKGROUND

On October 25, 2010, the RWC/TRWC Joint Chair/Vice-Chair and Executive Directors crafted a letter of intent which set the stage for on-going relations between the two systems with the goal of establishing a cohesive direction that supports Public Safety operations throughout the Region. Since that date, the Joint RWC/TRWC Executive Committees developed a number of alternatives to address the action item intended to address "developing a solution for ongoing operational roaming across the Region".

The "Customer Model" was developed and presented to the RWC Board of Directors for consideration. The TRWC evaluated this model and determined that it was not a viable option due to its substantial up-front costs and on-going operations and maintenance and system capacity financial requirements.

THE ISSUE

On Thursday, September 8, 2011, the RWC/TRWC Joint Chairs met to continue discussion regarding a reasonable funding model which would encourage participation by nonmember Public Safety agencies that require Region-wide operational use of either system. Discussion surrounded a "Network Partner" concept which would be a new category of participation by Public Safety agencies who may be members of other Regional systems. The purpose of this category of participant would be to:

1. encourage and improve broad-based public safety communication (for single agency operational use)
2. discourage overbuilding or duplicating expensive infrastructure among and between systems

"Network Partners" may include, but not limited to, multi-jurisdictional agencies such as the TRWC, Maricopa County Wireless Network, Yuma Regional Communications System, and Pima County Wireless Integrated Network System or similar compatible systems.

The RWC/TRWC Executive Directors have been tasked to develop the principles for this model. The Executive Committees, supported by the Joint Chairs will oversee the development of the model for eventual approval by each Board of Directors.

RECOMMENDATION

Table further action on the Customer Model and move to support staff development of the "Network Partner" Model. Approve an extension of current Mesa Police Department use of RWC talkgroups "Mesa Investigations 1 and 2".