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RADIO MANAGEMENT

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This instruction implements Joint Publication 3-12, Cyberspace *Operations*; Department of Defense Directive (DoDD) 8100.02, *Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG)*; Department of Defense Instruction (DoDI) 4650.02, *Military Auxiliary Radio System (MARS)*; DoDI 4650.10, *Land Mobile Radio (LMR) Interoperability and Standardization*; Allied Communications Publication (ACP) 125, *Radiotelephone Procedures;* Defense Information Systems Agency (DISA) Circular 310-70-79, *MYSTIC STAR Network Management Manual and Users Guide*. This instruction identifies responsibilities to implement and support Air Force high frequency (HF) radio, Personal Wireless Communication Systems (PWCS) at the major command (MAJCOM), base and unit levels, and MARS. It provides requirements processing, validation, and handling procedures for classified and unclassified PWCS, and training. It provides procedures for the management, operation, and procurement of commercial wireless service for all PWCS. This publication applies to the Air National Guard (ANG) and the Air Force Reserve (AFR) unless indicated otherwise. Refer technical questions concerning PWCS and MARS to 38th Cyberspace Readiness Squadron (38 CYRS/SCM), 203 W. Losey Street, Room 1000, Scott AFB IL 62225-5222; and questions concerning HF and MYSTIC STAR to Cyberspace Support Squadron (CYSS/DOO), 203 W. Losey Street, Room 3180, Scott AFB IL 62225-5223. Send recommended changes or comments to Air Force Network Integration Center (AFNIC/EASD), 203 W. Losey Street, Room 1100, Scott AFB IL 62225-5222, through appropriate channels, using AF Form 847, *Recommendation for Change of Publication*, with an information copy to 38 Cyberspace Readiness Squadron (CYRS/SCM). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this

publication does not imply endorsement by the Air Force (AF). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims/**. See **Attachment 1** for a glossary of references and supporting information. See **Attachment 4** for AF PWCS Organizational Structure.

SUMMARY OF CHANGES

This document has been revised to incorporate AFI 33-217/AFI 17-212 Voice Call Sign Program and AFGM AFI17-210_AFGM2016-01 dated 11 Oct 2016.

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Section A—Managing High Power High Frequency Systems

1. United States Air Force High Power High Frequency (HF) Systems. All organizations identified in this section coordinate high power HF requirements and solutions so that radio systems and networks actively support the users. The High Frequency Ground Communications System (HFGCS) system consists of 13 high power HF stations around the world providing worldwide communications to all DoD aircraft, ships, and ground agencies on a shared by priority basis. The system supports: command and control, special purpose, contingency air-ground-air, and Navy ship-to-shore communications, as well as other authorized users according to established traffic precedence. Neither the system nor individual stations are dedicated to any service, command, or other activity. HFGCS is a globally networked, centrally operated high power HF system. All DoD and AF activities with high power HF requirements are directed to consider HFGCS as a solution to their needs prior to entering into unique system acquisition contracts.

1.1. **Roles and Responsibilities.**

1.1.1. **Directorate of Operational Capability Requirements (AF/A5R):** Oversees the documentation and validation of USAF operational requirements for communications systems in accordance with Air Force Instruction (AFI) 10-601, *Operational Capability Requirements Development.*

1.1.1.1. Directs the development, operation, and maintenance of high power HF systems and networks.

1.1.2. **High Frequency Global Communications Systems, AFSPC Cyberspace Support Squadron, CYSS/CYO, 203 W. Losey St, Suite 2200, Scott AFB, IL 62225.**

1.1.2.1. Coordinates policies and procedures for the HFGCS.

1.1.2.2. Serves as the entry point for new system requirements to the DoD HF Working Group.

1.1.2.3. Reviews and implements MAJCOM-level recommendations for changes to the Air Force Global HF System procedures. (T-2)

1.1.2.4. Coordinates the mission requirements of HF system users with appropriate MAJCOM plans/programs, operations, and requirement directorates. (T-2)

1.1.2.5. Recommend, analyze, and approve systems, operations, and maintenance support methods for high power HF systems. (T-2)

1.1.2.6. Identify, review, and track all high power HF technical requirements.

1.1.2.7. Facilitate global and regional HF system networking standards. (T-2)

1.1.2.8. Coordinates the development of the architecture, standards, policies, and procedures for the HFGCS.

1.1.2.9. Executes funding activities for HFGCS long haul circuits, system information assurance requirements.

1.1.2.10. Answers requests for inter-command and inter-service special communications support. (T-3)

1.1.2.11. Monitors HFGCS system network performance.

1.1.2.12. Accompanies MAJCOM HF managers on staff visits to evaluate operations, equipment use, and system integrity. (T-3)

1.2. **MAJCOM Roles and Responsibilities. HF managers in Air Combat Command, Air Mobility Command, Air Force Materiel Command, Pacific Air Forces, United States Air Forces in Europe, Air Force Space Command, and United States Navy (USN HF Ship-Shore-Ship Communications Network) will:**

1.2.1. Advocate for and provide necessary funding required to maintain and sustain all real property (including buildings, real estate, fencing and associated antennas) and utilities associated with HFGCS and MYSTIC STAR mission requirements within their respective commands.

1.2.2. Oversee day to day operation and maintenance of system assets under their control. (T-3)

1.2.3. Match employees and equipment to job requirements. (T-3)

1.2.4. Evaluate training, operations, and equipment use. (T-3)

1.2.5. Coordinate publication creation and production. (T-3)

2. MYSTIC STAR. MYSTIC STAR is a worldwide communications mission, executed by elements of the United States Army, United States Navy, and United States Air Force under the direction of DISA IAW DISA Circular 310-70-79, *MYSTIC STAR Network Management Manual and Users Guide*. The MYSTIC STAR network provides worldwide communications by directly controlling radio equipment located at ground entry point stations. It consists of ultra-high frequency (UHF) satellite and HF networks supporting Presidential, special air, commanders-in-chief, Joint Staff, very important persons, and command airborne missions. The system consists of a master net control station (MNCS) located at Andrews AFB MD, and an

alternate net control station (at another location to provide continuity of operations capability), interstation and inter-site circuits, as well as relay and auxiliary communications subsystems.

2.1. **Roles and Responsibilities.**

2.1.1. **AFSPC CYSS/DOO.**

2.1.1.1. Manages the life cycle, future planning, programming, and budgeting of MYSTIC STAR elements from a system perspective.

2.1.1.2. Oversees the activities of the MYSTIC STAR Ops-Tech Manager's Office.

2.1.2. **The Commander, 89th Communications Squadron must:**

2.1.2.1. Manage, operate, and evaluate the MNCS according to DISA Circular 310-70-79. (T-0)

2.1.2.2. Give network status updates to the MYSTIC STAR system manager through the operations technical manager. (T-3)

2.1.2.3. Provide facility, administrative, and logistical support for the MNCS. (T-3)

2.1.3. **The MYSTIC STAR Operations Technical Manager.** The MYSTIC STAR Operations Technical Manager operates from the 89th Communications Squadron (89 CS/SCX), 1558 Alabama Ave, Suite 67, Andrews AFB MD 20762-6116. The MYSTIC STAR Operations Technical Manager must:

2.1.3.1. Directly interface with the MYSTIC STAR users to ensure mission requirements are satisfied. (T-2)

2.1.3.2. Evaluate system facilities and assesses network performance. (T-2)

2.1.3.3. Compare performance trends to established standards and make recommendations for improvements to criteria, documentation, or performance. (T-2)

2.1.3.4. Work with personnel on all plans for operating, maintaining, managing, controlling, and configuring the network. Oversee MYSTIC STAR contracted personnel to ensure performance requirements are met. (T-2)

2.1.3.5. Recommend budgets for network operations, maintenance, sustainment and upgrades. (T-2)

2.1.3.6. Work with customers to develop new network requirements and assist with developing AF Form 1067, *Modification Proposal* for submission to CYSS/DOO.

2.1.3.7. Implement approved network plans and special system configurations. (T-2)

2.1.3.8. Report the operational status, performance status, or limitations of the network to CYSS/DOO. (T-3)

Section B—Managing Personal Wireless Communication Systems

3. Managing Personal Wireless Communication Systems (PWCS).

3.1. Procurement of PWCS assets and infrastructure has to comply with DoDD 5000.01, *The Defense Acquisition System*; DoDI 8100.04, *DoD Unified Capabilities (UC)*; AFI 17-120, *Management of Cyberspace Support Activities*; AFI 63-101, *Acquisition and Sustainment*

Life Cycle Management; and AFI 17-111, *Information Technology (IT) Asset Management.* (T-3)

3.2. **Secretary of the Air Force, Information Dominance and Chief Information Officer (SAF/CIO A6).** Serves as the Air Force focal point for approving PWCS policy.

3.3. **AF PWCS Lead, 38 CYRS/SCM.**

3.3.1. Serves as the Air Force single point of contact for PWCS support.

3.3.2. Serves as Air Force PWCS Equipment Control Officer (AFECO) for the Asset Inventory Management (AIM) module of the Air Force Equipment Management System (AFEMS) for PWCS assets, as well as the focal point for all proposed upgrades and/or modifications to AIM for PWCS assets according to AFI 17-111. (T-3) In addition 38 CYRS/SCM will:

3.3.2.1. Formulate policy changes for Headquarters United States Air Force (HAF) review and approval. (T-2)

3.3.2.2. Coordinate with AF Information Technology Commodity Council (ITCC) on commercial wireless issues prior to disseminating overall program guidance to the field. (T-3)

3.3.2.3. Review technical solutions for reportable PWCS systems to ensure compatibility with Air Force Enterprise Architecture, Air Force ITCC commodity strategies, interoperability requirements, continuity of operations, and life-cycle support. (T-2)

3.3.2.4. Review MAJCOM provided inspection information to identify patterns and trends with Air Force-wide applicability, and cross-feed that information to all MAJCOMs. (T-2)

3.4. **Major Commands (MAJCOM) will:**

3.4.1. Prepare supplements to this instruction, if needed, to accommodate MAJCOM-unique operational, procedural, and/or policy requirements with coordination and approval from AFSPC/CYSS.

3.4.2. Appoint a MAJCOM PWCS representative.

3.4.2.1. Appointment containing name, rank, Defense Switched Network (DSN) number, and E-mail address of appointee is sent to 38 CYRS/SCM within 15 days of appointment.

3.4.3. Ensure Government-owned/leased Land Mobile Radio (LMR) systems comply with DoDI 4650.10, *Land Mobile Radio (LMR) Interoperability and Standardization*. This includes ensuring LMR systems operating within the United States and Possessions (US&P) comply with the National Telecommunications and Information Administration (NTIA) narrowband mandates through acquisition of narrowband capable equipment and/or alternative communications services, or by obtaining the required waivers prior to the effective dates. LMR trunking systems require NTIA certification prior to obligation of funds.

