

**Air Soldier System (Air SS)**  
**(version 3.0)**

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USAACE - Aviation School

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## Table Of Contents

1.0 System Description

2.0 Target Audience

3.0 Assumptions

4.0 Training Constraints

5.0 System Training Concept

5.1 New Equipment Training Concept (NET)

5.2 Displaced Equipment Training (DET)

5.3 Doctrine and Tactics Training (DTT)

5.4 Training Test Support Package (TTSP)

6.0 Institutional Training Domain

6.1 Institutional Training Concept and Strategy

6.1.1 Product Lines

6.1.1.1 Training Information Infrastructure

6.1.1.1.1 Hardware, Software, and Communications

Systems

6.1.1.1.2 Storage, Retrieval, and Delivery

6.1.1.1.3 Management Capabilities

6.1.1.1.4 Other Enabling Capabilities

6.1.1.2 Training Products

6.1.1.2.1 Courseware

6.1.1.2.2 Courses

6.1.1.2.3 Training Publications

6.1.1.2.4 Training Support Package (TSP)

6.1.1.3 TADSS

6.1.1.3.1 Training Aids

6.1.1.3.2 Training Devices

6.1.1.3.3 Simulators

6.1.1.3.4 Simulations

6.1.1.3.5 Instrumentation

6.1.1.4 Training Facilities and Land

6.1.1.4.1 Ranges

6.1.1.4.2 Maneuver Training Areas (MTA)

6.1.1.4.3 Classrooms

6.1.1.4.4 CTCs

6.1.1.4.5 Logistics Support Areas

6.1.1.4.6 Mission Training Complex (MTC)

6.1.1.5 Training Services

6.1.1.5.1 Management Support Services

6.1.1.5.2 Acquisition Support Services

6.1.1.5.3 General Support Services

6.1.2 Architectures and Standards Component

6.1.2.1 Operational View (OV)

6.1.2.2 Systems View (SV)

6.1.2.3 Technical View (TV)

6.1.3 Management, Evaluation, and Resource (MER) Processes

Component

6.1.3.1 Management

6.1.3.1.1 Strategic Planning

6.1.3.1.2 Concept Development and Experimentation

(CD&E)

6.1.3.1.3 Research and Studies

6.1.3.1.4 Policy and Guidance

6.1.3.1.5 Requirements Generation

6.1.3.1.6 Synchronization

6.1.3.1.7 Joint Training Support

6.1.3.2 Evaluation

6.1.3.2.1 Quality Assurance (QA)

6.1.3.2.2 Assessments

6.1.3.2.3 Customer Feedback

6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

6.1.3.3 Resource

7.0 Operational Training Domain

7.1 Operational Training Concept and Strategy

7.1.1 Product Lines

7.1.1.1 Training Information Infrastructure

7.1.1.1.1 Hardware, Software, and Communications

Systems

7.1.1.1.2 Storage, Retrieval, and Delivery

7.1.1.1.3 Management Capabilities

7.1.1.1.4 Other Enabling Capabilities

7.1.1.2 Training Products

7.1.1.2.1 Courseware

7.1.1.2.2 Courses

7.1.1.2.3 Training Publications

7.1.1.2.4 TSP

7.1.1.3 TADSS

7.1.1.3.1 Training Aids

7.1.1.3.2 Training Devices

7.1.1.3.3 Simulators

7.1.1.3.4 Simulations

7.1.1.3.5 Instrumentation

7.1.1.4 Training Facilities and Land

- 7.1.1.4.1 Ranges
  - 7.1.1.4.2 Maneuver Training Areas (MTA)
  - 7.1.1.4.3 Classrooms
  - 7.1.1.4.4 CTCs
  - 7.1.1.4.5 Logistics Support Areas
  - 7.1.1.4.6 Mission Command Training Centers (MCTC)
  - 7.1.1.5 Training Services
    - 7.1.1.5.1 Management Support Services
    - 7.1.1.5.2 Acquisition Support Services
    - 7.1.1.5.3 General Support Services
  - 7.1.2 Architectures and Standards Component
    - 7.1.2.1 Operational View (OV)
    - 7.1.2.2 Systems View (SV)
    - 7.1.2.3 Technical View (TV)
  - 7.1.3 Management, Evaluation, and Resource (MER) Processes
    - 7.1.3.1 Management
      - 7.1.3.1.1 Strategic Planning
      - 7.1.3.1.2 Concept Development and Experimentation
      - 7.1.3.1.3 Research and Studies
      - 7.1.3.1.4 Policy and Guidance
      - 7.1.3.1.5 Requirements Generation
      - 7.1.3.1.6 Synchronization
      - 7.1.3.1.7 Joint Training Support
    - 7.1.3.2 Evaluation
      - 7.1.3.2.1 Quality Assurance (QA)
      - 7.1.3.2.2 Assessments
      - 7.1.3.2.3 Customer Feedback
      - 7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)
    - 7.1.3.3 Resource Processes
- Component
- (CD&E)
- 8.0 Self-Development Training Domain
    - 8.1 Self-Development Training Concept and Strategy
      - 8.1.1 Product Lines
        - 8.1.1.1 Training Information Infrastructure
          - 8.1.1.1.1 Hardware, Software, and Communications
          - 8.1.1.1.2 Storage, Retrieval, and Delivery
          - 8.1.1.1.3 Management Capabilities
          - 8.1.1.1.4 Other Enabling Capabilities
        - 8.1.1.2 Training Products
          - 8.1.1.2.1 Courseware
- Systems

- 8.1.1.2.2 Courses
- 8.1.1.2.3 Training Publications
- 8.1.1.2.4 Training Support Package (TSP)
- 8.1.1.3 Training Aids, Devices, Simulators and Simulations
- (TADSS)
  - 8.1.1.3.1 Training Aids
  - 8.1.1.3.2 Training Devices
  - 8.1.1.3.3 Simulators
  - 8.1.1.3.4 Simulations
  - 8.1.1.3.5 Instrumentation
- 8.1.1.4 Training Facilities and Land
  - 8.1.1.4.1 Ranges
  - 8.1.1.4.2 Maneuver Training Areas (MTA)
  - 8.1.1.4.3 Classrooms
  - 8.1.1.4.4 CTCs
  - 8.1.1.4.5 Logistics Support Areas
  - 8.1.1.4.6 Mission Command Training Centers (MCTC)
- 8.1.1.5 Training Services
  - 8.1.1.5.1 Management Support Services
  - 8.1.1.5.2 Acquisition Support Services
  - 8.1.1.5.3 General Support Services
- 8.1.2 Architectures and Standards Component
  - 8.1.2.1 Operational View (OV)
  - 8.1.2.2 Systems View (SV)
  - 8.1.2.3 Technical View (TV)
- 8.1.3 Management, Evaluation, and Resource (MER) Processes
- Component
  - 8.1.3.1 Management
    - 8.1.3.1.1 Strategic Planning
    - 8.1.3.1.2 Concept Development and Experimentation
    - (CD&E)
      - 8.1.3.1.3 Research and Studies
      - 8.1.3.1.4 Policy and Guidance
      - 8.1.3.1.5 Requirements Generation
      - 8.1.3.1.6 Synchronization
      - 8.1.3.1.7 Joint Training Support
  - 8.1.3.2 Evaluation
    - 8.1.3.2.1 Quality Assurance (QA)
    - 8.1.3.2.2 Assessments
    - 8.1.3.2.3 Customer Feedback
    - 8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)
  - 8.1.3.3 Resource Processes

- A Milestone Annex
- B References
- C Coordination Annex

This System Training Plan (STRAP) is preliminary.  
Front end analysis (mission, task, job) is ongoing. USAACE - Aviation School will amend and update this STRAP as details solidify.

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## 1.0 System Description

A. Air Soldier System (Air SS) is an integrated, modular, mission tailorable Aviation Life Support Equipment (ALSE) and protective ensemble for aircrew. Air SS represents evolutionary improvements of the Air Warrior Block I, II, and III as well as integration into the Soldier as a System (SaaS) Family of Systems (FOS). The Air SS is one of the three variant systems under the SaaS concept. The Air SS captures the unique/specific requirements for pilots, flight crewchiefs, flight engineers, flight medics, and flight surgeons. Crew members will use the Air SS in the unified land operations (desert, forested, urban, mountainous, jungle, maritime, etc.) and in support of offensive, defensive, and stability operations as well as civil support. The system is modular in design to permit tailoring based upon Mission, Enemy, Terrain/Weather, Troops Available, Time, and Civilian (METT-TC) considerations. Air SS will be subjected to electronic attack and must be able to operate in a Chemical, Biological, Radiological, or Nuclear (CBRN) environment. The Air SS will also be subjected to attacks by sea based or airborne platforms employing similar weapons systems. While airborne, Air SS will encounter these same threats as a component system of the aircraft in which it is operating. Air SS will also survive a host of naturally occurring environmental and man-made threats, to include cold and heat related injuries. Air SS capabilities will include, but are not limited to: increased situational awareness; increased crew member protection; reduced ensemble weight and bulk; common integrated helmet and helmet display systems; advanced night vision; 3-dimensional (3-D) Degraded Visual Environment (DVE) symbology; environmental protection; survival (dismounted); flame resistance; combat identification; reliability. This includes air mission equipment, ALSE and Clothing and Individual Equipment (CIE), which are primarily aircrew-mounted or worn.

B. The Air SS empowers aircraft and aircraft crew members to efficiently interoperate and exploit platform Command, Control, Communication, Computers, and Intelligence (C<sup>4</sup>I) systems by providing continuous connectivity to platform systems, and effectively link the platform to mounted and dismounted crew. Air SS will provide the combat commander increased capabilities to conduct offensive and defensive operations by providing uninterrupted connectivity to on-board platform C<sup>4</sup>I capabilities, thereby improving crew effectiveness by providing continuous Situational Awareness (SA). Air SS provides timely mission information, both voice and data, to all aircrew members that enables mission planning for timely execution of combat operations. Air SS provides critical mission data through integrated helmet mounted displays. Air SS increases

voice communications and crew coordination between aircrew members while increasing aviator safety and mission duration; providing aircrew members with the necessary protection for the current asymmetric threat. Air SS development requires continuous integration of improved capabilities to increase functionality.

C. During the conduct of small unit operations, aircraft, equipped with Air SS systems, perform collective tasks, display SA and exchange C2 messages with the combined arms team using the platform's on-board communications suite. Crew members talk internally sharing information and coordinating air crew duties. These Soldiers, although normally mounted, may function in a dismounted mode for short periods to accomplish selective Soldier Tasks.

