

**PIMA COUNTY WIRELESS INTEGRATED NETWORK
(PCWIN)
EXECUTIVE MANAGEMENT COMMITTEE**

Pima County Sheriff's Administration Building
1750 East Benson Highway, 3rd Floor
Thursday, August 31, 2006
9:00 a.m.

SUMMARY OF MEETING

Note: The following is a summary of what transpired at the August 31, 2006 EMC meeting. Cassette tape and materials provided are available upon request.

I. Call to Order: Captain Paul Wilson, Alternate Chairman, 9:00 a.m.

Roll Call: Catherine Hanna, Pima County Sheriff's Department

Members Present

Captain Paul Wilson, Pima County Sheriff's Department (*2nd Alternate*)
Chief Daniel Sharp, Oro Valley Police Department
Chief Doug Chappell, Drexel Heights Fire District
Chief Joseph Delgado, Tohono O'odham Police Department
Asst. Chief Ray Allen, Tucson Fire Department (*1st Alternate*)
Chief Jeff Piechura, Northwest Fire District
Chief Richard Vidaurri, Marana Police Department
Captain Bill Richards, Tucson Police Department (*2nd Alternate*)
Mr. Kerry Reeve, Pima County OEM & Homeland Security (*2nd Alternate*)

Members Absent

Sheriff Clarence Dupnik, Pima County Sheriff's Department
Chief Dan Newburn, Tucson Fire Department
Mr. Dennis W. Douglas, Pima County OEM & Homeland Security
Chief Richard Miranda, Tucson Police Department

Others Present

Manny Amado, Pima College PD	Jerry Lumpkin, Durham Communications
Rick Brown, Marana Police Dept	John Moffatt, Pima County IS Department
Dennis Busby, M/A Com	Albert Pesqueira, Northwest Fire Dept
Jim Bush, Ajo/Gibson Vol. Fire Dept	Paul Punske, Motorola
Gary Bynum, Drexel Heights FD	Mike Sacco, Pima County SD
Anthony Daykin, UAPD	Larry Seligman, Pascua Yaqui PD
George Heaney, Pima County SD	Ann Strine, City of Tucson
Joe Jakoby, City of Tucson	Anita Velasco, City of Tucson
Pat Joy, Pima County SD Communications	

II. Approval of Minutes
Captain Paul Wilson, Pima County Sheriff's Department

Captain Wilson proposes approval of the minutes for the July 27, 2006, Executive Management Committee (EMC) meeting. Chief Chappell moves to approve the minutes and Captain Richards seconds the motion. Motion is unanimously carried.

Materials provided: EMC summary, dated July 27, 2006.

III. Committee Appointment
Captain Paul Wilson, Pima County Sheriff's Department

Captain Wilson advises that Deputy Chief Miller, of the Tucson Police Department, has requested that Captain Kevin Mayhew replace Captain Bill Richards as the second alternate representative on the Executive Management Committee. Captain Wilson extends his appreciation to Captain Richards for his service and participation to the PCWIN project.

Chief Sharp, of the Oro Valley Police Department, offers a motion to recommend the appointment of Captain Mayhew. Chief Sharp nominates and motions for Lieutenant Jason Larter to replace Commander Charles Lentner on the Executive Management Committee as second alternate for the Oro Valley Police Department.

Chief Chappell seconds the motions to recommend Captain Mayhew and Lt. Larter to the Board of Supervisors for Executive Management Committee appointment. Motions unanimously carry.

IV. CTA Communications – Consultant Engagement Status Report
Ms. Cheryl Giggetts, CTA Communications

Ms. Giggetts explains that the System Alternatives & Recommendations Report has been published and can be viewed on CTA's website at www.ctacommunications.com. She extends her appreciation to all Committee members for their input and information gathering to complete this document.

Ms. Giggetts explains that CTA is in the process of beginning the Concept of Operations Report and Business Plan component. She adds that Captain Wilson has designated workgroups to meet periodically to discuss the operations and maintenance issues of a new communications and EOC center.