3.4.4. Direct MAJCOM PWCS representatives to coordinate activities with their respective command spectrum management office in order to ensure compliance with spectrum regulations of the U.S. and sovereign nations hosting U.S. Forces.

3.5. **MAJCOM PWCS Representative will:**

3.5.1. Complete PWCS Manager Training, using Air Education and Training Command (AETC) approved training materials, within 90 days of appointment. Training specifically provided by 81 Training Support Squadron (TRSS) Qualification Training Flight, Keesler AFB.

3.5.1.1. If PWCS training materials are unavailable for use within initial 90-day appointment period, contact AFECO (38 CYRS/SCM) to obtain guidance on available alternate training options. (Staff Assistance Visits (SAV), MAJCOM qualification training packages, computer-based training, etc.).

3.5.2. Review base-level PWCS inspection information (SAVs/inspection reports).

3.5.2.1. Identifies base-level deficiency patterns and trends with command-wide applicability.

3.5.2.2. Cross-feeds information to field units for inclusion in their base-level cross-feed programs.

3.5.2.3. Provides a copy of MAJCOM- and command base-level inspection reports to 38 CYRS/SCM.

3.5.3. Review base-level LMR deficiency and inventory reports from AFECO and ensures corrective actions are taken to prevent reoccurrence.

3.5.4. Disseminate applicable information provided by HAF and 38 CYRS/SCM to Base/Tenant.

3.5.5. Monitor and manage MAJCOM-acquired PWCS services according to applicable Air Force and DoD directives for acquisition, control, and use of wireless devices and services, including applicable security policy for wireless devices and systems.

3.5.6. Monitor and evaluate PWCS technological advances and changes to identify the types of PWCS that best meet Air Force wartime and peacetime operational mission requirements.

3.5.7. Direct PWCS Equipment Control Officers (ECO), and PWCS Equipment Custodians (PEC) to coordinate their activities conducted according to AFI 17-111 with installation spectrum management office to ensure compliance with spectrum regulations of sovereign nations hosting U.S. Forces prior to deployment to overseas locations.

3.5.8. Develop and maintain MAJCOM PWCS-related concepts and plans utilizing Work Order Management System (WOMS) and Cyberspace Infrastructure Planning System (CIPS) IAW Methods and Procedures Technical Orders (MPTO) 00-33D-3003, *Managing the Cyberspace Infrastructure with the Cyberspace Infrastructure Planning System*, to ensure compatibility with Air Force Enterprise Architecture, Air Force Information Technology Commodity Council (ITCC) commodity strategies, interoperability requirements, continuity of operations, and life- cycle support.

3.6. Air Force Installation and Mission Support Center (AFIMSC) will:

3.6.1. Manage enterprise transmission systems (e.g., LMR/Enterprise Land Mobile Radio (ELMR), Giant Voice, cable/antenna). Provide oversight, support, and guidance for policies and standard architectures.

3.7. **Wing/Base Communications and Information Systems Officer (CSO) will:**

3.7.1. Coordinate management of PWCS assets for installation commander.

3.7.2. Appoint primary and alternate PWCS ECO according to AFI 17-111. (T-3)

3.7.3. Appoint a PWCS Contracting Officer's Representative (COR) to monitor associated PWCS maintenance contracts. (T-3)

3.7.4. Perform annual reconciliation of PWCS maintenance and service contracts with the PWCS asset inventory. (T-2)

3.7.4.1. Accomplishes reconciliation at least 30-60 days prior to contract/option award date, if applicable.

3.7.5. Evaluate PWCS inspection reports and ensure implementation of corrective actions and procedural controls to prevent reoccurrence. (T-2)

3.7.5.1. Review and cross-feed inspection information to the host MAJCOM. (T-3)

3.7.6. Ensure all PWCS service contracts are reviewed for compliance with ITCC commodity strategies. (T-2)

3.7.7. Coordinate with host Installation Spectrum Manager (ISM) to communicate with other Federal, DoD, State, and local agencies to support interoperability and maximize the communications capabilities of PWCS assets. Reference AFI 17-220, *Spectrum Management* and the NTIA Manual for further guidance. (T-3)

3.7.8. Develop training materials for PWCS managers and users to ensure awareness of applicable security requirements documented in DoDD 8100.02, AFMAN 33-145, *Collaboration Services and Voice Systems Management*; AFI 17-130, *Cybersecurity Program Management;* AFMAN 17-1302, *Communications Security (COMSEC) Operations*; and AFI 10-712, *Cyberspace Defense Analysis (CDA) Operations and Notice and Consent Process*. (T-2)

3.7.9. Ensure appropriate Authorizing Official approval is obtained as mandated by DoDD 8100.02, DoDI 8510.01, and AFI 17-130. (T-0)

3.8. **Wing/Base PWCS Equipment Control Officer (ECO) will:**

3.8.1. PWCS ECOs will complete PWCS Manager Training, using AETC approved training materials, within 90 days of appointment and documents training in applicable Automated Information System (AIS) AIM. Training specifically provided by 81 TRSS Qualification Training Flight, Keesler AFB. (T-3)

3.8.1.1. If PWCS manager training materials are unavailable for use within the initial 90-day appointment period, contact the AFECO to obtain guidance on available alternate training options (staff assistance visits, qualification training packages, computer-based training, etc.).

3.8.2. PWCS ECOs are required to register as a member of AF PWCS Community website. Contact AFECO for further guidance. (T-3)

3.8.3. Maintains a PWCS continuity folder. See **Attachment 3** for a mandatory list of items. (T-3)

3.8.4. Ensure all organizational LMR requirements are analyzed and evaluated using an appropriate PWCS Decision Matrix, such as **Attachment 2**. (T-2)

3.8.5. Prior to procuring new spectrum-dependent systems, coordinate with host ISM in obtaining frequency assignments. (T-2)

3.8.6. Coordinate new and recurring Radio Frequency Authorization (RFA) requests with ISM in accordance with AFI 17-220. (T-2)

3.8.7. Coordinate all third party requests and/or mutual aid agreements for temporary or permanent unit frequency or talk-group access with the ISM and the using unit PEC. Ensure Memorandum For Record (MFR) is obtained and kept on file. (T-3)

3.8.8. Develop LMR Life Cycle Support Plan (LCSP). See Attachment 10. (T-2)

3.8.9. Maintain reportable PWCS asset accountability according to ECO guidance in AFI 17-111. (T-2)

3.8.10. Cross-feed surplus reportable PWCS equipment lists and requests for equipment assistance to unit PECs and the AFECO. (T-3)

3.8.10.1. Unserviceable and outdated items should not be identified as surplus in this context and should be processed through Defense Reutilization and Marketing Service for disposal.

3.8.11. Unless otherwise designated by the base commander, manage Base LMR call signs IAW AFI 10-701, *Operations Security (OPSEC)* and the following (T-2):

3.8.11.1. Use English dictionary words as the basic call sign, with a single- or two-digit numeric suffix.

3.8.11.2. Use voice call signs to identify military aircraft, organizations, activities, bases, units, operational facilities, staff personnel, and geographic locations.

3.8.11.3. Use changing call signs on clear voice circuits to the maximum extent practicable to enhance operational security (OPSEC).

3.8.11.4. Use changing call signs for classified operations and missions; during exercises and contingency operations; while conducting research and development testing, and when evaluating programs.

3.8.11.5. Call signs will not contain any of the following:

3.8.11.5.1. Air Force.

3.8.11.5.2. Part of a unit or MAJCOM name.

3.8.11.6. Ensure OPSEC is considered before requesting static call sign assignments.

3.8.11.7. Submit requests for call signs only to meet mission requirements.

3.8.11.8. Do not use or request personalized call signs. Call signs are assigned to meet mission needs only.

3.8.11.9. Maintain and annually validate units' call sign validation letters.

3.8.12. Train unit PECs, provide refresher training annually and documents training in applicable AIS. (T-3). Initial training should occur as soon as possible but not later than 60 days after unit PEC has been assigned. See **Attachment 5** to conduct unit PEC training. (T-3)

3.8.13. Brief unit PECs annually on the monitoring consent requirements outlined in AFI 10-712, *Cyberspace Defense Analysis (CDA) Operations and Notice and Consent Process*. Document training in applicable AIS. (spreadsheet, MFR, etc.). (T-2)

3.8.14. Ensure current Memorandum of Agreements are on file prior to: (T-2)

3.8.14.1. Allowing outside state or local agencies to utilize USAF LMR systems.

3.8.14.2. Utilizing a state or local LMR system. **NOTE:** In crisis situations, interfacing with or using other LMR systems, except those controlled by federal agencies, is governed by the Manual of Regulations and Procedures for Federal Radio Frequency Management published by the NTIA.

3.8.15. Perform annual assessment of all reportable base-level (host, tenant, and direct reporting units) PWCS equipment and EC programs. (T-2). Assessment areas include:

3.8.15.1. Appointment of Unit PWCS Manager.

3.8.15.2. Inventory (Signed by Commander or Director)

3.8.15.3. Documented Completion of Annual Training.

3.8.15.4. LMR Call Signs.

3.8.15.5. Telecommunications Monitoring and Assessment Program (TMAP).

3.8.15.6. Training Materials.

3.8.16. Maintenance and Service. (T-2)

3.8.16.1. Performs annual reconciliation of LMR maintenance and service contracts at least 30-60 days prior to contract/option award date, if applicable. Provides reconciliation report to MAJCOM for contracts maintained at their level.

3.8.16.2. Conducts a review of mission requirements, cost of tools, test and support equipment, repair parts stock, facilities, training, and personnel prior to establishing an organic maintenance capability.

3.8.16.3. Performs limited maintenance on PWCS devices when such actions are beneficial to the Air Force and not specifically prohibited under the terms of an existing maintenance contract.

3.8.17. Asset Demilitarization. (T-2).

3.8.17.1. Ensures complete demilitarization of all reportable PWCS devices before turn-in to base supply for disposal in the following manner:

3.8.17.1.1. Remove unit designations, call signs, operational procedures, codes,

controlled cryptographic item (CCI) devices, frequency crystals, and other information that might compromise military operations. Reset frequencies and codes to default or generic settings in programmable radios.