D. The Air SS enables Command and Control required by the Joint Force Commander. Through the use of standardized mission planning tools and information, aircrew members maintain the Common Operational Picture (COP) that is necessary to coordinate movement as well as precision maneuver, while synchronizing supporting fires that increase overall effectiveness for the Joint Warfighter. Air SS enables commanders to effectively combine the elements of combat power (leadership, information, movement and maneuver, intelligence, fires, sustainment, command and control and protection). Air SS enables the network centric information environment by providing increased Battle Command (BC) and Situational Awareness (SA) through the COP to all aircrews conducting joint operations. Air SS will enhance troop leading procedures, tactical problem solving and operational momentum required at all echelons of Army and joint operations.

E. The Air SS will be interoperable with the Core Soldier and other Soldier variant systems. The Air SS enables the aircrew member(s) to efficiently integrate with, and better exploit, aircraft system capabilities by providing improved connectivity to aircraft systems and crew members. The Air SS effectively improves crew member SA, protection, and platform interface. These increased capabilities give the aircrew member(s) increased lethality, endurance, and protection.

F. First Unit Equipped Date: Increment 1a- 2nd Quarter FY15, Increment 1b - 4th Quarter FY18

## 2.0 Target Audience

A. The Air SS is intended for aircrews of select manned aircraft in maneuver, maneuver support and maneuver sustainment roles. These aircrew roles include: pilots, crew chiefs, flight engineers, flight medics, door gunners, load masters and flight surgeons. The Soldiers in the Military Occupational Specialties (MOS) listed below will be users of the Air SS ensemble:

All 15 Series MOS performing crew duties [i.e. UH-60 Helicopter Repairer (15T), CH-47 Helicopter Repairer (15U)]

Flight Surgeon (61N)

Aero medical Physician Assistant (65D)

Aero medical Evacuation Officer (67J)

Health Care Specialist (68W)

Flight Medic (68WF)

Flight Nurse (66H)

Aviation (15A/B/C)

AH-64 Pilot (152F/H)

AH-6/MH-6 Pilot (152C)

CH-47 Pilot (154C/E/F)

OH-58 Pilot (152B/D/153C)

UH-60 Pilot (153D/E/M)

UH-72 Pilot (153L)

Fixed Wing Pilot (155A/D/E/F/G)

Rotary Wing Aviator Aircraft Nonspecific (153A)

B. The Additional Skill Identifier (ASI) of Q2, for enlisted soldiers, or H2, for Warrant Officers will be used to identify Aviation Life Support Equipment (ALSE) technician(s). The ALSE technician will be the maintainer of Air SS components. Complete information is available on standards of grade, job and task performance duties, and training requirements for each

MOS in Army Regulation (AR) 611-1 Military Occupational Classification  
Structure Development and Implementation.

### 3.0 Assumptions

The following list of assumptions underlies the training concept and training strategy. These assumptions were derived from preliminary analysis related to the Materiel Requirements Documents (MRD), and comparative analysis of similar systems.

- 1) The Army requires no new Military Occupational Specialties (MOSs) or Additional Skill Identifiers (ASIs) to operate, maintain, or support Air SS. Air SS will encompass the existing MOS ASI Q2 or H2.
- 2) The system will not require a change in skill or aptitude requirements, as described in Army Regulation (AR) 611-1 Military Occupational Classification Structure Development and Implementation and Department of the Army Pamphlet (DA PAM) 611-21 Military Occupational Classification and Structure.
- 3) Introduction of Air SS into US Army Aviation Life Support Equipment (ALSE) will not require any increase in the physical, sensory, or mental abilities of the personnel who have responsibility for its operation, maintenance, or support.
- 4) Department of the Army, Active, National Guard and Reserves will provide the necessary resources, personnel, and equipment required to implement and support Air SS.
- 5) Any software or software changes directed toward operation or maintenance will be user friendly and follow an open system design approach.
- 6) There will not be an increase in total Army force structure to support manning Army aircraft and ALSE systems equipped with Air SS.
- 7) The materiel developer/contractor will use the Army Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process in the production of all training products. These products must comply with standards and formatting as specified in TRADOC Regulation 350-70 Army Learning Policy and Systems and be documented in the Training Development Capability (TDC) database (a government furnished tool). Interactive Multimedia Instruction (IMI) and Distributed Learning (dL) products must comply with the latest TRADOC Technical Media Standards and Sharable Content Reference Model(SCORM). The Product Manager (PM) for Air SS will provide Videos, Compact Disks (CD) and Computer Based Information (CBI) for

training. Training for service and support of the Air SS components will be provided in specially designed courses to each unit receiving Air SS products.

8) Technical Manuals, which conform to applicable military and/or commercial specifications, will be validated, verified and delivered to the user no later than New Equipment Training (NET) as systems are fielded.

9) Training materials developed by the PM-Air Warrior (AW) will be adequate for NET, unit sustainment, and institutional training. Institutional training will be conducted at the United States Army Aviation Center of Excellence (USAACE), Fort Rucker, AL. USAACE will provide training materials to all facilities conducting aviation training.

10) PM-AW will program and budget for the resources required to implement the training program identified/designed in this STRAP and its annexes.

11) The Directorate of Training and Doctrine (DOTD), Training Division, Fort Rucker, AL, will provide oversight, review and approval of all Training Development (TD) materials prior to implementation.

12) All systems will be fielded using the most recent version of the system software.

13) Active Army and reserve component training will be identical per TRADOC's Total Army School System (TASS) requirement.

14) PM-AW will develop training concurrently with the system hardware/software via the NET TSP and Training Test Support Package (TTSP). As systems are upgraded and enhanced, the NET TSP and TTSP will be updated accordingly.

15) Air SS training will encompass all hardware and software specific to the operation and maintenance of the equipment.

16) Task analysis and individual and collective task development will be performed using TDC database software. Program of Instruction (POI) and Lesson Plans (LPs) will be developed by the contractor IAW TRADOC Regulation 350-70, made available to DOTD for review and will be in the TDC database.

17) The NET team will leave exportable training packets with fielded units to conduct sustainment training.

18) The Material Developer (MATDEV) shall qualify and provide courseware

for the New Equipment Training Team (NETT) for initial unit training. The funding for the NETT, to include travel funds will be provided by the PM-AW. Qualification of the NETT will be accomplished during Instructor and Key Personnel Training (IKPT).

19) Training Aids, Devices, Simulators, and Simulations (TADSS) will be delivered to units prior to fielding. USAACE shall be provided all necessary Air SS TADSS quantities to conduct institutional training prior to the scheduled training start date.

20) The MATDEV will provide, to include funding, a course of instruction and exportable training package (ETP) for all units scheduled to receive Air SS IAW the Basis of Issue Plan (BOIP). These materials will be developed and validated at Initial Operational Test and Evaluation (IOT&E) and put in place prior to fielding. TSPs will be used by NETTs during NET and materials will remain with the unit upon completion for sustainment training.

21) The MATDEV shall develop all training products using the Logistics Support Analysis (LSA) for the Training Support Package. The ADDIE process and TDC will also be used by the MATDEV.

22) Resident training shall start six months prior to fielding of the First Unit Equipped (FUE).

#### 4.0 Training Constraints

The following are the Training Constraints identified for the Air SS:

- 1) MANPOWER : No constraints. The system shall not require an increase in maintenance manpower or support personnel requirements. The Air SS shall be supportable and maintainable within the current aviation force structure.
- 2) PERSONNEL ASSESSMENT : No constraints. Personnel responsible for maintenance, servicing and support of Air SS components will be Soldiers/civilians who are designated as Aviation Life Support Equipment (ALSE) technicians with the Additional Skill Identifier (ASI) of Q2 or H2.
- 3) FORCE STRUCTURE: No constraints. The components of the Air SS will be fielded to all aviation units with the following aircraft: AH-64 series, CH-47 series, OH-58 series, UH-60 series, UH-72 series, AH/MH-6, TH-67, EO-5, C-12, RC-12, C-23, and UC-35. The United States Army Aviation Center of Excellence (USAACE) will be allocated Air SS components according to the Materiel Fielding Plan for institutional and/or resident training for MOS producing schools, professional development and officer training for the Active Army, Reserves and National Guard. The Air SS will replace the current systems in all contingency corps aviation units.
- 4) TRAINING : Constraints are identified for additional course hours. Support training for the Air SS will require the proper operation and maintenance of the system and all associated equipment. Each crewmember will receive training on Air SS operations and how it will interface with other flight, mission and host equipment/systems. Both will be conducted institutionally and through the New Equipment Training Teams (NETT). Since AIR SS is intended to improve aircrew safety and survivability, special training considerations and attention will be required for tasks associated with survivability. In addition, readily available service and support of Air SS components will be provided in specially designed courses to each unit receiving Air SS. TRADOC's zero-growth policy and Soldier availability will have an impact on course growth .

- Operation and maintenance of training devices and/or embedded Troop Proficiency Training (TPT) for the Aircrew Integrated System (ACIS) will provide Videos, Compact Disk (CD) and Computer Based Information (CBI) for training. Software must not require aptitude, education, or training that exceeds the target audience capabilities. Due to the

number of personnel to be trained, Interactive Multimedia Instruction (IMI) and New Equipment Training Teams (NETT) must be utilized extensively.

- Air SS technical documentation must be adequate and easily usable for Soldiers learning to operate, maintain, and support the equipment. Recommend technical documentation is written at the 10th grade reading level to ease the training burden.
- United States Army Aviation Center of Excellence (USAACE) does not have the resources to support a Doctrine and Tactics Training Team (DTT) during the NET. Recommend incorporating Doctrine and Tactics Training into the IMI.
- The training equipment, components, and devices must be provided in sufficient quantities and within the appropriate time frames to support operational testing and fielding. Training systems should be fielded concurrently with the system.
- Availability of funds for training equipment, instructional material, multimedia training support package, and updated Associated Support Items of Equipment (ASIOE) will impact training requirements.
- Current operational timelines may effect fielding and training timeline requirements.
- The on time delivery and development of training assets to the training institutions that support system fielding is essential.
- The Materiel Developer is responsible for establishing the service and support contract for the initial fielding years and will ensure that proper logistical support is established through the normal Army logistics system.

5) HUMAN FACTORS : The Air SS shall be designed to be fully compatible with other flight and mission equipment and provide comfort to each crewmember for extended wear, to effectively perform their normal, primary and secondary mission related functions. There will be no increase in unit manpower for this training and no increases or new MOSs will be required for this system.