Ms. Giggetts explains that the Conceptual Architectural Design Report is well under way. She explains that following the Executive Management Committee meeting, CTA and HSMM staff will meet with the Workgroup Meeting Chairs to discuss technical issues as part of the Business Plan component. Ms. Giggetts adds that several PCWIN technical representatives have been invited to Lynchburg, Virginia to tour the CTA facility to view the propagation facility, discuss technical aspects of the project, and meet CTA staff.

Ms. Giggetts explains that during the Specifications (Phase III) phase of the project, CTA staff will review the terms and conditions Pima County Procurement has provided. Ms. Giggetts explains that work on the Conceptual Design component of the project will allow CTA to provide PCWIN with specification modules. She adds that all three (3) phases of the project are on schedule and completion is anticipated at the end of the calendar year.

Captain Wilson adds that during the July 27th Executive meeting, the Committee approved the travel recommendation scheduled for early October 2006. Captain Wilson explains that Captain Mayhew was recently added to the list of invited Committee members to bring him up-to-speed on the PCWIN project. Additionally, the County is sending Larry Sayers, of Pima County Wireless Services and Joe Jakoby, of the City of Tucson, to Lynchburg, Virginia to discuss in-depth technical issues regarding the Conceptual Design Package. This trip will allow for a proactive attempt to retrieve information as opposed to waiting for information to filter in and force PCWIN to make last minute changes to the design package.

Ms. Giggetts explains that Mr. Sayers and Mr. Jakoby have the technical expertise and knowledge to review the technical aspects of individual sites and propagation models for CTA. Mr. Sayers and Mr. Jakoby will discuss what components are economically and operationally feasible for a technically and financially sound system.

Ms. Giggetts explains that on September 1, 2006, CTA and their parent architectural company, HSMM, will meet with PCWIN representatives to discuss space requirements and present schematic block diagrams for consideration in a new facility. Talks will continue throughout the day and afternoon discussions will include the operational aspects for a co-located facility.

Captain Wilson refers to the Committee for questions. He receives no response.

Materials provided: CTA Communications Project Status Report dated August 17, 2006.

V. System Alternatives & Recommendations Final Report
Captain Paul Wilson, Pima County Sheriff's Department
Ms. Cheryl Giggetts, CTA Communications

Captain Wilson explains that all participating agencies will receive a final copy of the Systems Alternatives & Recommendations Report via US Mail. Captain Wilson explains that the report details regulatory issues surrounding radio communications and how those issues may impact the PCWIN project.

Captain Wilson explains that approximately two (2) months ago, Ms. Giggetts presented the Committee with several recommendations for consideration and ultimately those recommendations were adopted allowing the Conceptual Design component to move forward. He adds that Dr. Ken Ballard, of CTA Communications, has joined today's meeting to explain several regulatory issues with the Committee in further detail, outlining what future challenges those issues may present to the project.

FCC Regulatory Requirements

- **800 MHz Rebanding Plan**

Captain Wilson reminds the Committee that there is a nationwide interference problem with the 800 MHz band surrounding public safety radio users, particularly involving Nextel Communications. Over the next several years, Nextel has proposed to reband users within the 800 band, moving public safety away from the cell carriers to minimize future interference. The FCC has adopted that plan and Nextel has committed to paying for the labor which will go into the planning and replacement of equipment; cost reaching approximately 2 billion dollars.

Dr. Ballard explains that the interference was primarily caused by Nextel and originated from the FCC, which allowed Nextel to utilize their technology in a land mobile environment, causing significant interference. He adds that some users are completely unaware of the interference and this becomes unacceptable when involving public safety. Nextel stresses that they will not just “give away” the 2 billion dollars for planning and replacement of equipment, and have become very aggressive in giving all entities their fair share of replacement costs.