3.8.17.1.2. Ensures all storage media are sanitized according to AFMAN 17-1301, *Computer Security (COMPUSEC).*

3.8.17.1.3. Insert following statement, signed by the PWCS ECO, on applicable supply condition tag "Per DoD Manual 4160.21-M-1, I certify that demilitarization has been accomplished." **NOTE:** Excess channel elements or other parts may be retained for future use or turned in according to AFMAN 23-110, Volume 2, Part 13, *Standard Base Supply Customer's Procedures.*

3.8.18. Asset Procurement. (T-2).

3.8.18.1. Coordinates with AFECO (38 CYRS/SCM) prior to asset acquisition. (T-3)

3.8.18.2. Provides technical solutions for PWCS functional requirements utilizing WOMS/CIPS process.

3.8.18.2.1. Ensures proposed solutions are in accordance with T.O. 00-33D-3003; AFI 17-220; AFMAN 17-1302, *Communications Security (COMSEC) Operations*; AFMAN 33-203, Volume 3, *Emission Security Countermeasures Reviews*; DFARS 217.70, Exchange of Personal Property; DoDI 4650.01, *Policy for Management and Use of the Electromagnetic Spectrum*; and DoDD 8100.02.

3.8.18.3. ECO will not approve an organization to purchase, obtain reportable PWCS equipment, or request work order maintenance of reportable assets without a current inventory. (T-2).

3.8.18.4. Coordinates proposed technical solution with ISM.

3.8.18.4.1. Ensures NTIA Spectrum Management Office (SMO) (within the US&P), or host nation spectrum management authority has approved the device for use within intended area of operation before acquiring any LMR equipment. (T-3)

3.8.18.4.2. Obtains frequency licenses from the ISM prior to deployment accounting for lead-time constraints (90 days US&P, 90 days or more depending on geographic Combatant Command (COCOM) policy). **NOTE:** LMR requirements identified for locations outside the US&P have to follow AFI 17-220 and Combatant Commander guidance to ensure host nation coordination is accomplished.

3.8.18.4.3. Processes a formal application for authorization to migrate to a Trunked LMR (TLMR) system through the MAJCOM SMO and the AF SMO (AFSMO). Either the NTIA SMO (within the US&P), or the host nation spectrum management authority must approve the application before acquiring any TLMR equipment.

3.9. **Using Organizations. (T-3)**

3.9.1. **Commander or Designated Representative will:**

3.9.1.1. Deleted.

3.9.1.2. Budget for the payment of all bills relating to the acquisition, operation (including cellular "air time" charges) and maintenance of their unit PWCS equipment. If applicable, centralized base service and/or maintenance contracts for LMRs. (T-2).

3.9.1.3. Annually validate all unit-owned PWCS assets with the CSO to determine if existing equipment meets unit mission requirements. (T-2)

3.9.1.4. Annually validate mission needs for cellular telephones experiencing low usage levels. (T-2)

3.9.1.5. Evaluate unit-level PWCS service contract(s) annually, focusing on obtaining the most economical plan in accordance with published ITCC commodity strategies. (T-2)

3.9.1.6. Redistribute unit-owned PWCS assets as needed.

3.9.1.7. Submit unit PWCS requirements to the communications plans and programs office for technical solutions according to MPTO 00-33D-3003. (T-2)

3.9.1.8. Adhere to practices established by the base PWCS manager for the management of PWCS call signs. (T-3)

3.10. Unit Property Custodian will:

3.10.1. Maintain accountability of reportable PWCS assets according to AFI 17-111. (T-2)

3.10.2. Implement a unit-level customer education program, using training materials provided by the ECO (**Attachment 5**). Coordinates OPSEC and COMSEC training activities with base/unit OPSEC and COMSEC managers. Document training in applicable AIS. (spreadsheet, MFR, etc.). (T-3)

3.10.3. Brief PWCS users on the proper use of PWCS equipment, as outlined in DoDD 8100.02; and applicable local policies and document training in applicable AIS. (spreadsheet, MFR, etc.). (T-0)

3.10.4. Brief unit PWCS users annually on the monitory consent requirements outlined in AFI 10-712. Document training in applicable AIS. (Spreadsheet, MFR, etc.). (T-1)

3.10.5. Verify PWCS requirements with the ECO prior to expending funds for any PWCS assets and submit unit PWCS requirements to the ECO for technical solutions according to MPTO 00-33D-3003. (T-2)

3.10.6. Consult with host Wing COMSEC manager and IA on information assurance issues. Information protection will be accomplished according to DoDD 8100.02 and AFMAN 17-1302 (FOUO).

3.10.7. Ensure appropriate Designated Accrediting Authority approval is obtained as mandated by DoDD 8100.02 and AFI 17-130, and that the System Security Authorization Agreement is updated to include PWCS devices which connect to the DoD Information Network. Consult with the CSO or Communication Focal Point. (T-0)

3.10.8. Conduct annual reviews of existing PWCS assets to ensure requirements are still valid, i.e. low usage devices are still required and heavy use assets are not being abused. (T-3)

4. USAF PWCS Management Special Considerations.

4.1. Land Mobile Radio (LMR).

4.1.1. Procurement of LMR assets and infrastructure has to comply with DoDD 5000.01, *The Defense Acquisition System*; DoDI 4650.10, *Land Mobile Radio (LMR) Interoperability and Standardization*; AFI 17-111, *Information Technology Asset Management,* AFI 63-101, *Integrated Life Cycle Management;* and established local procedures.

4.1.2. 38CEIG will review LMR CIPS purchase requests, user radios and infrastructure, to ensure they meet enterprise and efficiencies concepts. (T-1). Requesting units and Cyber Systems Integrators will input requests into CIPS. (T-3). Inputs have to capture the need for the LMR upgrade and the requested solution.

4.2. Family Radio Service (FRS) and Inter Squad Radio (ISR) Systems:

4.2.1. Air Force entities, within US&P, are authorized to purchase and operate radios certified by the Federal Communications Commission (FCC) in the FRS. AF use is on an unlicensed, unprotected basis shared with non-Federal users. FRS radios cannot be used for planned communications that safeguard human life or property. Use outside the US&P is subject to spectrum certification and frequency licensing with the host nation following geographical COCOM spectrum policy. Planned FRS use has to be coordinated with the installation spectrum manager.

4.2.2. FRS devices are intended for use by family, friends, and associates to communicate among themselves within a small area, or while on group outings. FRS devices may also be used for military-related (administrative) communications, provided they are not used for classified, Sensitive but Unclassified (SBU), command and control, operational, fire/crash, security and/or emergency response/ medical communications (see **Table A2.1**). FRS devices are not designed to make telephone calls. No FCC controlled FRS frequency channels can be assigned to any specific individual or organization. The 14 commercial FRS channels may be used only on a "take turns" basis.

4.2.3. ISR radios are nearly identical to FRS radios. They operate on 14 channels in the ISR spectrum, prior to equipment acquisition. Obtain host nation approval to use these 14 frequencies, if ISR radio operation is outside the US&P. As with its FRS counterpart, they may be used for military-related (administrative) communications, provided they are not used for classified, SBU, command and control, operational, fire/crash, security and/or emergency response/medical communications (see **Table A2.1**).

4.2.4. Citizen's Band radios cannot be used for government purposes.

4.2.5. General Mobile Radio Service (GMRS) is a personal two-way voice communications service designated to individual and immediate family member use; GMRS use by DoD government agency is forbidden

4.3. **Interoperability.**

4.3.1. Base CSO is responsible for working with other Federal, DoD, State and local agencies to support interoperability and maximize the communication capabilities of PWCS assets. Additional guidance can be found in AFPD 10-8, *Defense Support of Civil Authorities (DSCA)*, AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations* and AFMAN 10-2502, *Air Force Incident Management System (AFIMS) Standards and Procedures.*

4.3.2. All PWCS managers will build interoperability into every technical solution in an effort to bridge the gap between federal, state and local first responders. (T-1)

4.3.2.1. Follow Association of Public-Service Communications Officials equipment standards and guidelines.

4.3.2.2. The US Department of Homeland Security SAFECOM project provides solutions and additional information regarding this subject.

4.3.2.3. Technical solutions have to adhere to rules and regulations outlined in the NTIA Manual, AFI 17-220 and state and local laws. **NOTE:** AFI 33-118 is now replaced by AFI 17-220 (December 2015)

4.4. **Encryption.**

4.4.1. Sensitive But Unclassified (SBU)/For Official Use Only (FOUO) Communications

4.4.1.1. SBU/FOUO communications do not require any encryption because they are not National Security Systems (NSS). *See paragraph 4.4.2.1.1*

4.4.1.2. Devices processing SBU/FOUO may be encrypted using standard self-generated AES keys (Type 3/Type 4).

4.4.1.2.1. The vast majority of LMRs do not require NSS level encryption.

4.4.1.2.2. An IA Risk Assessment is recommended to identify vulnerabilities.

4.4.1.2.3. Consider base first responders (SFS, Medical, EM, Fire Dept.) obtain unclassified encryption capabilities to reduce SBU operations surveillance.

4.4.1.2.4. Administrative Control per Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*: Direction or exercise of authority over subordinate or other organizations in respect to administration and support, including organization of Service forces, control of resources and equipment, personnel management, Unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in the operational missions of the subordinate or other organizations.

4.4.1.3. Generation of unclassified Type 3/4 encryption keys are authorized at field level using Federal Information Processing Standards (FIPS) certified devices.

4.4.1.3.1. Unclassified keys of this type should follow a quarterly supersession plan.

4.4.2. NSS/Secret/Top Secret Communications

4.4.2.1. NSS/Secret/Top Secret communications require AES Type 1/Type 2 encryption. NSS communications are defined in 44 U.S.C. § 3542(b) (2)]:

4.4.2.1.1. Any information system (including any telecommunications system) used or operated by an agency or by a contractor of an agency, or other organization on behalf of an agency whose function, operation, or use of which: involves intelligence activities; involves cryptologic activities related to national security; involves command and control of military forces; involves equipment that is an integral part of a weapon or weapons system; is critical to the direct fulfillment of military or intelligence missions; or is protected at all times by procedures established for information that have been specifically authorized under criteria established by an Executive order or an Act of Congress to be kept classified in the interest of national defense or foreign policy.

4.4.2.1.2. Additional policy concerning NSI/NSS may be obtained from the Committee on National Security Systems (CNSS) via **http://www.cnss.gov/** .

4.4.2.1.3. The definition of C2 can be found in Joint Publication 1-02.

4.4.2.2. The following COMSEC Type 1/Type 2 capabilities are available:

4.4.2.2.1. Suite A (Confidential thru Top Secret).

4.4.2.2.1.1. This set of encryption keys is approved for US use only and is not releasable to any coalition personnel.

4.4.2.2.2. Suite B (Confidential thru Top Secret).

4.4.2.2.2.1. The emerging set of encryption keys is being developed for joint US/Coalition use. See CNSS Policy (CNSSP) 15, National Information Assurance Policy on the Use of Public Standards for the Secure Sharing of Information Among National Security Systems guidance.

4.4.2.2.2.2. Starting in October 2015 Suite B is expected to replace AES Type 1/Type 2 as the only authorized encryption for NSS/Secret/Top Secret communications.