6) HEALTH HAZARDS : Health hazards associated with the mechanical forces or pressure will be identified and eliminated or the risk of injuries related to the crewmembers using the Air SS will be stressed in training and upon new equipment fielding; i.e., hazards include toxic, allergenic, irritating substance and any unidentified hazards not mentioned. Any increase in injuries during training must stop that particular training until the root of the problem is resolved by the safety professionals.

7) SYSTEM SAFETY : Safety, health, environmental, fire, and ergonomic

hazards associated with the use, maintenance, transportation, storage, handling, and demilitarization of the Air SS will be identified, evaluated/assessed, and mitigated or controlled to an acceptable level during production. The residual risk will be identified, reviewed, and if possible reduced and/or eliminated during all classes of instruction. Additional safety hazards may develop over time and also dependent on the environment could possibly ground the system until the condition is mitigated or resolved.

8) TEST MEASUREMENT and DIAGNOSTIC EQUIPMENT (TMDE): The Air SS maintenance concept will be fully maintainable at the unit and user level. New TMDE equipment or special tools shall be minimal if required for Air SS maintenance support during training or upon fielding. Maintenance and logistical support for the new TMDE equipment or special tools could be problematic based on availability in the supply chain.

## 5.0 System Training Concept

A. Support training for the Air SS shall be conducted institutionally and through Air SS New Equipment Training (NET) teams. Maintainers that service night vision systems (MOS 94R) will continue to receive training at their Advance Individual Training (AIT), Advance Leader Course (ALC), and Senior Leader Course (SLC). Training for service and support of Air SS components will be provided in specially designed courses to each unit receiving Air SS products. The Product Manager (PM) for the Air SS will provide Videos, Compact Disks (CD) and Computer Based Information (CBI) for training.

B. The PM will conduct Instructor and Key Personnel Training (IKPT) and support NET during developmental testing. The Materiel Developer will provide a NET team for fielding. Training products provided for NET will be used as the basis for institutional training development, unit sustainment training, and rapid train-up of replacement personnel in support of contingency operations. The training products will be prepared in accordance with the Training Requirements Analysis System (TRAS) process, the Army Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process and TRADOC Regulation 350-70. Task analysis and individual and collective task development will be performed using Training Development Capability database software, provided as Government Furnished Equipment (GFE).

C. Initial operator training for the Air SS will consist of performance oriented, hands-on training. This training program shall include: an introduction which covers the capabilities of the system and identification of components; the assembly, installation of batteries, disassembly, donning, and doffing of the Air SS; operation of the computer system which includes initialization, logging on, interfacing with the graphic displays, use of the various input devices, accessing the various programs (maps, embedded features, and reach-back routines), zeroizing or purging the system, and shutting the system down; operating the communications features to perform voice communications; to create, edit, send, manage, and receive messages and free text; use of the maps to include uploading, downloading, accessing, learning the symbology, familiarization on the selection, creation, editing, storing, retrieving, and transmitting of various overlays, and position location information/features. Employment and leader training will cover characteristics and capabilities of the Air SS; planning and employment considerations; maintenance and sustainment; and an overview of Tactics, Techniques and Procedures (TTP)s. Those selected as unit Air SS instructors will receive, in addition to all the training

above, training on planning and execution of individual and collective sustainment training. The Air SS will be integrated into unit collective training at all levels.

## 5.1 New Equipment Training Concept (NET)

Under the approval authority of the United States Army Aviation Center of Excellence (USAACE) Directorate of Training and Doctrine (DOTD), the Material Developer will provide a series of system training products to conduct Initial and Key Personnel Training (IKPT) and support NET during developmental testing. The Product Manager (PM) for Air Warrior, in conjunction with USAACE DOTD will develop the Training Support Package (TSP) to support NET. The NET TSP will be based on the Test Training Support Package (TTSP), modified by lessons learned during Operational Testing (OT). It will serve as the basis for unit sustainment and institutional training. NET requirements include:

- 1) NET will be monitored by the USAACE. The Air SS training package will consider applicable embedded training features and state-of-the-art computer based training techniques and support capabilities.
- 2) Product Manager Air Warrior (PM-AW) will provide a NET Team for initial fielding and Air SS ensemble upgrades to gaining commands and will conduct operator/operator maintenance training. Receiving units are responsible for sustainment training, crew qualification, and proficiency training on the system. Exportable training packets will be left with the unit to conduct sustainment training. NET details will be in the New Equipment Training Plan (NETP).
- 3) PM-AW will provide USAACE with the training materials required to train operator and maintainer tasks in accordance with (IAW) the training strategy developed for the respective airframes. The training developers at the above mentioned schools are responsible for the selection of the critical tasks to support the training at their respective proponent school. PM-AW is responsible for the development of all NETP materials. The PM will develop a complete training package that is compliant with TR 350-70, The Analysis, Design, Development, Implementation and Evaluation (ADDIE) process, and the Training Development Capability (TDC) format. The training package will be entered into the TDC program or the current Army approved automated system. The Digital Training Management System (DTMS) is the current DA G-3 approved automated system for delivery to the operating forces.
- 4) The PM, in conjunction with USAACE DOTD, will develop Interactive Multimedia Instruction (IMI) modules which will support individual training in the institutional, operational, and self-development domains. The three training modules, operation and maintenance, employment, and conduct unit training, will be included in the TSP fielded in NET. The modules will

provide standalone computer training as well as web-based training over the internet.

5) The training strategy will be coordinated with the USAACE. NET development will, at a minimum, include a total task inventory (TTI), a NET TSP that includes multipurpose multimedia products, programs of instruction (POI), lesson plans, technical manuals, student and instructor guides, and a course management plan. The TSP will include a tutorial "how to" module that permits identification of Soldier training proficiency by module. The Air SS equipment and training subsystem devices and products must be available for NET. The following NET courses are required: (1) Test Player Training, (2) Instructor and Key Personnel Training (IKPT), and (3) Unit NET.

6) The Instructor and Key Personnel Course will be conducted at least a year prior to the first fielding to allow training developers at all directorates to review lesson plans IAW TRADOC timelines.

7) Procedures for the operation and maintenance of Air SS will be described in approved technical manuals issued with each aircraft. Operators and maintainers will be able to access technical manuals from the Logistics Support Activity (LOGSA) internet web site.

8) The USAACE will supervise the development of training using the Army Analysis, Design, Development, Implementation and Evaluation process and will supervise the training being conducted under the oversight and direction of their respective training development directorates.

9) Directorates responsible for training development will perform task analysis and individual task development using the TDC database software, provided as Government Furnished Equipment (GFE). PM-AW will ensure the TSP remains current throughout the Air SS program life cycle and that any revisions are provided to the Army Training Support Center (ATSC)/Reimer Digital Library (RDL) "DTMS" in addition to the regular Air SS distribution requirements.

10) Training for Active Army and Reserve Component units will be identical.

11) Prior to initial fielding and after each separate fielding event, a training assessment will be conducted and completed training requirements will be defined or redefined.

## **5.2 Displaced Equipment Training (DET)**

Displaced Equipment Training is not required at this time. If required in the future, Product Manager Air Warrior (PM-AW) will develop Displaced Equipment Training Plans (DETP) for Air SS systems. PM-AW will provide technical assistance to the trainer, when required, in developing DET materials or information. DETP will be prepared in accordance with Department of the Army Pamphlet 350-40 Army Modernization Training Plans for New and Displaced Equipment.

### 5.3 Doctrine and Tactics Training (DTT)

#### 5.4 Training Test Support Package (TTSP)

The TTSP will meet content requirements established in TRADOC Regulation 350-70, paragraph 8-3b. Products and process data will be delivered to the government using the Training Development Capability (TDC) system. The Product Manager (PM) Air SS, in conjunction with United States Army Aviation Center of Excellence (USAACE) Directorate of Training and Doctrine (DOTD), will develop an initial TTSP and provide it to the test manager nine months before test or as specified in the outline assessment plan before Operational Testing (OT). The PM will deliver the final TTSP not later than (NLT) 60 days before test player training or as specified in the outline assessment plan. The initial TTSP will also support Instructor and Key Personnel Training (IKPT) as well as user training for OT.

1) Initial TTSP. The initial submission is due to the test agency as specified in the Outline Test Plan. The Initial TTSP will contain:

- a. System Training Plan (STRAP) or Training Data Requirements.
- b. Test Training Certification Plan.

2) Final TTSP. The final TTSP is prepared following Instructor and Key Personnel Training (IKPT) and receipt of the New Equipment Training Test Support Package (NET TSP). It should be available 60 days prior to the commencement of test player training and the Operational Test Readiness Review (OTRR) #2. The Final TTSP will contain:

- a. Training schedule for player personnel.
- b. POI for each Military Occupational Specialty affected.
- c. The Army External Evaluation.
- d. List of training devices, embedded training components, and simulators.
- e. Target audience description.
- f. Draft Soldier training publications or changes.
- g. Crew drills.
- h. Lesson plans.
- i. Ammunition, targets, and ranges required for training.

j.Critical Military Occupational Specialty task list.

k.Technical manuals (TM) or changes to TMs.

## **6.0 Institutional Training Domain**

Institutional Training will be conducted at the United States Army Aviation Center of Excellence (USAACE). There is currently no MOS for the maintenance of the ALSE equipment, however, this training is done under the Additional Skill Identifier (ASI) of Q2, for enlisted soldiers, or H2, for Warrant Officers. If ALSE personnel are not used as maintainers of the AirSS components, MOS 15F or 15N, aircraft electrician and avionics mechanic respectively will assume the maintenance responsibility after manufacturer repair is no longer available on the AirSS electrical components. Maintenance training for the Air SS electrical components could be conducted at other installation other than Ft. Rucker, the final determination for training location will be given by USAACE.

## **6.1 Institutional Training Concept and Strategy**

A. The institutional training strategy is to incorporate Air SS training into the existing initial aircraft crew training. This training will supplant existing Aviation Life Support Equipment (ALSE) training. A full complement of training support products is required to support training of the Air SS system in the institution. Active Army and Reserve Component training will be identical.

B. All institutional courses must be available in Interactive Multimedia Instruction (IMI) as either Computer Based Training (CBT) in a standalone digital media format or as web-based training hosted on the Army Learning Management System. Courses will contain, at a minimum: required doctrinal manuals, system technical manuals (will be Electronic Technical Manuals [ETM]), Training Aids, Devices, Simulations and Simulators (TADSS), Training Support Packages (TSP), and courseware.