Dr. Ballard explains that the rebanding periods occur in “waves,” the southwest being Wave 4 (last). Waves 1-3 remain in negotiations at this point in time, but on-schedule in implementing the rebanding requirement; completion anticipated in the next three (3) to five (5) years.

Dr. Ballard explains that the 821-824 frequency band, which public safety has occupied, has recently been coveted by Nextel. Nextel will instead vacate all frequencies under 821 for public safety entities. The FCC will move users in “blocks.” Each wave has two (2) phases; Phase I taking all public safety users occupying frequencies 806-809 and move them up, allowing the availability of 90 additional frequency pairs (licensed by Nextel). This will give public safety a period of three (3) years to reserve/license those frequencies. If those frequencies are not utilized, they will be turned over to non-public safety users.

Dr. Ballard cautions the Committee in regards to the unresolved treaty with Mexico on band sharing along the border. He explains that the U.S. has a treaty with Mexico detailing how the bands are divided between Mexican and U.S. licensees. The U.S. State Department is currently holding negotiations with the Mexican Government to discuss reallocating those frequencies, affecting communications in both countries. The FCC has stated that the Wave 4 project will be held in suspense until the treaty negotiations are complete. Marana (outside the 70 mile requirement) will be on-schedule in frequency reallocation.

Captain Wilson explains that ideally, rebanding would occur before PCWIN builds their system, but if not; PCWIN would have to deal with retuning transmitters, reprogramming radios, and potentially replacing equipment.

Ms. Giggetts explains that those agencies not affected by this treaty should begin reallocating their frequencies now, causing the least amount of impact in regards to cost and time. Captain Wilson explains that the PCWIN website (www.bonds.pima.gov/Wireless/Wireless.htm) provides documentation on FCC literature for additional frequency information.

- **Narrow banding on agencies' communications in the 700 MHz band**

Captain Wilson explains that the FCC has directed more efficient use of the spectrum for the 700 MHz and UHF/VHF frequencies on particular time tables.

Dr. Ballard explains that entire 700 MHz band is divided into 6.25 kHz channels, but licensing as aggregated 12.5 kHz channels. The requirement for operating voice systems must include operation on narrow band channels under 12.5 kHz; half the band width currently in use. By 2017, the FCC has mandated that all systems in the 700 MHz band will operate under the 6.25 kHz channels **or** the equivalent; equivalent meaning two (2) users using the same frequency slot.

Dr. Ballard explains that in regards to data, the rate of data used has to double by 2017. CTA has found that the frequency issues do not affect data as much as voice. The systems that major vendors are presenting in the 700 MHz meet the dictated requirements of the FCC. Dr. Ballard explains that all groups will eventually have to narrow band and although not officially adopted by the P25 team, Motorola and M/A Com are pursuing the TDMA solution. The parameters incorporated are being negotiated.

Dr. Ballard explains that CTA is researching a way to avoid the issues regarding the voice system; reviewing what the 800 MHz license resources are in Pima County. If CTA can identify sufficient licenses and frequencies to cover all of Pima County under the 800 MHz band, narrow banding would not have to occur. Dr. Ballard recommends that PCWIN deploy its P25 voice system using the 800 MHz frequencies and deploy the data and AVL systems using the 700 MHz frequencies. He adds that current mobile data on 800 MHz may be moved to the 700 MHz frequencies, freeing those licenses for the voice system; avoiding a potential upgrade in technology 10 years into the life of the system.

Captain Wilson asks Dr. Ballard to explain what impact PCWIN would undertake if the 700 MHz band was utilized. Dr. Ballard explains that site placement may be salvaged, and PCWIN can reuse towers, facilities, and equipment. He adds that the IP network equipment should stay in place, and cautions that it is difficult to imagine Motorola or M/A Com plugging in information into each system, one by one. Dr. Ballard explains that TDMA would require hardware and software changes in the site manager and network management system.