4.4.3. Contact your MAJCOM A6 office or 38 CYRS/SCM for more information.

4.4.4. Interoperability has to be incorporated into all technical decisions per AFPD 10- 8 and AFMAN 10-2502. Thus, when considering encryption, leadership has to balance the secure communications needs and ability to support local, state and other federal agencies during a mutual aid/crisis response.

4.4.5. Ensure encryption capable LMRs and key management devices are certified according to FIPS 140-2, *Security Requirements for Cryptographic Modules*, FIPS 197, *Advanced Encryption Standard*, and FIPS 200, *Minimum Security Requirements for Federal Information and Information Systems* according to the National Institute of Standards and Technology (NIST) guidelines.

4.5. **PWCS ECO encryption responsibilities. PWCS ECO will:**

4.5.1. Coordinate with the wing communications security (COMSEC) manager and the requiring unit's COMSEC Responsible Officer (CRO) on all technical solutions for PWCS assets requiring NSA Type 1 encryption-endorsed products per NSS guidance. (T-2). The COMSEC manager and CROs acquire and manage COMSEC material supporting PWCS assets containing NSA-approved encryption modules. (See AFMAN 17-1302 for guidance). (T-3)

4.5.2. Contact appropriate Combatant Command and/or MAJCOM authority for specific guidance on COMSEC issues relating to technical solutions for commercial wireless operations outside the US&P.

4.5.3. Ensure technical solutions, which include COMSEC-equipped PWCS assets operated or maintained by Foreign Nationals, meet approval requirements according to AFMAN 17-1302, *Communications Security (COMSEC) Operations*, (FOUO). (T-1)

4.5.4. Verify asset reportable, COMSEC-equipped, wing/base PWCS assets are maintained according to AFI 17-131, *Communications Security (COMSEC) Equipment Maintenance and Maintenance Training*; AFMAN 17-1302. (T-2)

4.5.5. Verify all encryption modules are zeroized or encryption module is removed prior to turn-in for transfer, maintenance and disposal. (T-2)

4.6. **Intrinsically Safe.**

4.6.1. PWCS managers will participate in development of local Intrinsically Safe LMR operational procedures with Base Safety and Fire Marshall and for processing use requirements through command safety channels. (T-2).

4.6.2. Radios may have a green dot on them and may say "Intrinsically Safe;" however, that does not mean they have been certified as such. A radio is considered Intrinsically Safe when the battery and the radio itself are stamped Factory Mutual (FM) Approved Intrinsically Safe.

4.6.3. Recertification occurs any time outer case has been breached in a manner, which exposes internal circuits of unit. (This does not include: replacement of antenna; changing/replacing battery pack; software loaded into unit; replacing a control knob; replacing an escutcheon or belt clip). If for any reason a radio needs repair, it then needs to be re-certified as FM Approved.

4.7. **Information Assurance.**

4.7.1. Contact local IA OPR and/or IA COP for guidance.

4.8. **LMR Life Cycle Support Planning:**

4.8.1. ECOs will annually review and validate a LMR LCSP to ensure that LMR systems and assets are renewed IAW AF direction and vendor support documentation. (T-2).

4.8.2. A LCSP is a locally generated report that must include make, model, purchase date, purchase price and vendor support expiration date.

4.8.3. Coordinate with vendor to determine expected life cycle length for their products.

4.8.4. Consider replacement of LMR assets based on factors such as age of system, mission requirements, and maintenance records.

4.8.5. Use **Attachment 10** as a tool for planning.

4.8.6. MAJCOMs/Wings will coordinate replacement based on local conditions and mission needs being careful to achieve most efficient use of USAF dollars. (T-3).

4.8.7. Bases may consider leasing systems as an option if it is in the best interests of the USAF, and does not violate OPSEC or other security regulations, and fully supports mission requirements.

4.8.8. Provide validated reportable PWCS Replacement Plan to using organizations to support budget planning decisions.

Section C—Managing the AF Military Auxiliary Radio System (MARS)

5. AF MARS General. The MARS purpose and mission can be found in DoDI 4650.02, *Military Auxiliary Radio System (MARS)*, published by DoD Chief Information Officer (CIO). The document identifies contingency radio communications in support of the U.S. Government, DoD Components, civil authorities at all levels in order to fulfill DoD responsibilities, and health, moral, and welfare support when in remote/isolated areas, contingencies, or when appropriate. Additionally, AF provides worldwide fixed and mobile emergency communications that support the disaster preparedness program as defined in AFI 10-2501.

6. AF MARS Responsibilities.

6.1. **HQ SAF/A6WWE will:**

6.1.1. Establish and organize a MARS entity within the AF.

6.1.2. Develop overarching policy and guidance for the AF MARS program.

6.1.3. Perform oversight as needed and review documents (i.e. annual reports) provided to DoD CIO and other higher headquarters outside the AF.

6.1.4. Delegate authority to lead command as appropriate.

6.2. **AFSPC 38 CYRS/SCM will:**

6.2.1. Appoint an AF MARS Chief, in consultation with the DoD CIO and Secretary of the AF. (T-2). The AF MARS Chief may be a military (active duty or reserve) or civilian government employee, and can be done as either a primary or additional duty. The AF MARS Chief will be the focal point for all lead command activities, requirements, and SAF/A6WWE delegated responsibilities. (T-2)

6.2.2. Develop MAJCOM and below policy and guidance for the AF MARS program, to include guidelines and management procedures in an AF MARS Operational Instruction (AF MOI). (T-2)

6.2.3. Ensure AF MARS program compliance with DoDI 4650.02. (T-0).

6.2.4. Provide an annual report to DoD CIO, as required by DoDI 4650.02. Report should be appropriately staffed through MAJCOM and Headquarters AF levels. (T-0).

6.2.5. Coordinate with other service MARS chiefs as needed. (T-2)

6.2.6. Coordinate with MAJCOMs to determine emergency/contingency communication requirements and validate AF MARS frequency requests. (T-2)

6.2.7. Send valid frequency requests to the 24 AF SMO. (T-2)

6.2.8. Maintain AF MARS frequencies according to AFI 17-220. (T-2)

6.2.9. Establish a management structure to administer the auxiliary organization and control network operations using AF Form 3661, *MARS Personnel Action Notification*. This includes appointing region and state MARS directors and other key auxiliary officials. (T-3).

6.2.10. Oversee AF MARS membership activities, to include: (T-3)

6.2.10.1. Authorizing the operation of equipment and approving MARS applications and issuing AF Form 3666, *Military Auxiliary Radio System (MARS) Station License and Identification Card*. (T-3)

6.2.10.2. Control and issue DD Form 2350, *Military Auxiliary Radio System (MARS) Disaster Support Identification Card, DoD*. (T-3)

6.2.10.3. Termination for AF MARS members who discredit themselves or fail to meet requirements listed in AF MOI. (T-3)

6.2.10.4. Grants termination waivers for extenuating circumstances and periods of inactive status on a case-by-case basis for AF MARS members. (T-3)

6.2.11. Serve as AF liaison for amateur radio. (T-3)

6.2.12. Approve AF MARS stations along with the host command. (T-2)

6.2.13. Oversee the management of excess and surplus government property acquired for use in AF MARS. (T-2) This function may be delegated to an appointed AF MARS Property Accountable Officer, who processes DD Form 1348-1A, *Issue Release/Receipt Document*, and other duties as spelled out in the AF MOI. (T-3)

6.3. **MAJCOM/A6 Functional will:**

6.3.1. Appoint a command AF MARS director, as needed.

6.3.2. Identify AF MARS support requirements, as necessary.

6.3.3. Oversee and authorize AF Installation MARS Directors of MAJCOM owned locations, as needed.

6.3.4. Notify 38 CYRS/SCM of all appointments.

6.3.5. Ensure Installation Commanders can appoint an AF installation MARS director to administer the local AF MARS base support team program.

6.3.6. Ensure AF MARS members comply with all publications governing AF MARS operations, to include the AF MOI, and submit frequency requests through Chief, AF MARS.

7. AF MARS Stations. As defined in DoDI 4650.02, MARS stations can be categorized as military, civilian agency, club, or individual organizational elements. The AF further breaks down individual elements into fixed and mobile. Only military, civilian agency and club stations may affiliate with more than one MARS Service. Military commands or military activities need to affiliate with their sponsoring Service unless in areas where only another Service's MARS is authorized or available.

8. AF MARS Membership. Refer to DoDI 4650.02 for membership eligibility requirements. AF MARS membership requests/applications should be submitted as mandated by the AF MOI. Simultaneous membership in more than one military service MARS program is not permitted. AF MARS membership status and penalties for infractions, to include termination and waivers, are detailed in the AF MOI and at the discretion of the AF MARS Chief on a case-by-case basis. Penalties applied to AF MARS members may be inclusive of all military service MARS programs.

9. AF MARS Policy and Guidance. For operating directives and training, refer to AF MOI published and maintained by 38 CYRS/SCM. Any active duty, military MARS member may ship or store MARS equipment at government expense, (See Joint Travel Regulations). AF MARS officials may use government telephone systems for MARS official business.

10. AF MARS Civil Agency Support.

10.1. Refer to the National Military Command System, National Emergency Communications Plan (SECRET) for MARS support guidelines for civil agencies.

10.2. Refer to AFPD 10-8, AFI 10-801, *Defense Support of Civilian Authorities,* and AFI 10-2501 for support guidelines for civil agencies near military installations.

10.3. Refer to National Communications System Manual 3-3-1, *Telecommunications Operations Shared Resources (SHARES) High Frequency (HF) Radio Program*, for MARS support to the SHARES HF Radio Program. Checklist Development. Use the recommended questions listed in the following attachments along with AF Form 2519, All Purpose Checklist (available electronically) to develop a checklist for MAJCOM PWCS, MARS, HF, and MYSTIC STAR management, as appropriate.

Section D—Waveform Sponsorship

11. Air Force Waveform Responsibilities.

11.1. The Air Force shall be the Waveform Sponsor if the Air Force is responsible, on behalf of the DoD, for all program documentation, periodic reporting, and funding actions required to support the capabilities development and acquisition process for the specific capability proposal.

11.1.1. The program manager for any acquisition program which develops waveform capability shall be the waveform sponsor.

11.2. Secretary of the Air Force, Information Dominance and Chief Information Officer (SAF/CIO A6) shall have approval authority on all waveform applications sent for Air Force-sponsored programs to Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer (ASD(NII)/DoD CIO for final approval.

11.3. SAF/CIO A6 shall be responsible, on behalf of the Air Force, for ensuring compliance with DODI 4630.09.

11.4. SAF/CIO A6 shall determine if an Air Force-sponsored program, supporting a highly specialized mission and is exempt under DODI 4630.09(2)(c).

12. Waveform Sponsor Responsibilities.

12.1. Waveform Sponsor shall submit Waveform Assessment Submit the Waveform Assessment Application for the conceptual stage to SAF/CIO A6 NLT 90 days prior to Milestone-A for DAS programs.