C. Air SS will be incorporated into Professional Development (PD) courses for familiarization/sustainment. Product Manager Air Warrior (PM-AW) is required to develop TSP changes to Air SS training as the system matures IAW TR 350-70 Army Learning Policy and Systems. All training and training development will be IAW AR 350-1 Army Training and Leader Development and TR 350-70. Training development will include institutional training, professional development courses, exportable TSPs, IMI and other forms of Distributed Learning (dL).

### **6.1.1 Product Lines**

All institutional courses must be available in Interactive Multimedia Instruction (IMI) as either Computer Based Training (CBT) in a standalone digital media format or as web-based training hosted on the Army Learning Management System. Courseware will comply with the Shareable Content Object Reference Model (SCORM). IMI modules will support individual training in the institution. Three training modules, Operation and Maintenance, Employment, and Conduct Unit Training, will be provide as standalone computer based training as well as web-based training over the Internet. Technical manuals (TMs) for Operators and Maintainers will be produced to MIL STD and undergo a contractor validation and Government verification process to ensure accuracy and completeness. Courseware, Courses, Training Support Packages and Training Publication estimates are to be determined.

#### 6.1.1.1 Training Information Infrastructure

A. Air SS training infrastructure will require use of the following items:

- Commercial off the shelf (COTS) Automated Information Systems (AIS) with CD/ROM and or DVD.
- Training Development Capability (TDC) system.
- Department of Defense (DOD) standards such as Army Distributive Learning (AdL), Sharable Content Object Reference Model (SCORM), Joint Technical Architecture-Army (JTA-A), Army Training Information Architecture-Migrated (ATIA-M), and Common Training Instrumentation Architecture-Army (CTIA) will be implemented in the design and development of the dL products.

B. Air SS Life Cycle Support will include training, training software and courseware design that will be developed in a reusable and maintainable format, i.e., Defense Information Infrastructure Common Operating Environment (DII-COE) and SCORM compliant. Product Manager Air Warrior is responsible for the funding of support tools, personnel training, training equipment, and Associated Support Items of Equipment (ASIOE) to support the institutional training base. The amount is dependent upon availability and accuracy of Qualitative and Quantitative Personnel Requirements Information (QQPRI).

C. The Air SS will provide interfaces that allow the system to interoperate with Training Aids Devices Simulations and Simulators (TADSS) and with the current forces in a synthetic training environment that includes live, virtual, and constructive simulators/simulations. The Air SS must interoperate with current systems such as the Multiple Integrated Laser Engagement System (MILES) and the Combat Training Center-Instrumentation System (CTC-IS) and future Army and Joint Tactical Engagement Simulation Systems (ESS).

#### **6.1.1.1.1 Hardware, Software, and Communications Systems**

The use of Army Knowledge Online will support the distributed learning (dL) concept and facilitate the dissemination and delivery of training support information. Additional material and updated items are to be made available for dissemination at institutional training as well as for download.

#### **6.1.1.1.2 Storage, Retrieval, and Delivery**

Access and storage of Air SS training and information will be made available through one or more of the following locations:

- Training Development Capability (TDC) Database
- Army Distribution Learning (dL)
- Army Knowledge Online (AKO)
- Other approved databases as they become available

#### **6.1.1.1.3 Management Capabilities**

Air SS training products and information will be managed through the Standard Army Training System (SATS), distributed learning (dL), Training Development Capability (TDC) system , and the Automated Instructional Management System - Personal Computer (AIMS-PC)

**6.1.1.1.4 Other Enabling Capabilities**

Not Applicable

#### 6.1.1.2 Training Products

A. Providing training devices and other essential training products to training centers and schools in time to prepare Soldiers for initial system fielding is the key to successful training. These devices and products must maintain interoperability with the future modular force training systems. The Materiel Developer will consider exportable Interactive Multimedia Instruction (IMI), Distributed Learning (dL) and train-the-trainer.

B. For the institution, there will be adequate IMI and computer based training (CBT) to provide students with virtual hands on experience, while at the same time reducing the number of Training Aids, Devices, Simulators and Simulations (TADSS) required in the school as training devices. Items provided to the training base include, but are not limited to: Air SS ensembles, Interactive Electronic Technical Manuals, and other equipment. Desktop trainers, largely software solution, will allow training on individual operator tasks on the Air SS on a typical personal computer or laptop. The system will use the actual operator controller unit interfaced with the computer to provided simulated Air SS operations in varied scenarios and missions.

C. For the live field training exercise (FTX) portion of institutional training, and for unit and sustainment training, components will employ embedded training capabilities, be multimedia based, and/or use distance-learning technologies. The subsystem will contain (as a minimum) doctrinal manuals, system ETM, TMs, TADSS, IMI Training Support Package (TSP) and courses (complete with a digitized POI, lesson plans, student and instructor guides, and course management plan). The package will be coordinated with institutional training developers. This process will facilitate the production of training support products for delivery with the Training Support System and the ability to rapidly update tasks and their instructional products using digital information systems.

D. The following are additional items that need to be considered during the training development phase:

- Air SS training will encompass all hardware and software specific to the operation and maintenance of the equipment. The Air SS institutional training strategy must be IAW the Capabilities Development Document (CDD) and Capabilities Production Document (CPD) and will be developed/developed to produce Air SS trained Soldiers.
- Lesson plans (LPs) developed by the contractor for the New Equipment Training (NET) Training Support Plan (TSP) will be put in the Training Development Capability (TDC) system or the updated TDC database using

TDC software provided by the Army Training Support Center (ATSC). This authoring software provides the capability of producing LPs in Microsoft Word. Product Manager (PM) Air Soldier will develop an Interactive Multimedia TSP consisting of instructor/operator and user training, to include Digital Operator Guides (DOGS) and manuals.

E. The interactive multimedia TSP will include tutorial "how to" modules that permit audiences to be self-taught, where feasible. In addition, it will include a diagnostic module that permits identification of dL in accordance with the Army Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process, referenced in TRADOC Regulation 350-70, that the government will validate during developmental and operational testing.

PM Air SS will update all training materials when a software update/upgrade occurs so that the training and training materials support the update/upgrade.

#### **6.1.1.2.1 Courseware**

Using the Army Distributive Learning (dL) contract, Product Manager (PM) Air Warrior (AW) will develop Interactive Multimedia Instruction (IMI) which includes: computer aided instruction, computer managed instruction, interactive courseware, electronic publications, electronic testing, electronic guides and simulations. IMI products must comply with the latest TRADOC Technical Media Standards and Sharable Content Reference Model (SCORM). IMI must be able to support institutional training at the United States Army Aviation Center of Excellence (USAACE). The PM will plan and program resources for the modification or upgrade of Training Aids, Devices, Simulations and Simulators (TADSS), IMI, and embedded training impacted by modifications, upgrades, or block improvements to the Air SS.

#### **6.1.1.2.2 Courses**

All courses that currently instruct the Air Warrior System will be updated to Air SS as the capabilities mature and Air Warrior is replaced and or upgraded in the field.

#### **6.1.1.2.3 Training Publications**

A. The Materiel Developer will develop training products in coordination with the proponent. All Technical Manuals (TMs), user manuals, and Soldier Training Publications (STP) shall be created in both hard copies and software versions and available to the Soldier during new Equipment Training (NET), institutional training and downloadable from an Army Knowledge Online (AKO) site. The Air SS Training Support Plan (TSP) will provide a structured training program that supports Soldier/Leader and staff training. All task development will be completed using the Training Development Capability (TDC) database. This will facilitate the production of training support products for delivery with the Training Support System (TSS) and the ability to rapidly update tasks and their instructional products using digital information.

B. TMs for Operators and Maintainers will be produced to military standard (MIL STD) and undergo a contractor validation and Government verification process to ensure accuracy and completeness. Operator, field and sustainment levels of maintenance will be called out in the Maintenance and Allocation Charts (MAC) in the Field and Sustainment Maintenance TMs. All calibration requirements, procedures, schedules will be identified in operator and maintainer TMs.

#### **6.1.1.2.4 Training Support Package (TSP)**

The Air SS TSP will provide a structured training program that supports Soldier training and will be integrated into a training exercise. All validated TSPs will be loaded into the Training Development Capability (TDC) database. TSPs will contain Interactive Multimedia Instruction (IMI) modules which will support individual training in the institutional, operational, and self-development domains. The Product Manager (PM) for Air Warrior will provide Videos, Compact Disks (CD) and Computer Based Information (CBI) for training. The Materiel Developer will provide a complete library of available Air SS related manuals, to include all related training.

#### 6.1.1.3 TADSS

Training Aids will be used to the maximum extent possible to include, but not limited to, the actual equipment, mock-ups, diagrams, and computers. At this time, no upgrades to existing simulators is required. Items provided to the institutions include, but are not limited to: Air SS ensembles, Interactive Electronic Technical Manuals, and other equipment. Desktop trainer, largely software solution, would allow training on individual operator tasks on the Air SS on a typical personal computer or laptop. The system would use the actual operator controller unit interfaced with the computer to provide simulated Air SS operations in varied scenarios and missions.

#### **6.1.1.3.1 Training Aids**

Training Aids will be used to the maximum extent possible to include the following, but not limited to; actual equipment, mock-ups, diagrams, and computers. Material Developer will develop 3-D objects that are fully interactive Free Play/Exploration mode, allowing user to attach/detach parts as desired. View internal components, rotate the equipment in all directions, view parts in context through semi transparency, view equipment in line drawing or X-Ray mode, disassemble and reassemble the equipment while experiencing constraints on parts, get detailed information, etc. User can pause animation and move 3D model around freely, including any camera angle and part movements in real time. To perform a task, the user must be able to select parts and actually perform the actions to be done on the 3D model, such as removing/replacing parts in real time and perform multi-direction cross-sectioning in real time. Movement constraints can be associated with parts (such as hinges, bolts, gauges) and user can move parts in constrained manner in real time. Parts can be linked to other 3D simulations, documents, and web pages. It may have the capability of being inserted into Microsoft Word, PowerPoint and Adobe PDF via "insert" menus.

#### **6.1.1.3.2 Training Devices**

The Product Manager (PM) Air SS strategy is to initially provide hands on training on Air SS. This may occur in the classroom and will be used to the maximum extent possible for realistic training. The PM is responsible for the development, integration, and life cycle management of TADSS IAW Army Regulation (AR) 350-38 Policies and Management for Training Aids, Devices, Simulators, and Simulations.

#### **6.1.1.3.3 Simulators**

Flight simulators for the respective aircraft design series will be used to train Soldiers on the Air SS. Shallow Water Egress Trainer (SWET), Modular Egress Training Simulator (METS) commonly referred to as "dunkers", and Emergency Breathing System (EBS) trainers are used for water survival training.