Ms. Giggetts explains that CTA encourages their technical team to be optimistic and states that their vendors will take all options into consideration when writing specifications for PCWIN.

- **Telecommunications Industry Association (TIA) / Electronic Industries Alliance (EIA) / Telecommunications Systems Bulletin (TSB-88)**

Dr. Ballard explains that TSB-88 was developed by a technical committee; ground work completed prior to digital systems becoming widely deployed. TSB-88 uses overly stringent requirements regarding bit air rate. Dr. Ballard explains that when the document was developed, public safety saw a decrease in voice quality, and non-public safety's quality increased.

Digital operations allow audio to be heard clearly unless the user is at a point where the bit air rate is unable to recover the audio properly at which point the audio halts. Dr. Ballard explains that in testing several systems, performance remains acceptable until the stringent requirement meets a less bit air rate, causing vendors to design and guarantee their product based on bit air rate as opposed to the product quality. This may cause users to add sites for coverage that they don't need.

Dr. Ballard recommends that clients take this requirement into consideration and not adopt it at this time. Ms. Giggetts states that this regulatory issue is not a standard, it's a guideline. She adds that like CTA, she is asking the Committee to rely on the technical experts within PCWIN to review the system and ensure proper testing suitable for public safety.

Captain Wilson refers to the Committee for questions. He receives no response.

**VI. Facility Acquisition Status Report – 3434 E. 22nd Street
Captain Paul Wilson, Pima County Sheriff's Department**

Captain Wilson informs the Committee that Pima County is scheduled to close escrow on the facility purchase near the end of September. Captain Wilson explains that during the September 1st meeting, discussions regarding facility design, zoning limitation, risk mitigation and management strategies, spacing requirements, and block diagram alternatives will continue.

Captain Wilson refers to the Committee for questions. He receives no response.

**VII. Pima County Workgroup Meetings – Status Report
Captain Paul Wilson, Pima County Sheriff's Department**

Captain Wilson explains that the work on the Conceptual of Operations document and the Business Plan has begun. In order to prepare participant interaction with CTA in developing the document, three (3) workgroups have been established to address several key elements for implementation in a new communications center:

- Radio Systems Workgroup
- ECC Facility Workgroup
- IT/Telecommunications Systems Workgroup

The Radio Systems Workgroup focuses on operational and maintenance requirements in a new system. The IT/Telecommunications Systems Workgroup focuses on the technology maintenance and various components; this workgroup has now been broken into several sub-groups to address several types of technologies. The ECC Facility Workgroup focuses on facility operations. Captain Wilson explains that each workgroup is moving forward and he is pleased with the progress. He adds that it may seem like the tangible progress is slow, but stresses that work is occurring behind the scenes. Establishing the workgroups has increased the level of energy and enthusiasm within the Committees.

Captain Wilson refers to the Committee for questions. He receives no response.

VIII. Communications Center Participation **Captain Paul Wilson, Pima County Sheriff's Department**

Captain Wilson refers the Committee to the memorandum handout on PCWIN participation expansion. He explains that during last meeting, Chief Chappell asked the Committee to consider expanding participation within the communications center to accommodate the Northwest Fire Consortium and the Drexel Heights Fire District.

Captain Wilson explains that currently, the Northwest Fire District represents several agencies: Northwest, Golder Ranch, Picture Rocks, Avra Valley, and Three Points Fire. Collectively, each agency contracts with the Tucson General Services Department for dispatch services. Drexel Heights Fire District operates its own stand alone secondary PSAP and dispatch facility; incoming 9-1-1 calls originate at the County and are transferred to Drexel Heights. He adds that Drexel Heights Fire dispatches for Arivaca, Helmet Peak, Mount Lemmon, and Rincon Valley Fire Departments.