12.2. Prior to Milestone B, Waveform Sponsor shall submit updates to the Waveform Assessment Submit the Waveform Assessment Application for the prototype stage to SAF/CIO A6 (NLT 90 days prior to Milestone-B for DAS programs).

12.2.1. Waveform sponsor shall update any applicable material from Milestone A and submit to SAF/CIO A6 for approval.

12.2.2. Waveform Sponsor shall initiate standardization of the waveform through the Defense Standardization Program (DSP).

12.2.3. Waveform Sponsor shall initiate a Global Information Grid Technical Profile (GTP) providing waveform implementation guidance.

12.2.4. Waveform sponsor shall follow Table for non-DAS developments, and submit supplemental material accordingly.

12.3. Waveform Sponsor shall submit updates to the Waveform Assessment Submit the Waveform Assessment Application for the operational stage to SAF/CIO A6 (NLT 90 days prior to Milestone-C for DAS programs).

12.3.1. Waveform sponsor shall submit to SAF/CIO A6, at the operational stage, the waveform and supporting material for inclusion in the IR in accordance with JTNC IR entrance requirements. (NOTE: All material submitted for entry into the IR should already be available as a part of documenting the development and testing of the waveform for DoD approval.)

12.4. At Registration (Stage 4), Waveform Sponsor shall prepare the following and submit to SAF/CIO A6 for approval.

12.4.1. For Government-owned waveforms (non-proprietary), complete standardization of the waveform in accordance with the DSP.

12.4.2. For proprietary waveforms, provide licensing information, defined capabilities, and any additional unique features of the waveform to the IR to document the waveform's.

12.4.3. The waveform standard to be added to the Defense Information Technology Standards Repository.

12.4.4. The finalized GTP providing implementation guidance for the waveform standard and minimum interoperability requirements.

12.5. The Waveform Sponsor shall be responsible for sustaining the waveform throughout the remainder of its life cycle in accordance with the life cycle sustainment plan for the waveform. Sustainment includes maintaining the waveform's designed capability, security, and interoperability. As such, routine bug fixes, software security updates, and standard regression testing would be a part of this sustainment. (NOTE: Modifications or enhancements to the waveform that significantly alter its characteristics are not considered part of a normal sustainment plan and would result in a new waveform assessment application and, perhaps, a new waveform sponsor.

Section E—Other Administrative Requirement

13. Information Collections, Records, and Forms.

13.1. Information Collections. No information collections are created by this publication.

Section F—Voice Call Sign Program

14. Introduction. The Air Force Voice Call Sign Program (VCSP) establishes call sign procedures to identify military aircraft, organizations, activities, base units, operations facilities (except global high frequency [HF] stations and navigational aids), staff personnel, and geographic locations. Voice Call Signs (VCS) are used to establish and maintain voice communications.

14.1. **Applicability.** This instruction is applicable to all users of the VCSL1, VCSL2, VCSL3 (formerly AFKAI-1, AFKAI-2 and AFKAI-3).

14.2. **General Information.** The VCS PMO is located at Lackland AFB, San Antonio, Texas. The VCS Manager is responsible for managing supported entities' call signs and works with Major Commands to ensure regulatory compliance. The following contact information applies:

14.2.1. AFLCMC/HNCD

14.2.2. Voice Call Sign Program

14.2.3. 230 Hall Blvd, Suite 200

14.2.4. San Antonio, TX 78243-7056

14.2.5. NIPRNet Email: **CallSigns@us.af.mil** Phone: (210) 925-1789 / DSN 945-1789

14.2.6. Alternate Phone: (210) 977-5810 / DSN 945-5810

14.3. Air Force units should send all requests concerning call signs through their MAJCOM or equivalent. Under most circumstances, the VCSPMO will communicate only with units' MAJCOM VCS POC.

14.3.1. Other AF activities and supported non-AF activities may submit requests directly to the VCSPMO.

14.3.2. VCSL-1 (USAF Voice Call Sign List), VCSL-2 (Air Combat Command Standard VCSL-1 Extract), and VCL-3 (Sensor Pacer) are available at the following web site: **http://intelshare.intelink.sgov.gov/sites/usafcallsigns/SitePages/Home.aspx** (*Case Sensitive*).

14.4. **The Voice Call Sign Program Management Office (VCSPMO) will:**

14.4.1. Manage the USAF VCS Program.

14.4.2. Process call sign assignment and change requests.

14.4.3. Provide call sign management support to non-AF agencies and services on a case-by-case basis and only after a signed Memorandum of Agreement (MOA) between the VCSPMO and the submitting agency or service.

14.5. **Major Commands and Non-AF Organizations Equivalent will:**

14.5.1. Ensure compliance with this instruction and the VCSLI.

14.5.2. Serve as the call sign focal point for all subordinate units.

14.5.3. Ensure changes to personnel and/or contact information are provided to the VCSPMO in a timely manner.

14.5.4. Validate unique units registered in the VCS database at least annually, and as requested by the VCSPMO. Annually, the VCSPMO will provide MAJCOMs and other activities with a list of unique units with assignments in the database. The intent of this requirement is to ensure the database reflects only existing units and only units with call sign requirements. Additional information can be found in the VCSLI.

14.6. **Non-AF entities supported by the VCSPMO.** Adhere to all regulations governing the AF VCS program. Establish an MOA with the VCSPMO in order to receive support on VCS.

14.7. **VCS Standard Procedures.**

14.7.1. Use English dictionary words as the basic call sign, with a single- or two-digit numeric suffix (T-2).

14.7.1.1. Aircraft call signs are restricted to words four to six letters in length (T-3).

14.7.1.2. Words are currently not permitted to be truncated in order to comply with the DoD Flight Information Publication (FLIP). Any future implementation of call sign truncation will be promulgated in the VCSLI. Other call signs are comprised of up to two words with a minimum of 4 characters and a maximum of 15 characters, including the space.

14.7.1.3. The VCSLI contains additional details. Authorized variations are listed in Annex A of the VCSLI.

14.7.1.4. Units are authorized one static call sign for every permanently assigned aircraft.

14.7.1.5. Users should download and locally save sufficient editions of the VCSLs to sustain operations during rare network/web site outages.

14.7.1.6. Use voice call signs to identify military aircraft, organizations, activities, bases, units, operational facilities, staff personnel, and geographic locations (T-2).

14.7.1.7. Use changing call signs on clear voice circuits to the maximum extent practicable to enhance operational security (OPSEC).

14.7.1.8. Use changing call signs for classified operations and missions; during exercises and contingency operations; while conducting research and development testing, and when evaluating programs.

14.7.2. Call signs will not contain any of the following unless specifically authorized by the VCSLI (T-2).

14.7.2.1. Air Force.

14.7.2.2. Acronyms.

14.7.2.3. Part of a unit or MAJCOM name.

14.7.2.4. Abbreviations.

14.7.2.5. Phonetic alphabet.

14.7.2.6. Spoken numbers, other than authorized suffixes.

14.7.2.7. Ensure OPSEC is considered before requesting static call sign assignments, or other unchanging variations outlined in Annex A of the VCSLI.

14.7.2.8. Submit requests for call signs only to meet mission requirements.

14.7.2.9. Do not use or request personalized call signs. Call signs are assigned to meet mission needs only.

14.8. VCS Exceptions to Standard Procedures.

14.8.1. Global HF systems are identified by the geographical name of the station or location (e.g., Andrews Global)

14.8.2. Aircraft control facilities are identified by using the base or location and service required (e.g., Nellis Tower) as outlined in FAAO JO 7110.65 and FAAO JO 7110.10 (See Attachment 1 Reference).

14.8.3. The following call signs are not managed by the Air Force VCS program Office:

14.8.3.1. Military Affiliate Radio System (MARS).

14.8.3.2. Base Land Mobile Radio (LMR) call signs, which are managed by the Personal Wireless Communications System (PWCS) Manager or equivalent.

14.8.3.3. Call signs used in theaters of operation under the operational control of a theater or task force commander, which are assigned and managed by the respective commander.

14.9. **Application of the USAF VCS Program.** The VCSLI contains detailed procedures for requesting, assigning, and using voice call signs, and is available on the VCS SIPRNet web site: **http://intelshare.intelink.sgov.gov/sites/usafcallsigns/SitePages/Home.aspx** *(Case Sensitive).*

14.9.1. VCSL-1 contains static and changing call sign assignments for use around the world by various USG and Canadian entities. VCSL-1 has an overall classification of CONFIDENTIAL.

14.9.2. VCSL-2 is an operational extract from VCSL-1. This publication is produced explicitly for the USAF Air Combat Command (ACC) MAJCOM. This product may only

be used aboard certain aircraft when authorized by the controlling authority and ACC/A6. VCSL-2 has an overall classification of CONFIDENTIAL.

14.9.3. The VCSL-3 is an operational product produced explicitly for the Intelligence community for the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA) . VCSL-3 has an overall classification of SECRET.

WILLIAM J. BENDER, Lt Gen, USAF
Chief, Information Dominance and
Chief Information Officer

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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AFMAN 33-363, *Management of Records*, 1 March 2008

Federal Acquisition Regulation, November 22, 2006

MPTO 00-33D-3003, *Managing the Cyberspace Infrastructure with the Cyberspace* **Infrastructure** *Planning System*

VCSL-1, *USAF Voice Call Sign List*

VCSL-2, *The Air Combat Command (ACC) Standard VCSL-1 Extract*

VCSLI, *USAF Voice Call Sign List Instructions*

Prescribed Forms

AF Form 3661, *MARS Personnel Action Notification*

Adopted Forms

DD Form 1348-1A, *DoD Single Line Item Release/Receipt Document*

DD Form 1577, *Unserviceable (Condemned) Tag - Materiel*

DD Form 2350, *Military Affiliate Radio System (MARS) Disaster Support Identification Card, DoD*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1067, *Modification Proposal*

AF Form 1297, *Temporary Issue Receipt*

AF Form 3666, *Military Affiliate Radio System Station License and Identification Card*

AF Form 2519, *All Purpose Checklist*

Abbreviations and Acronyms

ACP—Allied Communication Publication

ADCON—Administrative Control

AES—Advanced Encryption Standard

AETC—Air Education and Training Command

AF—Air Force (as used in forms)

AFDIR—Air Force Directory

AFECO—Air Force Equipment Control Officer

AFEMS—Air Force Equipment Management System

AFLCMC—Air Force Life Cycle Management Center

AFSMO—Air Force Spectrum Management Office

AFI—Air Force Instruction

AFMAN—Air Force Manual

AIS—Automated Information System

ANG—Air National Guard

AFNIC—Air Force Network Integration Center

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

AFR—Air Force Reserve

AFSPC—Air Force Space Command

AIM—Asset Inventory Management

CCI—Controlled Cryptographic Item

CIO—Chief Information Officer

CIPS—Cyberspace Infrastructure Planning System

CJCSI—Chairman of the Joint Chiefs of Staff

COCOM—Combatant Command

COMSEC—Communications Security

COR—Contracting Officer's Representative

CNSS—Committee on National Security Systems

CRO—COMSEC Responsible Officer

CSO—Communication Systems Officer

CYRS—Cyberspace Readiness Squadron

CYSS—Cyberspace Support Squadron

DD—Department of Defense (as used in forms)