#### **6.1.1.3.4 Simulations**

As required

#### **6.1.1.3.5 Instrumentation**

PM-AW will ensure that all necessary instrumentation are supported for a realistic training scenario throughout life cycle development.

#### **6.1.1.4 Training Facilities and Land**

No new training facilities or land has been identified for the Air SS at this time. Lessons learned from the execution of Operational Testing (OT) will assist in determining capabilities required to support New Equipment Training, unit training, and institutional training.

#### **6.1.1.4.1 Ranges**

It is anticipated that the current Army's training areas will support training for the Air SS. Lessons learned from the execution of Operational Training (OT) may highlight certain terrain features that enhance or in some way affect Air SS training.

**6.1.1.4.2 Maneuver Training Areas (MTA)**

Not Applicable.

#### **6.1.1.4.3 Classrooms**

Air SS will be instructed in the current classrooms existing at the United States Army Aviation Center of Excellence (USAACE). Lessons learned from the execution of the Air SS Operational Testing (OT) may cause a modification to the classroom requirements for New Equipment Training (NET), unit sustainment training, and institutional training. If classroom modifications are deemed necessary for NET, unit sustainment or institutional training, the Product Manager for Air Warrior will provide funding to cover the cost of the modifications.

**6.1.1.4.4 CTCs**

Not Applicable

#### **6.1.1.4.5 Logistics Support Areas**

Training institutions are responsible for storing Training Aids, Devices, Simulators and Simulations (TADSS), both classified and unclassified, that are delivered with the Air SS Training Support Package. Program Manager (PM) Air Warrior (AW) is currently in the process of determining the battery charging facilities capabilities caused by the fielding of Air SS to operational units. PM AW will ensure that any battery charging facilities solutions planned for operational units are implemented at training institutions as required.

6.1.1.4.6 Mission Training Complex (MTC)

#### **6.1.1.5 Training Services**

A. Product Manager Air Warrior (PM-AW) is responsible for the New Equipment Training Plan (NETP). United States Army Aviation Center of Excellence (USAACE) Directorate of Training and Doctrine (DOTD) training developers will input the appropriate training requirements into the System Training Plan (STRAP).

B. PM-AW must provide resources for the most cost-effective training program and strategies for operators and maintainers. These must be determined as early as possible in the program. PM-AW will ensure that the training enables Soldiers to achieve the performance levels required for proficiency as specified in the requirement documents. In accordance with (IAW) AR 350-1 Army Training and Leader Development, paragraph 5-7, funding for training development of Air SS equipment and Training Aids, Devices, Simulators, and Simulations (TADSS) for institutional, unit and sustainment training is a PM responsibility.

#### **6.1.1.5.1 Management Support Services**

The PM must coordinate funding for the life cycle of the Air SS. Standard Army management support services are available throughout the Army support system related requirements.

#### **6.1.1.5.2 Acquisition Support Services**

dLXXI Contract management services and other contract vehicles are a standard provided system for support. Product Manager Air Warrior must coordinate funding for the life cycle of the Air SS.

#### **6.1.1.5.3 General Support Services**

Product Manager Air Warrior responsible for coordinating Army or contractor support and funding for the required general support services throughout the life cycle of the Air SS.

### **6.1.2 Architectures and Standards Component**

The Institutional Architecture begins with the New Equipment Training Support Package (NETSP) developed by the Program Manager. The NETSP contains instruction on performing operator and maintainer tasks on the new item, as well as any Tactics, Techniques and Procedures (TTP) developed by the institution's Combat Developer/Training Developer, associated with the employment of the new item. The NETSP is handed off to the institution(s), where the United States Army Aviation Center of Excellence (USAACE), Directorate of Training and Doctrine (DOTD), provides the package to their Training Development Division for refinement and development of the training support system used in the institution. The NET TSP will be used to revise existing POIs. Soldier Training Products will be developed, given to the distributed Learning (dL) element, for media formatting, and then made available for Self-Development training. Collective Training products will be developed or updated, incorporating TTP, and revising any CATS. DOTD will incorporate the developed TTP in the updates to Aviation doctrinal manuals. Institutional training on Air SS will begin within 12 months of First Unit Equipped (FUE).

#### 6.1.2.1 Operational View (OV)

A. The Air SS creates a standard Soldier-as-a-System (SaaS), System-of-Systems (SoS) ensemble of Aviation Life Support Equipment (ALSE) and protective equipment issued to all Army aircrew members. It enables the aircrew member(s) to efficiently integrate with, and better exploit, aircraft system capabilities by providing improved connectivity to aircraft systems and other crewmembers. The Air SS effectively improves crewmember Situational Awareness (SA), survivability, and platform interface.

B. Air SS provides improved survivability for downed aircrews on land and in water; increased probability of recovery of downed aircrew members; and improved logistics for ALSE items. Aircrew members will use the Air SS in all operational environments (desert, forested, urban, mountainous, jungle, etc.) and in support of all types of operations, from small-scale contingencies and stability operations through major combat operations. The system is modular in design to permit tailoring based upon Mission, Enemy, Terrain/Weather, Troops Available, Time, and Civilian (METT-TC) considerations.

C. Air SS uses two communications components, an electronic notebook computer display called the Mission Display Module (MDM) with Soldier Computer Module (SCM), and the legacy Aircraft Wireless Intercom System (AWIS), an internal communications capability for the aircrew.

1. The MDM is wired directly to the Blue Force Tracking (BFT) Satellite Communications (SATCOM) transceiver. The only interface with the aircraft is power and SCM input. The Mission Display Module (MDM) displays the graphics and the SCM the control device. The MDM is mounted on the platform's dashboard left/right side. It is an Air SS external communications device. The MDM utilizes the BFT system to provide digital connectivity to Joint/Combined forces and the Global Information Grid (GIG). It also interfaces with the Aviation Mission Planning Station (AMPS), and aircraft "A-kit" (BFT and Global Positional System (GPS) hardware) as well as power to provide multiple mission support functions. These include moving map displays, aircraft performance planning (weight and balance, E6B Flight Computer operations, etc.), flight navigation and mission planning, mission planning fly ahead rehearsal, digital publications (checklists, manuals, and approach plates) and recording handwritten notes.

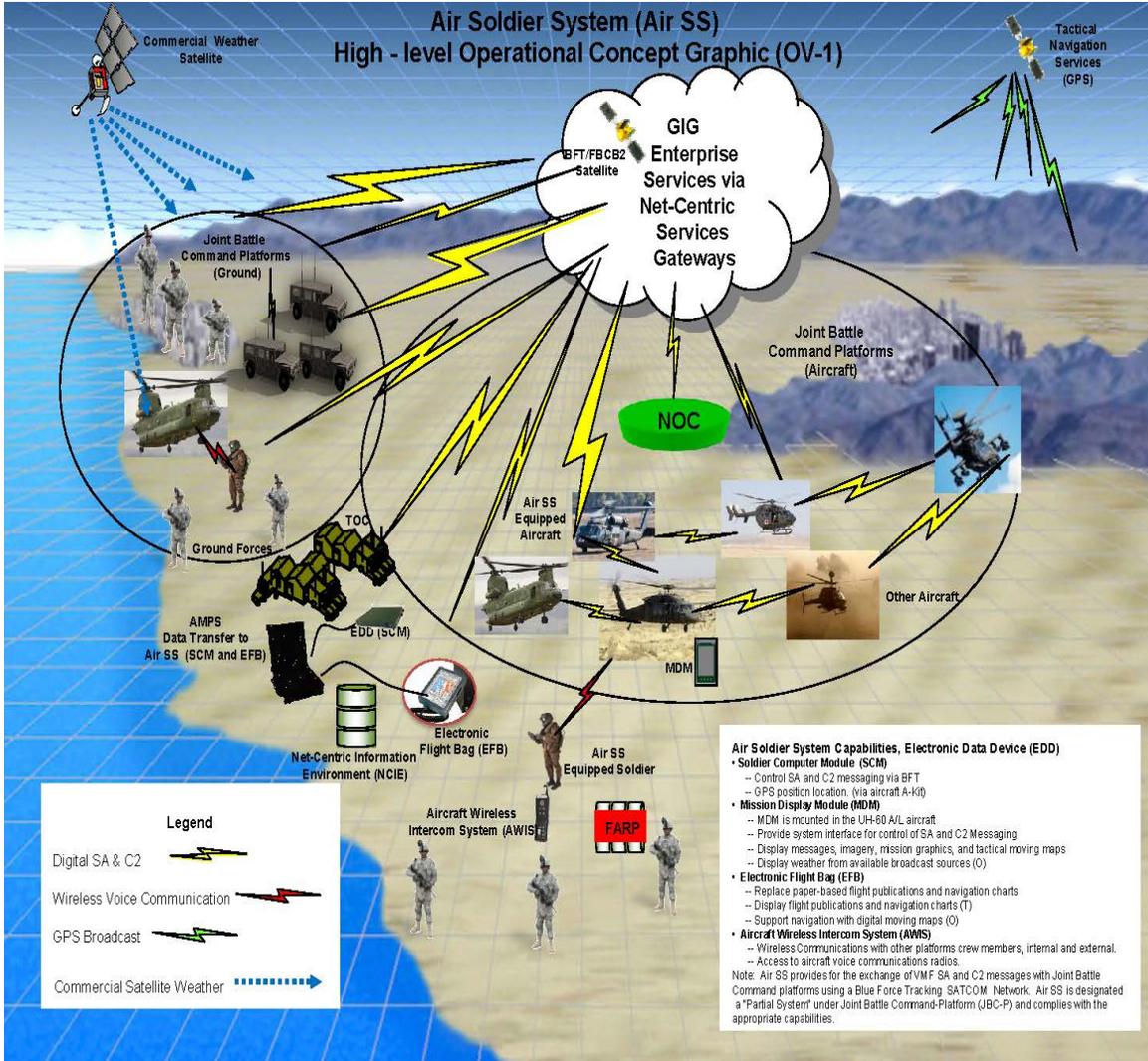
2. The legacy AWIS establishes simultaneous independent nets for up to forty aircraft with up to six aircrew users each, within the aircraft (and within 1/2 mile from the center of aircraft) with voice activated

hands-free or push-to-talk Omni-directional voice communications, and access to the aircraft's radios.

D. Typical Air SS mission connectivity will be between Air SS equipped aircraft/air crewmembers, assembly areas (to include PZs and LZs), Forward Area Refueling Points (FARPs), and at downed aircraft locations. The MDM will be used with the BFT SATCOM transceiver. It will host battle command software that allows the pilot and copilot to maintain situational awareness (SA), by providing the ability to access a "common operational picture" (COP) presenting current information on adversary and friendly forces, neutral elements, the environment, geospatial information, and integrate information on location and identity of friendly forces.