Chief Chappell and Chief Jeff Piechura request future planning for a new communications center to include their dispatch and 9-1-1 operations. Captain Wilson suggests that Committee members read the handout for the bond project history, which outlines the bond package and committee authority and goals. He adds that the bond is specific in identifying participation within the project, although those entities already provide services for secondary customers; Sheriff's Department provides dispatch and 9-1-1 services for the Sahuarita Police Department, and the Tucson General Services Department provides dispatch and 9-1-1 services to the consortium of the Northwest Fire District. Captain Wilson states that it was never recommended that those occupants tell those customers to go out and seek their own separate systems because each is not welcome in a new building, however, the bond did not address whether or not there could be additional future participation by other entities.

Captain Wilson explains that the Northwest Fire District would like more flexibility in their operation. Drexel Heights Fire District is looking for new opportunities to consolidate and improve service efficiency. In order to achieve those goals, those entities would either have to create their own stand alone dispatch and 9-1-1 operation and stand up as a 4th co-located entity in the new facility or have them consolidate further with an existing occupant; contracting further with the City of Tucson or contract with Pima County.

Captain Wilson states that both the City and County would entertain those ideas and outline details when requested.

Captain Wilson explains that the handout includes space requirements and cost projections to give an idea on how this request would impact the project. Chief Piechura and Chief Chappell provided Captain Wilson with a total number of space requirements they anticipate needing in a stand alone operation. Captain Wilson explains that he took the model that HSMM provided, added a co-located 4th entity, and found that there would be a need for approximately 2300 additional square feet within the building. He adds that he applied cost projections for new construction and at \$250-\$300 per square foot; a cost of approximately \$396,250 would be needed. **NOTE:** Captain Wilson estimated 1585 gross square feet, taking into account for a corresponding reduction of space within the City of Tucson General Services area based on their projections to accommodate the Northwest Consortium dispatch requirements.

Captain Wilson explains that with the assistance of Mike Dye, of CTA Communications, he attempted to illustrate the expenses for equipment. He adds that there is a significant cost savings with consolidation (approximately \$200,000), which results when a consolidated operation is located within the primary communications center eliminating a need to support remote radio consoles.

Captain Wilson cautions that the Committee does not know enough about existing space requirements to make a motion, adding that the Committee could be looking at expending renovation dollars as opposed to new construction dollars, depending on the spacing requirements previously discussed. Captain Wilson recommends that this item be tabled until he gathers more information on the cost projections.

The Committee has four (4) options to consider for this item:

- **Proceed with the original documented scope of the project including those entities delineated in the bond implementation plan**
- **Proceed with original scope, but create a master plan for future expansion of the facility to accommodate additional occupants**
- **Permit additional agencies to co-locate as part of the bond initiative (4th entity)**
- **Permit additional agencies to consolidate services with the City of Tucson or Pima County within the new communications facility**

Chief Piechura explains that the Consortium for the Northwest Fire District includes three (3) PSAPs: Marana, Oro Valley, Pima County (land lines), and the City of Tucson provides one (1) additional PSAP for cell. Current transfer times run from 30 seconds to 4 minutes to process an emergency call (fire or medical). Chief Piechura explains that Northwest Fire is attempting to decrease those response times under the NFPA 1710 (National Fire Prevention Association). He adds that consolidation has been Northwest Fire District's determination for many years to deliver better service to their customers; PCWIN offers the best opportunity to achieve and streamline those goals.

Captain Wilson asks Chief Piechura to explain his vision on streamlining the PSAPs in this process. Chief Piechura explains that ideally, fire personnel would want one call center for 9-1-1. If 9-1-1 entities are in one building, the ideal vision is to streamline those 9-1-1 PSAPs into a centralized system, removing those two (2) call taking systems. Chief Piechura explains that PCWIN's concept is one which other communications centers should model after and the regional communications approach should become a model in teaching other public safety organizations to eventually consolidate into one (1) building.