DISA—Defense Information Systems Agency

DoD—Department of Defense

DoDD—Department of Defense Directive

DoDI—Department of Defense Instruction

DoDIN—**Department of Defense Information Networks (replaced term GIG)**

DSN—Defense Switched Network

EC—Equipment Custodian

ECO—Equipment Control Officer

ECSS—Expeditionary Combat Support System

FCC—Federal Communications Commission

FIPS—Federal Information Processing Standards

FRS—Family Radio Service

FOUO—For Official Use Only

GIG—Global Information Grid **(GIG term no longer used; replaced by DoDIN—see above)**

GMRS—General Mobile Radio Service

GPC—Government Purchase Card

HF—High Frequency

HFGCS—High Frequency Ground Communications System

HAF—Headquarters United States Air Force

IA—Information Assurance

IAW—In Accordance With

ISM—Installation Spectrum Manager

ISR—Intra-Squad Radios

IT—Information Technology

ITCC—Information Technology Commodity Council

LCSP—Life Cycle Support Plan

LMR—Land Mobile Radio

MAJCOM—Major Command

MARS—Military Auxiliary Radio System

MFR—Memorandum for Record

MHz—Megahertz

MNCS—Master Net Control Station

MOI—MARS Operating Instruction

MPTO—Methods and Procedures Technical Orders

NIST—National Institute of Standards and Technology

NSA—National Security Agency

NSI—National Security Information

NSS—National Security Systems

NTIA—National Telecommunications and Information Administration

OPSEC—Operations Security

PL—Public Law

PWCS—Personal Wireless Communications System

RDS—Records Disposition Schedule

RF—Radio Frequency

RFA—Radio Frequency Authorization

SAV—Staff Assistance Visit

SBU—Sensitive but Unclassified

SHARES—Shared Resources

SMO—Spectrum Management Office

TLMR—Trunked LMR

TMAP—Telecommunications Monitoring and Assessment Program

TRSS—Training Support Squadron

UHF—Ultra-High Frequency

US&P—United States and Possessions

U.S—United States

USAF—United States Air Force

U.S.C—United States Code

VCS—Voice Call Sign

VCSL—Voice Call Sign List

VCSPMO—Voice Call Sign Program Management Office

WOMS—Work Order Management System

Terms

Communications and Information System— An integrated system of communications equipment (hardware and software), facilities, personnel, and procedures designed to provide communications and information to its users. This includes the processing of the information by the system. Communications and information systems include base visual information support systems.

Changing Voice Call Sign—An identifying word randomly generated, selected, and assigned to a specific purpose, unit, activity, or staff position, and changed at periodic intervals.

Department of Defense Information Networks—(DoDIN) - See Joint Publication 3-12 for definition.

LMR Enterprise and Efficiencies— A LMR Enterprise system is connecting several bases to one controller to conserve funds. An example of such a system would be the National Capital Regions' LMR infrastructure. LMR Enterprise solutions are not vendor specific, but driven by ensuring that systems meet and comply with interoperability standards. Efficiencies are realized by conserving funds by purchasing the correct solution.

Personal Digital Assistant (PDA)— Hybrid handheld automated data processing equipment (e.g., Palm Pilot®, Cassiopeia® or Blackberry™) that are designed for use as multi-functional voice and/or data wireless communications-computer devices.

Personal Wireless Communications System (PWCS)— A user centric service that is accessible via devices either vehicular mobile, hand carried, or worn by individual users. Each user may have an individually identifiable electronic address.

Sensitive Information— See DoDD 8500.1 for definition.

Static Call Sign—An unchanging identifying word permanently assigned to a specific purpose, unit, activity, or staff position.

Voice Call Sign (VCS)—An identifying word provided primarily for voice communications. Use English language pronounceable dictionary words usually suffixed with two digits (01 through 99) to establish identity and to maintain voice communications.

Wireless— Technology that permits the active transfer of information involving emanation of energy between separated points without physical connection. Currently wireless technologies use Infrared acoustic, RF, and optical but, as technology evolves, wireless could include other methods of transmission.

Attachment 2

DETERMINING TECHNICAL SOLUTIONS

A2.1. Overview. As the PWCS ECO, one of your most important tasks is to determine the technical solution that best satisfies your customer's communications requirements. This attachment provides a tool to assist your decision making process. Requiring units/organizations may also use this tool to assist in preparing requirements documents.

A2.2. Existing Services. PWCS ECO has to be aware of the wireless communications services currently available in local areas to determine an effective technical solution. Sources for this information include:

A2.2.1. AFECO and MAJCOM PWCS Lead.

A2.2.2. Local telephone/cellular service providers.

A2.2.3. Electronics stores specializing in communications services/devices.

A2.2.4. Available DoD and Air Force Enterprise PWCS contracts such as Air Force Enterprise IT Services.

A2.2.5. Trade and professional publications.

A2.2.6. AFNetOPS Architecture Integrated Product team (AIPT) **https://cs.eis.af.mil/a6/afnetops/default.aspx**.

A2.2.7. AFWay and Air Force NETCENTS (**https://afway.af.mil**), and published ITCC product list.

A2.3. Types of Services. **Table A2.1** lists examples of the types of wireless services that may be considered when determining a technical solution.

A2.4. Determining a Technical Solution. Answer the questions in **Figure A2.1** using the information contained in your customer's requirement document. This helps you determine the technology that may best fill their requirements. After selecting a technology, you may need to contact local vendors to better define the actual device required. When the selected solution is available from commercial service providers, refer to the i-TRM and/or Air Force Wireless Handheld Services and Devices Enterprise Agreements for approved products.

A2.4.1. **Spectrum Certification.** Any hardware procurement requires spectrum supportability to be addressed prior to obligation of funds.

A2.5. Trunked LMR Systems . Before considering a TLMR System, you have to be able to answer "Yes" to the majority of the questions listed below:

A2.5.1. Are there other federal agencies in the area (within 30 kilometers) that would be willing to share a TLMR.

A2.5.2. Does your base have more than 500 users, and/or 10 or more radio networks?

A2.5.3. Are the existing radio networks overcrowded and/or restricted in number, causing mission degradation?

A2.5.4. Are you able to obtain new frequency authorizations to meet demand for radio communications?

A2.5.5. Is your existing conventional LMR network experiencing increased levels of interference due to frequency congestion in the area?

A2.6. Final Considerations. When preparing a technical solution, you have to consider the following:

A2.6.1. Can the selected device meet security requirements?

A2.6.2. Does the selected device allow the user to interoperate with the required individuals/agencies? (A communication device that doesn't talk to anyone else is useless, no matter how many bells and whistles it has.)

A2.6.3. Does the selected solution make sense from a business perspective? Does it save the Air Force money in the long run? Is it in accordance with the ITCC commodity strategies?

A2.6.4. Does the selected solution fit into the Base Roadmap (formerly known as the Base Blueprint).

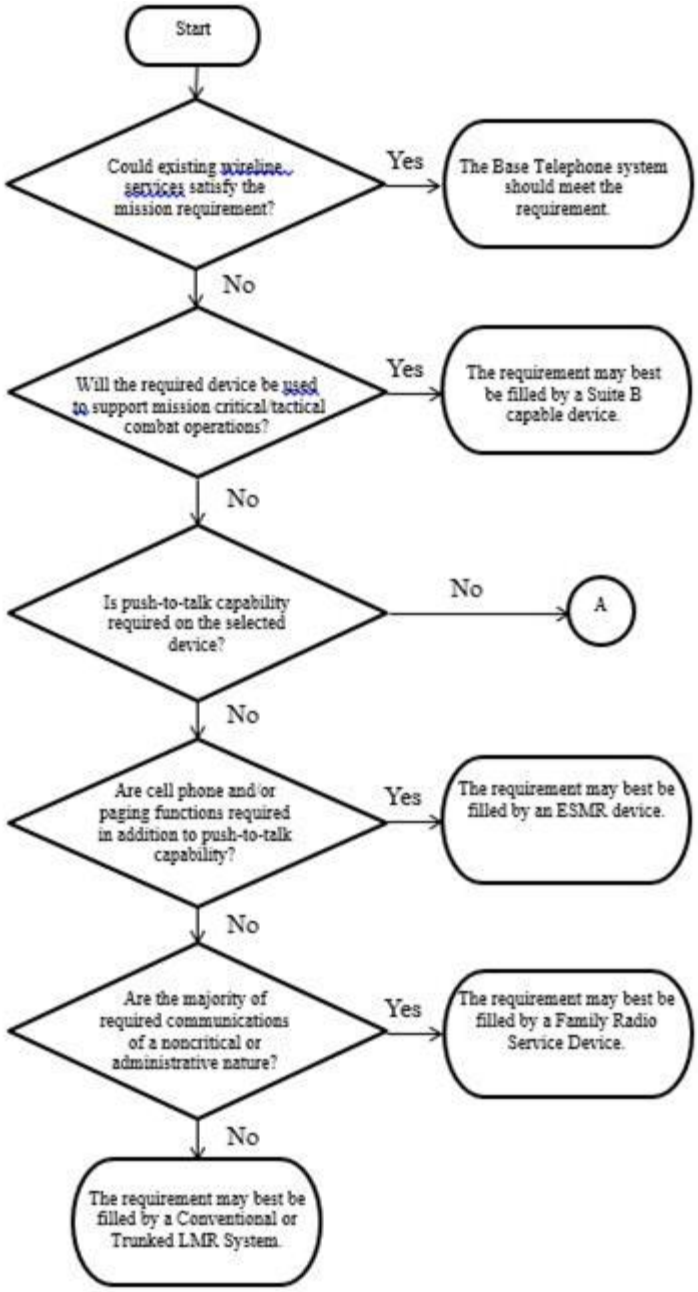
A2.6.5. If you answer "No" to any of these questions, you should reconsider your solution.