#### **High-level Operational Concept Graphics (OV-1)**

# Air Soldier System (Air SS) High - level Operational Concept Graphic (OV-1)



**Legend**

- Digital SA & C2
- Wireless Voice Communication
- GPS Broadcast
- Commercial Satellite Weather

**Air Soldier System Capabilities, Electronic Data Device (EDD)**

- **Soldier Computer Module (SCM)**
  - Control SA and C2 messaging via BFT
  - GPS position location, (via aircraft A-VG)
- **Mission Display Module (MDM)**
  - MDM is mounted in the UH-60 A/L aircraft
  - Provide system interface for control of SA and C2 Messaging
  - Display messages, imagery, mission graphics, and tactical moving maps
  - Display weather from available broadcast sources (O)
- **Electronic Flight Bag (EFB)**
  - Replace paper-based flight publications and navigation charts
  - Display flight publications and navigation charts (T)
  - Support navigation with digital moving maps (O)
- **Aircraft Wireless Intercom System (AWIS)**
  - Wireless Communications with other platforms crew members, internal and external.
  - Access to aircraft voice communications radios.

Note: Air SS provides for the exchange of VMF SA and C2 messages with Joint Battle Command platforms using a Blue Force Tracking SATCOM Network. Air SS is designated a "Partial System" under Joint Battle Command-Platform (JBC-P) and complies with the appropriate capabilities.

#### 6.1.2.2 Systems View (SV)

A. The Mission Display Module (MDM) is a computer display with Soldier Computer Module (SCM). The application software provides the aircrew member the ability to re-plan mission segments and generally react to changes in flight. The MDM attaches to the platform's dashboard to permit viewing and operation. It receives power and signal input from aircraft systems. It uses the aircraft Global Positioning System (GPS) and moving map. The screen is sunlight readable and uses Windows-based software. Software includes a Force XXI Battle Command Brigade and Below (FBCB2) type battle command application. It provides an Situational Awareness (SA) display and Variable Message Format (VMF) messaging. Also, flight management paper products are provided in an electronic format. EDD features include the following:

- Displays moving maps (aircraft position and waypoints).
- Imports mission planning data.
- Provides capability for weight and balance calculations.
- Provides capability for aircraft performance planning calculations.
- Provides capability for electronic notes.
- Provides an interface to transmit and receive the aviation core VMF message set defined by Joint Battle Command-Platform (JBC-P) (A).

B. The Air SS will utilize a GPS system that incorporates a Selective Availability Anti-Spoofing Module (SAASM) and complies with [CJCSI 6130.01E](#) 15 December 2008, "NAVSTAR Global Positioning System 33 Selective Availability Anti-Spoofing Module Requirements," which directs specific measures to protect GPS.

C. Air SS will interact with virtual and constructive TADSS in a seamless, synthetic environment. The goal is to produce a multi-grade, multi-echelon training events that maximize leadership opportunities and increases the frequency of each student's experience in all types of training.

### 6.1.2.3 Technical View (TV)

The Air SS will support system-to-system compatibility with the following:

- Joint Technical Architecture - Army (JTA-A)
- Common Operating Environment (COE)
- Installation Information Infrastructure Architecture (I3A)
- Army Training Information Architecture (ATIA)
- Common Training Instrumentation Architecture (CTIA)
- Live, virtual, constructive (LVC) integration architecture
- Standards and specifications for TSS components and subcomponents
- Sharable content object reference model (SCORM)

### **6.1.3 Management, Evaluation, and Resource (MER) Processes Component**

USAACE is responsible for managing the training requirements for the proponent school. Periodic reviews of course POI and lesson plans will be conducted to ensure the most up to date and relevant information is taught in training facilities. The proponent will ensure that maintainers and unit supply personnel are familiar with the Air SS warranty program (found in the applicable Technical Manual (TM)). Additional information for the management, evaluation and resource processes component can be found in the sub-paragraphs under this section.

#### **6.1.3.1 Management**

Where possible, Air SS will use existing facilities and support infrastructure. The staff training estimate in support of the Air SS will focus on the most efficient use of existing resources and precisely identify and quantify any expected shortfalls. Training development will focus on producing products that are capable of being used both in the institution and operationally. Students and evaluators will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction while maximizing available resources.

#### **6.1.3.1.1 Strategic Planning**

Planning will be conducted in accordance with:

- Joint Vision 2020
- The Army Plan and other Service plans
- Future force documentation
- TRADOC supporting plan to the Army Transformation Campaign Plan (ATCP)
- Training Support System Strategic Plan

#### **6.1.3.1.2 Concept Development and Experimentation (CD&E)**

The Air SS concept is already proven and systems are in place to upgrade Air Warrior ensemble and legacy Aviation Life Support Equipment (ALSE) equipment.

**6.1.3.1.3 Research and Studies**

Not Applicable

#### **6.1.3.1.4 Policy and Guidance**

The following documents are to provided guidance and direction for the TSS:

- Army Regulation 350-1 Army Training and Leader Development
- Army Regulation 350-38 Policies and Management for Training Aids, Devices, Simulators, and Simulations
- TRADOC Regulation 350-70 The Army Learning Policy and Systems
- TRADOC Regulation 71-20 Concept Development, Capabilities Determination, and Capabilities Integration

#### **6.1.3.1.5 Requirements Generation**

The following documents support requirements generated during the Joint Capabilities Integration and Development System (JCIDS) process for the Air SS.

- Capability Development Document (CDD)
- Capability Production Document (CPD)
- System Training Plan (STRAP)

#### **6.1.3.1.6 Synchronization**

A. The fielding of Air SS will be synchronized with the following as applicable to ensure that New Equipment Training (NET) occurs as units are fielded and with the following considerations:

- Training Aids, Devices, Simulators and Simulations (TADSS) Distribution Plans
- Unit rotations in the Global War on Terror
- Training institutions

B. To facilitate Shallow Water Egress Trainer (SWET), Modular Egress Training Simulator (METS) commonly referred to as "dunkers", and Emergency Breathing System (EBS) training, PM Air SS will ensure that water survival floatation devices and water survival emergency breathing apparatus are provided, in sufficient quantities, to the United States Army Aviation Center of Excellence (USAACE) and U.S. Navy, U.S. Air Force or U.S. Coast Guard accredited or certified facilities that provide training to Army aviators.

C. Full Operational Capability (FOC) for the Air SS will be achieved in FY23 when all Modified Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA) aviation units in the Active Army, Reserve, and National Guard are equipped with the fully integrated Air Soldier Increment 1c. This includes equipment required to support the training base. Equipment and maintenance spares will be issued to institutions based on the number of students trained in each affected course.

#### **6.1.3.1.7 Joint Training Support**

No joint training projected for the Air Soldier System at this time.

#### **6.1.3.2 Evaluation**

All centers/schools will conduct evaluations of their training/education on a continuing basis in accordance with AR 350-1 Army Training and Leader Development and TRADOC Regulation 350-70 The Army Learning Policy and Systems.

#### **6.1.3.2.1 Quality Assurance (QA)**

QA plans will be used in accordance with each installation's QA Plan to ensure proper course auditing is complete. The Standard Army After Action Review System (STAARS) will be used to provide feedback on each course's content and instruction. Feedback will assist each Center and School in understanding and correcting training deficiencies and will provide information that may affect the next set of equipment and or students.

#### **6.1.3.2.2 Assessments**

A. Post-Fielding Training Effectiveness Analysis (PFTEA). The United States Army Aviation Center of Excellence (USAACE) will conduct a Product Manager Air Warrior (PM-AW) funded PFTEA between 12 to 24 months after the initial fielded unit is operationally capable, or when problems are reported (e.g., high attrition course rates or MACOM complaints). The USAACE Directorate of Training and Doctrine (DOTD) will conduct the analysis, with assistance from the Directorate of Evaluation and Standardization at Fort Rucker, AL. Army Regulation 5-5, Army Studies and Analyses and TRADOC Regulation 350-32, The TRADOC Training Effectiveness Analysis (TEA) System will be used as references.

B. The PFTEA will address the following: The effectiveness of the fielded institutional Training Support Package; Comparison of actual costs to estimated life-cycle costs for all training systems; Relationship between sustainment training and soldier proficiency; Needed improvements to training in terms of cost, time, and effectiveness; Soldiers' perceptions of institutional training; Training Aids, Devices, Simulations and Simulators (TADSS) resource trade-offs (e.g., equipment and Operational Tempo (OPTEMPO)).

C. A portion of the analysis will be conducted using a written survey developed by the New Equipment Training Team (NETT) and selected Air SS subject matter experts. The analysis will include evaluations of Programs of Instruction, lesson plans, personnel selection criteria, and Situational Training Exercises (STXs). The NETT analysis of demonstrated skills by unit personnel will provide data for the evaluation. Data collected by the NETT and the results of the analysis will be staffed throughout institution conducting Air SS training. The PM will use the results of the PFTEA to improve or make changes to the Air SS Training Support Package as required.

#### **6.1.3.2.3 Customer Feedback**

Training developers will use written surveys, interviews, focus groups, and questionnaires to received feedback on quality of training.

#### **6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

Training developers will use AARs described above to provide course material, as well as, functional use evaluations. Training developers will use Center for Army Lessons Learned (CALL) documentation to analyze lessons learned from the field and will incorporate it into Air SS training as needed.











<b>Facilities/ Land</b>							
Facilities							
Land							
Site Surveys							
Concrete Pads							
AC/DC Power							
Equipment							
Maintenance							
Other							

Rationale: Estimated cost for the land and test facilities.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b>Training</b>							



Officer							
Contracts/Support							
Civilian Pay							
Travel/Per Diem	350K						
Facilities							
Equipment							
Printing							
TEA							
PFTEA	50K						
Other							

Rationale: Estimated cost to conduct evaluations and quality assurance.

## **7.0 Operational Training Domain**

Unit training will be conducted by unit commanders in accordance with Unit Combined Arms Training Strategy (CATS), Divisional Tactics, Techniques, and Procedures (TTP), Technical Manuals, Soldiers Manual, and appropriate doctrinal and administrative publications. Unit commanders have responsibility to:

- Ensure personnel are trained in risk mitigation procedures for the conduct of operations.
- Ensure deficiencies that can be attributed to formal training are reported to the appropriate service school(s) so corrective action can be initiated.
- Ensure that individual and collective task training is conducted on a regular basis for the Soldiers to maintain the required level of proficiency.
- Ensure institutional support is requested if training support is required.