Chief Chappell explains that Drexel Heights is currently duplicating efforts and must find ways to improve. Pima County currently takes the 9-1-1 calls (via call taker), information is gathered and that customer is forwarded to a Drexel Heights call taker where the information is repeated. That call is then dispatched. Chief Chappell stresses that time is of the essence and duplicating efforts wastes time for emergency services. He adds that maintenance costs are increasing and State funding for secondary PSAPs is decreasing, causing concern for several public safety entities.

Asst. Chief Allen states that PCWIN has previously discussed co-locating as opposed to consolidating; co-locating chosen as the easiest step. He adds that if Northwest and Drexel Heights chose to consolidate and then co-locate with PCWIN, future plans may allow fire entities to consolidate with PCWIN in one (1) building. Asst. Chief Allen explains that all participating agencies intend on growing and if Northwest and Drexel Heights desire future consolidation with PCWIN, those chances decrease due to the lack of space.

Chief Piechura would like to take a consolidated approach as a best case scenario; next best being to co-locate, allowing both agencies share CAD systems.

Captain Richards inquires about expansion capabilities in the new facility. Captain Wilson explains that there is room for expansion and Pima County Facilities will be able to answer those questions at the design meeting on September 1st. He adds that he will take concerns and suggestions from today's meeting and forward those to the design meeting.

Captain Wilson explains that it is premature to make a final decision on this item and recommends that the idea be explored from a cost aspect (community and PCWIN). He adds that he will bring back recommendations for future consideration. Chief Sharp motions to table the issue with future consideration. Chief Piechura seconds that motion. Motion unanimously carries. Item is tabled.

Captain Wilson invites Chief Piechura and Chief Chappell to the Communication & EOC Design Meeting on September 1, 2006, at 3434 E. 22nd Street.

Materials provided: Expanded Participation – PCWIN Communications Center Component Memorandum dated August 24, 2006.

**IX. Tohono O’odham Nation Support Follow-Up
Captain Paul Wilson, Pima County Sheriff’s Department**

Captain Wilson explains that County representatives met with the Tribal Chairwoman of the Tohono O’odham Nation on July 27, 2006, to discuss several issues regarding the PCWIN project. Captain Wilson explains that the meeting included PCWIN’s desire to gain permission, plan, and build on Kitt Peak and Quijotoa Ridge. Sheriff Dupnik prepared a letter for the Tribal Chairwoman, dated August 21, 2006, outlining the contents of the conversation.

Captain Wilson explains that the Tribal Chairwoman reaffirmed the Nation’s support of the PCWIN project and shared that the Nation was moving forward on their microwave project, which was supported by the PCWIN project. He adds that the Nation accepted responsibility for rallying the support necessary amongst government leaders to permit PCWIN to use those sites, although the Committee understands that obtaining permission doesn’t end with the Tribal Chairwoman, but also includes the Tribal Council, District Governing bodies, and additional entities who have rights to those sites.

Captain Wilson explains that key points of discussion from the County’s perspective included gaining the right to access and maintain those facilities on a long-term basis.

Materials provided: Pima County Sheriff’s Department Letter from Sheriff Clarence W. Dupnik to the Honorable Vivian Juan-Saunders, Chairwoman of the Tohono O’odham Nation, dated August 21, 2006.

X. New Business, Captain Paul Wilson, Pima County Sheriff’s Department

Captain Wilson asks if anyone would like to address the Committee. He receives no response.

XI. Call to the Public

Captain Wilson asks if anyone in the audience would like to address the Committee. He receives no response.

XII. Date-Time-Location of Next Meeting(s)

Next Meeting:

September 28, 2006 @ 9:00 AM
Pima County Sheriff’s Department
1750 East Benson Hwy
SOC/ 3rd Floor

XII. Adjournment

Captain Wilson asks for a motion for adjournment. Chief Sharp moves to adjourn the meeting. Captain Richards seconds the motion. Motion is unanimously carried.

Meeting adjourns at 10:14 a.m.

Minutes prepared by: Catherine Hanna