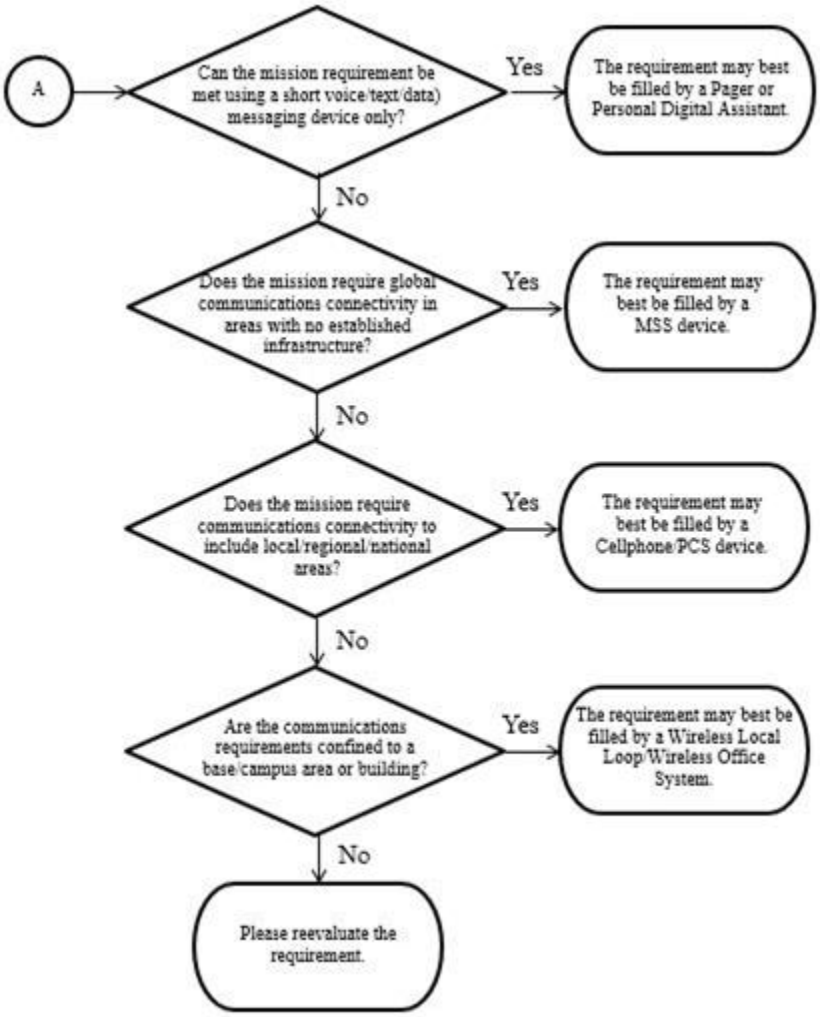
Table A2.1. Types of Services.

Type	Functions and Capabilities
LMR	Conventional: A typical conventional system is composed of portable handsets, vehicular mobiles, base stations, and/or repeaters.
	Trunked: A radio network composed of conventional LMR equipment that automatically and dynamically allocates a small number of radio channels to support a large number of users.
	ISLMR: A portable handset that is certified to operate safely in a hazardous environment (i.e fuel handling, munitions, EOD, etc.); it can be used on a conventional or trunked system. (See Para. 4.6. Intrinsically Safe)
Cellular Services	A service that provides two-way communication (voice, data, texting, etc.) utilizing a wireless telephone network and is highly mobile allowing the user to 'roam'.
Mobile Satellite Services (Narrowband)	Services (digital voice, data, paging, fax, etc.) provided through narrowband satellite service network providers. For MSS management refer to AFI 17-213, *Mobile Satellite Services Management*.

Wireless Local Loop/Wireless Office Systems	Similar to a cell phone system, but mobility is greatly reduced. This wireless RF system is generally limited to a small building/office or campus area.
FRS Radio	An improved walkie talkie radio system and one of the Citizens' Band radio services intended for use by members of a small team or work center to communicate among themselves. Unregulated use of FRS radios within the US&P may replace LMRs for certain administrative communications, but cannot be used to transmit classified, SBU, command and control, operational, fire/crash, security or emergency response/medical communications. Use of FRS radios outside the US&P is regulated by the host nation and may not be available for military use in this configuration. (See Para. 4.2 Family Radio Service (FRS) and Inter Squad Radio (ISR) Systems)
ISR	Short-range radios similar in construction and operational characteristics to FRS radios. They are intended to be used among members of a squad. Spectrum authorization has to be obtained through MAJCOM Spectrum Managers and the appropriate AFSPO or host nation prior to acquisition and use. (See Para. 4.2 Family Radio Service (FRS) and Inter Squad Radio (ISR) Systems)

Figure A2.1. Determining a Technical Solution.




A
Can the mission requirement be met using a short voice/text/data) messaging device only?
Yes
The requirement may best be filled by a Pager or Personal Digital Assistant.
No
Does the mission require global communications connectivity in areas with no established infrastructure?
Yes
The requirement may best be filled by a MSS device.
No
Does the mission require communications connectivity to include local/regional/national areas?
Yes
The requirement may best be filled by a Cellphone/PCS device.
No
Are the communications requirements confined to a base/campus area or building?
Yes
The requirement may best be filled by a Wireless Local Loop/Wireless Office System.
No
Please reevaluate the requirement.

Attachment 3

BASE PWCS MANAGER CONTINUITY FOLDER

A3.1. PWCS managers will maintain complete and current records for continuity. The following items are mandatory content for the continuity records: (T-2).

A3.1.1. List of managers and alternates, frequencies, nets/talkgroups, units, office symbols, and telephone numbers for:

A3.1.1.1. AFECO/MAJCOM PWCS Lead.

A3.1.1.2. Contractors and contract managers.

A3.1.1.3. Base supply equipment management, research, and receiving personnel.

A3.1.1.4. Base contracting office personnel (service and supply sections).

A3.1.1.5. Installation Spectrum Manager.

A3.1.1.6. Base COMSEC and OPSEC officers.

A3.1.2. List of governing directives and related publications and the location of the publication.

A3.1.3. Processing procedures and examples of completed forms.

A3.1.4. Copy of all current radio frequency authorizations and associated mutual aid, interoperability agreements for shared use frequencies.

A3.1.4.1. Frequency/Net restoration priorities.

A3.1.5. Procedures for demilitarizing reportable PWCS assets.

A3.1.6. A customer education package that includes:

A3.1.6.1. The customer brochure or publication training. A3.1.6.2. Cross-feed updates.

A3.1.7. An equipment inventory list with an explanation of your reconciliation method. Include:

A3.1.7.1. Contracts.

A3.1.7.2. Sample of a request letter you received from ECs.

A3.1.8. Procedures for processing assets for repairs when they are covered under contract and when they are not. Include:

A3.1.8.1. An example of completed AF Form 1297.

A3.1.8.2. An example of a completed job control log.

A3.1.8.3. An example of claim and repair tickets completed by ECOs and contractors.

A3.1.8.4. Control procedures for mobile, portable, and fixed assets.

A3.1.8.5. An example of reporting loss, damages, or stopped payments.

A3.1.9. Copy of the most recent asset Logistics Support Plan.

A3.1.10. Map showing equipment installations. Also include:

A3.1.10.1. Copies of individual frequency/net diagrams.

A3.1.10.2. A list of locations requiring escorted entry.

A3.1.10.3. The method you used to coordinate escorted entry.

A3.1.11. A list of the base PWCS manager's responsibilities for overseeing the base PWCS infrastructures.

A3.1.11.1. Operating information for the system and an explanation of its purpose.

A3.1.11.2. Control procedures for end items and examples of completed shipping forms.

A3.1.11.3. Procedures for issuing spare equipment.

A3.1.12. Contingency PWCS procedures including instructions on using war reserve materiel if applicable.

A3.1.13. List of COMSEC equipment users.

A3.1.14. Procedures for managing/obtaining/disseminating/storage of classified and unclassified keying material and assets.

A3.1.15. Procedures for programming PWCS assets.

A3.1.16. Procedures for requesting engineering help.

A3.1.17. Procedures for establishing annual PWCS maintenance contracts. Include an explanation of how you:

A3.1.17.1. Budget for repairs.

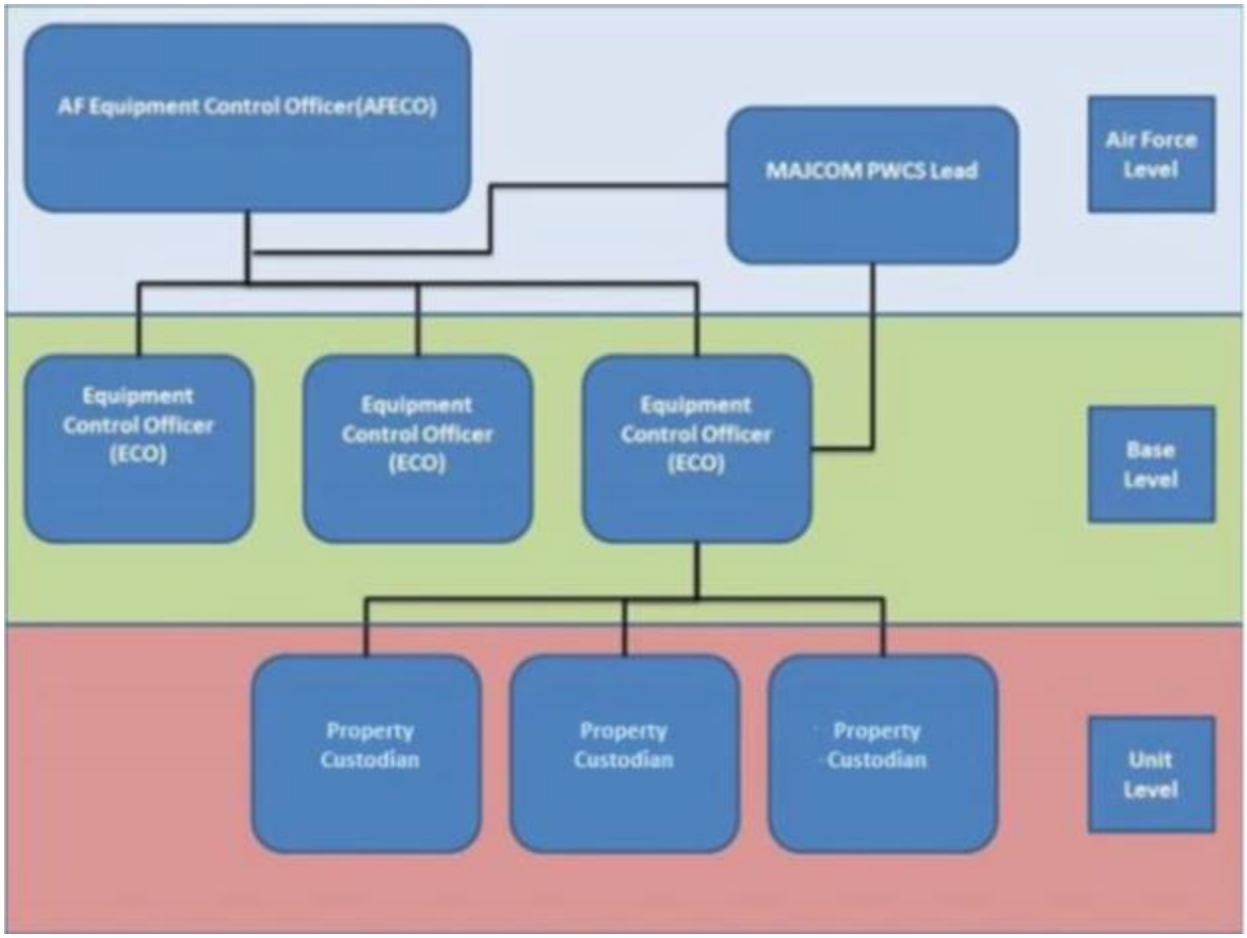
A3.1.17.2. Manage the contract surveillance plan.