## 7.1 Operational Training Concept and Strategy

A. Product Manager (PM) Air Warrior will provide and conduct initial Air SS training using NET Teams (NETT). Exportable training packets will be left with the unit so that the unit can develop its sustainment training program. Unit instructor pilots will annotate aviator records showing completion of training and level of proficiency. Commanders, depending on their theater of operation, will add Air SS equipment training proficiency in their aviator readiness level (RL) progression task list. Instructor pilots will make Air SS proficiency part of their periodic readiness level evaluation of Army aviators.

B. Training Aids, Devices, Simulators, and Simulations (TADSS) will be delivered to the unit prior to fielding of equipment to units. Items provided will include: Air Soldier ensembles, Interactive Electronic Technical Manuals, and other equipment. Desktop trainer, largely software solution, will allow training on individual operator tasks on the Air SS on a typical personal computer or laptop. The system will use the actual operator controller unit interfaced with the computer to provide simulated Air SS operations in varied scenarios and missions.

C. The Air SS will use state-of-the-art distributed learning (dL) capabilities and link into the Distributed Learning System (DLS), an infrastructure which has been put in place by the Department of Defense (DoD) to support initial and sustainment training in the home station and field environment. The DLS consists of modernized classrooms supporting Interactive Multimedia Instruction (IMI) and Video Tele-Training (VTT) which have been pre-positioned at all Army installations. Utilizing satellite up and down link technology, deployable classrooms are available to support training in forward areas. In addition to the classrooms, the DLS provides the Network Control Center (NCC) and Content Servers to make the IMI available to a Soldier when and where it is needed. DLS provides the capability to enhance and sustain Total Army readiness by delivering standardized training to Soldiers and units at the right place and time using multiple delivery means and techniques. It accomplishes this by leveraging technology and training design efficiencies to provide more cost effective and efficient training.

D. Sustainment training will be an integral part of the Air SS training and leader development strategies. Training developers and unit commanders will ensure that sustainment training requirements for the Air SS are integrated into the affected unit Combined Arms Training Strategy (CATS).

E. Initial operator training for the Air SS consists of performance

oriented, hands-on training. This training program shall include an introduction, which covers the capabilities of the system and identification of components; the assembly, installation of batteries, disassembly, donning, and doffing of the Air SS; operation of the computer system which includes initialization, logging on, interfacing with the graphic displays, use of the various input devices, accessing the various programs (maps, embedded features, and reach-back routines), zeroizing or purging the system, and shutting the system down; operating the communications features to perform voice communications; to create, edit, send, manage, and receive messages and free text; use of the maps to include uploading, downloading, accessing, learning the symbology, familiarization on the selection, creation, editing, storing, retrieving, and transmitting of various overlays, and position location information/features. Employment and leader training will cover characteristics and capabilities of the Air SS; planning and employment considerations; maintenance and sustainment; and an overview of TTPs. Those selected as unit Air SS instructors will receive, in addition to all the training above, training on planning and execution of individual and collective sustainment training. The Air SS will be integrated into unit collective training at all levels.

### **7.1.1 Product Lines**

Product lines will consist of hardware, software, publications, courses, lessons, training aids, training facilities and management services that will provide the capabilities that trainers and Soldiers need to train in the operational domain.

#### **7.1.1.1 Training Information Infrastructure**

Homestation Instrumentation Training System (HITS), is used to provide a homestation, instrumented, live training system for force-on-force collective training using COTS/NDI (Nondevelopmental Items) components. HITS provides a system to train and sustain readiness at homestation and deployed sites. HITS is based on Common Training Instrumentation Architecture (CTIA) which is the foundation for common components across the live training product line.

#### **7.1.1.1.1 Hardware, Software, and Communications Systems**

PM-AW is responsible for resourcing the development of these systems to support training now and for future updates.

#### **7.1.1.1.2 Storage, Retrieval, and Delivery**

Digital access and storage of Air SS operational training and information will be made available through one or more of the following locations:

- Army Distributive Learning (dL)
- Army Knowledge Online (AKO)
- Reimer Digital Library (RDL)
- Digital Training Management System (DTMS)

#### **7.1.1.1.3 Management Capabilities**

The Air SS training products and information will be managed through the Digital Training Management System (DTMS), Distributed Learning (dL), and the Resident Institutional Training Management system (RITM)

#### **7.1.1.1.4 Other Enabling Capabilities**

Not Applicable.

#### **7.1.1.2 Training Products**

Training products associated with Operational training are centered on those items utilized during New Equipment Training (NET) and institutional training, simulations, and Distributed learning (dL). These training products will be delivered with the NET Training Support Package (TSP) during unit NET.

- The Air SS will use state-of-the-art dL capabilities and link into the Distributed Learning System (DLS)
- Computer-Based Instruction
- Distributed Interactive Simulation
- Video Tele-Training
- Desktop Simulation
- Exportable training packet

#### **7.1.1.2.1 Courseware**

Operational courseware developed for the Air SS will contain instructional packages such as Computer Aided Instruction (CAI), Computer Based Instruction (CBI), Computer Managed Instruction (CMI), Interactive Courseware, (ICW) and Interactive Multimedia Instruction (IMI) to support and sustain operational training at home station or while deployed. These instructional packages will be accessible through Army dL and AKO. Use of dL IMI is encouraged to support New Equipment Training and refresher training on this system.

#### **7.1.1.2.2 Courses**

All courses that currently instruct the Air Warrior System will be updated to Air SS as the capabilities mature and Air Warrior is replaced and or upgraded in the field

#### **7.1.1.2.3 Training Publications**

All doctrinal and training publications used for training individuals or units may be in printed and/or electronic format. The term "training publications" includes all official training literature. Proponent organizations should review Combined Arms Training Strategies (CATS) and update as required to incorporate new Air SS tasks, if appropriate. Proponent training developers will also ensure that new tasks are developed IAW TRADOC Regulation 350-70 via the Training Development Capability (TDC) system or the current approved training development tool so they can be delivered through the Digital Training Management System (DTMS) to the operating forces.

#### **7.1.1.2.4 TSP**

The Air SS Training Support Plan (TSP) will provide training products, materials, and information that supports individual and collective task that will be integrated into a training and management exercise. The multimedia TSP will be a tutorial "how to" module that permits audiences to be self-taught, wherever feasible, and will include a diagnostic test module that permits identification of Soldier training proficiency by module. Certification and sustainment training will be facilitated by the multimedia TSP left with the unit following NET. A validated Air SS TSP will be loaded into the Training Development Capability (TDC) system database or the current approved Army automated data base for delivery through the Digital Training Management System (DTMS) to the operating forces and a complete Air SS TSP will be placed on the Army Doctrine and Training Digital Library (ADTDL) for unit use in certification and sustainment training after approval by the USAACE DOTD.

### **7.1.1.3 TADSS**

Paragraphs 7.1.1.3.1 thru 7.1.1.3.5 identify the required TADSS for the Air SS in the Operational Training Domain.

#### **7.1.1.3.1 Training Aids**

Air SS training aids include compact discs or digital video disk. Product Manager Air Warrior (PM-AW) is responsible for production of CDs and DVDs. Training institutions are responsible for the production of mock ups through local Training Aid branches.

#### **7.1.1.3.2 Training Devices**

The Product Manager (PM) Air SS strategy is to initially provide hands on training on Air SS. This may occur in the classroom. The PM is responsible for the development, integration, and life cycle management of TADSS IAW Army Regulation (AR) 350-38 Policies and Management for Training Aids, Devices, Simulators, and Simulations.

#### **7.1.1.3.3 Simulators**

As required to support the operational training.

#### 7.1.1.3.4 Simulations

As required.

#### **7.1.1.3.5 Instrumentation**

As required.

#### **7.1.1.4 Training Facilities and Land**

At the operational level, the Air SS training will be conducted at existing facilities at the training centers and unit locations. Expansion of existing classrooms, training areas, CTCs, and land is not foreseen with the introduction of Air SS.

**7.1.1.4.1 Ranges**

Not Applicable

#### **7.1.1.4.2 Maneuver Training Areas (MTA)**

As required to support operational exercises.

#### **7.1.1.4.3 Classrooms**

Air SS does not require the expansion of classroom space. The training aids and mockups are not anticipated to require more space. Lessons learned from the execution of the Air SS Operational Testing (OT) may cause a modification to the classroom requirements for unit sustainment training. If classroom modifications are deemed necessary for unit sustainment training, the Product Manager for Air SS will provide funding to cover the cost of the modifications.

#### 7.1.1.4.4 CTCs

A. CTCs are facilities that provide realistic joint and combined arms training, according to Army and joint doctrine, approximating actual combat. There are four primary training centers

- Battle Command Training Program (BCTP)
- Combat Maneuver Training Center (CMTC)
- Joint Readiness Training Center (JRTC)
- National Training Center (NTC)

B. Homestation Instrumentation Training System (HITS) supports collective maneuver training for platoon-through-battalion units. HITS allows commanders to train at homestation in preparation for CTC rotations. It builds on the proven CTC train- assess- train model, to enhance Warfighting capabilities and mission readiness.

C. The Air SS will provide interfaces that allow the system to interoperate with TADSS (Training Aids, Devices, Simulators and Simulations) and with the current forces in a synthetic training environment that includes live, virtual, and constructive simulators/simulations. The Air SS must interoperate with current systems such as the Multiple Integrated Laser Engagement System (MILES), HITS, and the Combat Training Center-Instrumentation System (CTC-IS) and future Army Target Engagement Simulation System (TESS) and Joint Engagement Simulation Systems (ESS).

#### **7.1.1.4.5 Logistics Support Areas**

The home station unit is responsible for storing training devices and systems, both classified and unclassified. PM-AW is currently in the process of determining the battery charging facilities capabilities caused by the fielding of Air SS to operational units.

#### 7.1.1.4.6 Mission Command Training Centers (MCTC)

#### **7.1.1.5 Training Services**

Product Manager Air Warrior (PM-AW) is responsible for the New Equipment Training Plan (NETP). Training products developed for NET will be used as the basis for unit sustainment training. PM-AW must provide resources for the most cost-effective training program and strategies for leaders, staff, crews, and maintainers.

**7.1.1.5.1 Management Support Services**

#### 7.1.1.5.2 Acquisition Support Services

#### **7.1.1.5.3 General Support Services**

The PM is responsible for coordinating Army or contractor support and funding for the required general support services throughout the life cycle of the Air SS.