A3.1.17.3. List of military technicians trained in PWCS repair.

Attachment 4

AF PWCS ORGANIZATIONAL STRUCTURE

Figure A4.1. AF PWCS Organizational Structure.



Attachment 5

TRAINING TOPICS FOR UNIT PWCS MANAGERS

A5.1. The following general topics are mandatory for use in the unit manager's training guide. Add additional topics as needed for local conditions.

A5.1.1. **General Information:**

A5.1.1.1. Points of Contact.

A5.1.1.2. Applicable Publications.

A5.1.1.3. Systems Description.

A5.1.1.4. Frequency/ Talk group Description.

A5.1.1.5. AIS (AIM, DMLSS, ECSS, Remedy).

A5.1.1.6. PWCS Requirements Process.

A5.1.1.7. Frequency Requirements/Interoperability.

A5.1.1.8. Intrinsically Safe Requirements.

A5.1.1.9. Equipment Inventories.

A5.1.1.10. Equipment Markings.

A5.1.1.11. Budgeting.

A5.1.1.12. Lifecycle Support Plan.

A5.1.1.13. Contingency Procedures/Operations.

A5.1.1.14. Customer Feedback.

A5.1.1.15. Inspections.

A5.1.2. **Maintenance and Operating Procedures for PWCS.**

A5.1.2.1. General Operating Rules.

A5.1.2.2. Procedures for Processing Assets for Repair/Operator Maintenance.

A5.1.2.3. Warranty Information.

A5.1.2.4. Pecuniary Liability in Case of Misuse or Abuse.

A5.1.2.4.1. Report of Survey (ROS) General Guidelines.

A5.1.2.5. Operating Restrictions in Hazardous Environments.

A5.1.2.6. Inspection and Operation of Intrinsically Safe LMRs.

A5.1.2.7. Information Protection and Encryption Guidelines.

A5.1.2.8. Spectrum Interference Resolution Program IAW AFI 17-221.

A5.1.2.9. Consent to monitoring, AFI 10-712 and AFI 17-131.

A5.1.3. **COMSEC and OPSEC.**

A5.1.3.1. Using COMSEC Equipment.

A5.1.3.2. OPSEC Requirements.

A5.1.3.3. Essential Elements of Friendly Information.

Attachment 6

PLANNING FOR PWCS DEPLOYMENT

A6.1. In planning for PWCS deployment, the base CSO and PWCS managers advise the wing/base and unit level planners to consider their PWCS requirements well in advance of any deployment. Other units have to plan for deployment anywhere. Some of the factors to consider are:

A6.2. Do you need your handheld telecommunications devices? Can the host base satisfy the requirement?

A6.3. Are your in-garrison operating frequencies usable in the deployed host area? Coordinate overseas requirements through MAJCOM and Air Force theater command frequency management offices.

A6.4. How do you maintain your deployed telecommunications devices?

A6.5. Do you need spares? What is the probability of combat damage or loss in transit or handling?

A6.6. Do chargers work on host-nation or host-base power sources? (Voltages and frequencies vary by nation.)

A6.7. Do you need fixed/mobile base stations, repeaters, and antennas? Should you preposition them, or do you carry and install them yourself?

A6.8. Do you need special procedures and call signs?

A6.9. Does your deployed telecommunications system give you adequate geographical coverage?

A6.10. Do you need encryption? What method of encryption? (unclass/class).

A6.11. What about interoperability with other units?

A6.12. Is your deploying telecommunications device spectrum certified for use at the intended deployment locations? Specifically, is the device capable of operating within host base/host nation standards and technical parameters (i.e., frequency, channel spacing, power, etc.)?

A6.13. If deploying assets, use approved AIS for inventory transfer to gaining unit or change status to “Deployed”. Ensure status is returned to “In Use” from “Deployed” status once deployment period has ended.

A6.14. Develop a deployed continuity folder by tailoring the information in Attachment 2 to meet your requirements. The base points of contact now become the deployed points of contact.

Attachment 7

CHECKLIST FOR MILITARY AUXILIARY RADIO SYSTEM (MARS)

A7.1. Does Chief, AF MARS manage the MARS program for HAF? (para 6.2.2.).

A7.2. Does Chief, AF MARS issue operating publications to MARS stations? (para 6.2.3.).

A7.3. Does Chief, AF MARS coordinate with MARS Chiefs from other services on matters requiring joint service resolutions? (para 6.2.6.).

A7.4. Does Chief, AF MARS coordinate with MAJCOMs to determine emergency and contingency communications requirements and to validate MARS frequency requests? (para 6.2.7.).

A7.5. Does Chief, AF MARS send valid frequency requests to 24 AF Spectrum Management Office? (para 6.2.8.).

A7.6. Does Chief, AF MARS maintain MARS repeater frequencies? (para 6.2.9.).

A7.7. Does Chief, AF MARS establish a management structure to administer the affiliate organization and control network operations using AF Form 3661? (para 6.2.10.).

A7.8. Does Chief, AF MARS appoint region and state MARS directors and other key affiliate officials? (para 6.2.10.).

A7.9. Does Chief, AF MARS oversee management of excess and surplus government property required for use in MARS? (para 6.2.14.).

A7.10. Does Chief, AF MARS respond to applications for MARS membership and issue AF Form 3666? (para 6.2.11.1.).

A7.11. Does Chief, AF MARS serve as Air Force liaison for amateur radio? (para 6.2.12.).

A7.12. Does Chief, AF MARS control and issue DD Form 2350 MARS Disaster Support Identification Card? (para 6.2.11.2.).

A7.13. Does Chief, AF MARS approve auxiliary MARS stations along with host command? (para 6.2.13.).

A7.14. Does Chief, AF MARS terminate affiliates who bring discredit upon themselves or MARS or who fail to: abide by the publications and rules governing MARS, complete required MARS training, maintain minimum quarterly participation on established MARS radio nets, maintain a current FCC amateur radio license, or notify appropriate authorities of a change of address? (para 6.2.11.3.).

A7.15. Does Chief, AF MARS grant termination waivers of affiliates for extenuating circumstances on a case by case basis? (para 6.2.11.4.).

Attachment 8

CHECKLIST FOR GLOBAL HIGH FREQUENCY (HF) SYSTEM

A8.1. Has the Global System Manager:

A8.1.1. Identified, reviewed, and tracked all high power HF technical requirements? (para 1.1.2.6).

A8.1.2. Executed funding activities for HFGCS long haul circuits, system information assurance requirements? (para 1.1.2.9).

A8.1.3. Coordinated mission requirements with system users? (para 1.1.2.4).

A8.1.4. Answered questions for intercommand and interservice special communications support? (para 1.1.2.10).

A8.1.5. Evaluated Global HF System network performance? (para 1.1.2.11).

A8.1.6. Accompanied MAJCOM HF managers on staff visits to evaluate operations, equipment use, and system integrity? (para 1.1.2.12).

A8.2. Has the MAJCOM HF Manager:

A8.2.1. Advocated for and ensured all necessary funding required to maintain and sustain all real property (including buildings, real estate, fencing and associated antennas) and utilities associated with HFGCS and MYSTIC STAR mission requirements was provided within their respective command? (para 1.2.1).

A8.2.2. Overseen operations of assets under their control? (para 1.2.2).

A8.2.3. Matched employees and equipment to job requirements? (para 1.2.3).

A8.2.4. Evaluated training, operations, and equipment use? (para 1.2.4).

A8.2.5. Coordinated publication creation and production? (para 1.2.5).

Attachment 9

CHECKLIST FOR MYSTIC STAR SYSTEM

A9.1. Has the MYSTIC STAR Ops-Tech Manager (MSOTMO) assessed network performance? (para 2.1.3.2).

A9.2. Has the MSOTMO compared performance trends to establish standards? (para 2.1.3.3).

A9.3. Has the MSOTMO recommended improvements to criteria, documentation, or performance? (para 2.1.3.3).

A9.4. Has the MSOTMO worked with personnel on all plans for operating, maintaining, managing, controlling, and configuring the network? (para 2.1.3.4).

A9.5. Has the MSOTMO recommended budgets for network operations? (para 2.1.3.5).

A9.6. Has the MSOTMO reported the operational status, performance status, or limitations of the network to CYSS/DOO? (para 2.1.3.8).

A9.7. Has the MSOTMO implemented plans and special system configurations? (para 2.1.3.7).

Attachment 10

LIFECYCLE SUPPORT PLANING TOOL

A10.1. A replacement plan is a locally generated product which reflects some of the following: How long each asset has been in service, the original purchase price, and total repair cost spent on the asset.

A10.2. Each year the Base ECO will provide a copy of the validated PWCS Replacement Plan to customer organizations to support budget planning decisions. Consider the following when formulating a logistic support plan for LMR assets: (T-3).

A10.2.1. Vendors may provide expected life cycle length for their products. This recommendation should be used in the replacement decision.

A10.2.2. Replacement of LMR assets are based on several factors including age of asset/system, mission requirements, maintenance records, and cost.

A10.2.3. LMRs (to include conventional/trunking sites, handhelds, mobiles, etc.) typically have a useful life well beyond 5 years. Replacing systems earlier than needed is wasteful and not in the best interests of the USAF.

A10.2.4. MAJCOMs/Wings will coordinate replacement based on local conditions and mission needs being careful to achieve the most efficient use of USAF dollars. **A10.2.5.** Interoperability and encryption has to be considered in all upgrades and replacement of LMR systems.

A10.2.5. The replacement plan may use a point system to assist in PWCS replacement management based on average lifecycle of 10 years.

A10.2.5.1. The point system aids in determining items that are candidates for replacement. The point assignments are as follows: 2 points per year of age (useful life), 3 points per repair action (reliability), and 5 points per year for phased out equipment (no longer supportable or procurable).

A10.2.5.2. Methodology for Determining Projected Replacement Years.

Table A10.1. Methodology Chart.

Accumulated Points	Replacement Year
0-45	N/A
46-50	Current Year + 5
51-55	Current Year + 4
56-60	Current Year + 3
61-65	Current Year + 2
66-75	Current Year + 1
76-Over	Current Year