### 7.1.2 Architectures and Standards Component

A. The Air SS architecture is an environment of capabilities that empower aircraft and aircraft crewmembers to efficiently interoperate and exploit platform Command, Control, Communication, Computers and Intelligence (C<sup>4</sup>I) systems by providing continuous connectivity to platform systems, and effectively link the platform to mounted crews. Air SS will provide the combat commander increased capabilities to conduct offensive and defensive operations by providing uninterrupted connectivity to on-board platform C<sup>4</sup>I capabilities, thereby improving crew effectiveness by providing continuous Situational Awareness (SA). This is done with the Mission Display Module (MDM), and the legacy Encryptable Aircraft Wireless Intercom System (EAWIS).

B. The MDM (Threshold) provides a graphical display to pilots while flying. Air SS expands the pilot's ability to effectively control, synchronize, and distribute information, which improves the organization's ability to successfully conduct a wide range of operations. Air SS will provide pilots with increased capabilities to conduct en route mission planning, and execution through use of the MDM and intercommunications system.

C. The legacy Air Warrior EAWIS allows the air and ground crew to maintain voice communications while mounted or dismounted. This provides the aircraft commander continuous voice communications during forward arming and refueling, maintenance service, pickup zone and landing zone operations. It provides the commander the ability to determine crewmember positions when dismounted reducing the risk of personal injuries while operating around working aviation platforms. The EAWIS for non-crewmembers is currently aircraft equipment. When a ground service crew approaches the platform for servicing or other requirements, the Soldier can use an EAWIS so he/she can perform wireless voice coordination with the aircraft. The EAWIS provides Air SS an "internal" voice communications capability for the aircrew, there is no architecture required.

D. New Equipment Team (NET) training provided by Product Manager Air Warrior (PM-AW) will provide unit members with the ability to use the MDM and EAWIS to meet mission requirements. This will provide unit commanders with the tools necessary to conduct unit sustainment training utilizing these tools.

#### 7.1.2.1 Operational View (OV)

Same as 6.1.2.1.

#### 7.1.2.2 Systems View (SV)

Same as 6.1.2.2.

### 7.1.2.3 Technical View (TV)

Same as 6.1.2.3.

### **7.1.3 Management, Evaluation, and Resource (MER) Processes Component**

Where possible, Air SS will use existing facilities and support infrastructure. The staff training estimate in support of Air SS will focus on the most efficient use of existing resources and precisely identify and quantify any expected shortfalls. Training development will focus on producing products that are capable of being used both in the institution and for operational use. Students and evaluators will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction while maximizing available resources.

#### **7.1.3.1 Management**

Where possible, Air SS will use existing facilities and support infrastructure. The staff training estimate in support of Air SS will focus on the most efficient use of existing resources and precisely identify and quantify any expected shortfalls. Training development will focus on producing products that are capable of being used both in the institution and operational use. Students and evaluators will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction while maximizing available resources.

#### **7.1.3.1.1 Strategic Planning**

Planning will be conducted in accordance with:

- National Defense strategies
- Joint Vision 2020
- Army Transformation Campaign Plan (ATCP)
- United States Army Training and Doctrine Command (TRADOC) Campaign Plan
- United States Army Aviation Center of Excellence (USAACE) Campaign Plan

#### **7.1.3.1.2 Concept Development and Experimentation (CD&E)**

A. The Air SS concept encompasses the Soldier and the items of equipment that the Soldier wears, carries, or consumes. Soldier as a System (SaaS) views the crewmember(s) as the centerpiece of the combat platform and ensures crewmember(s) Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) issues are addressed. Enhancing Soldier performance on the battlefield is central to the SaaS management process transformation. The SaaS Family of Systems consists of the Core Soldier, Ground Soldier, Mounted Soldier, and Air Soldier. The Air SS concept allows for modification to current Aviation Life Support components and upgrades ensembles to comply with mission requirements. The Air SS concept allows for new equipment/capabilities including: increased situational awareness; increased crewmember protection; reduced ensemble weight and bulk; common integrated helmet and helmet display systems; advanced night vision; 3-dimensional (3-D) aural cueing; laser eye protection; environmental protection; survival (dismounted); flame resistance; combat identification; reliability; and remote physiological monitoring. Evolutionary improvements of the Air Warrior Block I, II, and III, as well as, integration into the SaaS Family of Systems requires continuous integration of improved capabilities to increase functionality.

B. Air SS supports Joint Operations, providing capabilities that enhance Net Centric Combat Operations in the Joint Environment. Increased Battlespace Awareness and Command and Control provide real time information that is immediately available and intelligence and mission planning data that enables units to share a Common Operational Picture (COP). Shared Situational Awareness (SA) promotes a greater understanding of the operational joint environment.

C. The Air SS empowers aircraft and aircraft crewmembers to efficiently interoperate and exploit platform Command, Control, Communication, Computers and Intelligence (C<sup>4</sup>I) systems by providing continuous connectivity to platform systems, and effectively link the platform to mounted and dismounted crew. Air SS will provide the combat commander increased capabilities to conduct offensive and defensive operations by providing uninterrupted connectivity to on-board platform C<sup>4</sup>I capabilities, thereby improving crew effectiveness by providing continuous SA. This is done with the Mission Display Module (MDM) and the Encryptable Aircraft Wireless Intercom System (EAWIS). Air SS provides timely mission information, both voice and data, to all aircrew members that enables mission planning for timely execution of combat

operations. Air SS provides critical mission data through integrated helmet mounted displays. Air SS increases voice communications and crew coordination between aircrew members while increasing aviator safety and mission duration; providing air crewmembers with the necessary protection for the current asymmetric threat.

D. Air SS provides increased communications and untethered thermal regulation that enables aircrew members to move about the aircraft unencumbered, as well as retain these capabilities when dismounted. It shall increase all crewmembers' ability to more rapidly detect and process information pertaining to the status of aircraft systems, threat and friendly forces, the operating environment, and mission data while concentrating on keeping the crewmembers focus of attention outside the aircraft.

E. The implementation of a secure wireless intercom system will enable all crewmembers to maintain communications with one another while dismounted during slingload and MEDEVAC operations. Dismounted crewmembers will be provided the ability to verbally communicate with other personnel in their immediate vicinity in all mission configurations and to hear the external environment without removing their helmet. Heads Up Displays allow the crewmembers to view aircraft displays containing critical flight, mission and environmental information while maintaining focus outside the aircraft. An increased field of view provided by sensory devices provides a passive measure of allowing the crewmember to perceive more of his/her surroundings visually. Using all or several of the crewmembers senses to interpret information allows transmittal of information without an over burden of one sense contributing to increased Situational Understanding (SU).

F. Air SS enables Command and Control by allowing commanders to effectively combine the elements of combat power (leadership, information, movement and maneuver, intelligence, fires, sustainment, command and control and protection). Air SS will enhance troop leading procedures, tactical problem solving and operational momentum required at all echelons of Army and joint operations.

G. Successful reconnaissance, surveillance, targeting and acquisition operations are a combined effort and require precise communications between manned and unmanned ground and air assets. Air SS components should provide aircraft crewmembers with the ability to move SA information between manned and unmanned assets in the battle space. PM Air SS should develop interfaces to existing unmanned and manned mission management/decision aiding architectures to allow team cooperative/collaborative responses to

tactical threats and enhance team survivability. As the Army continues to refine Manned/Unmanned (MUM) capabilities for Unmanned Aerial Systems and manned aircraft, PM Air SS must ensure that operator training remains relevant to the Contemporary Operational Environment (COE). Unit collective sustainment training must encompass new doctrine, tactics, and procedures as they emerge.

#### 7.1.3.1.3 Research and Studies

#### **7.1.3.1.4 Policy and Guidance**

The documents listed below direct the training effort for the Air SS:

- Army Regulation (AR) 350-1 Army Training and Leader Development
- Army Regulation (AR) 73-1 Test and Evaluation Policy
- TRADOC Regulation (TR) 350-70 Army Learning Policy and Systems
- Command training guidance

#### **7.1.3.1.5 Requirements Generation**

The following documents support requirements for Air SS.

- Capabilities Development Document (CDD)
- Capabilities Production Document (CPD)
- System Training Plan (STRAP)

#### **7.1.3.1.6 Synchronization**

A. The fielding of Air SS will be synchronized with the following, as applicable, to ensure that New Equipment Training (NET) occurs as units are fielded and with the following considerations:

- Training Aids, Devices, Simulation and Simulators (TADSS) Distribution Plans
- Army Force Generation (ARFORGEN)
- Power projection platforms
- Training institutions

B. The Army Force Generation (ARFORGEN) process is the Army's method for effectively and efficiently generating trained forces by synchronizing training resources. Air SS will support the ARFORGEN cycle by fielding components to the 1st Combat Aviation Brigade (CAB) in FY13; meeting the steady state "Ready Pool" requirement of no more than 5 CABs per year from FY 14 through FY17; with the assumption that the number of brigades per year will not exceed 5 from FY18 to FY23 (extended planning period). Individual units comprising Theater Brigades will be fielded each FY as resources allow. Priority will be to Special Operations and deploying forces. Units will be retrofitted accordingly with appropriate Increments 1b and 1c capabilities within the fielding schedule as funding and deployments dictate. The training base will be equipped as each Increment is fielded. Although the fielding strategy supports ARFORGEN, the intent is to field to the Approved Acquisition Objective (AAO), providing the most up to date kit with each subsequent fielding.

C. Full Operational Capability (FOC) for the Air SS will be achieved in FY23 when all Modified Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA) aviation units in the Active Army, Reserve, and National Guard are equipped with the fully integrated Air Soldier Increment 1c. For planning purposes, this equates to 22,599 Air SSs fielded to support the current 2009 Aviation Force Structure published 11 September 2008, and equipment required to support the training base. The required 22,599 systems is based on the actual number of crew positions by aircraft type and staff support crew members, training sets, and maintenance spares necessary to equip the entire Aviation Force Structure.

#### **7.1.3.1.7 Joint Training Support**

None required. Air SS training is individual. Army operators will use Air SS in joint environments, but there are not joint tasks to train.

#### **7.1.3.2 Evaluation**

All operational training centers will conduct evaluations of their training exercises on a continuing basis in accordance with AR 350-1 Army Training and Leader Development and TRADOC Regulation 350-70 The Army Learning Policy and Systems.

#### **7.1.3.2.1 Quality Assurance (QA)**

Unit instructors, instructor pilots, and standardization instructor pilots will provide quality assurance in Air SS training.

#### **7.1.3.2.2 Assessments**

The New Equipment Training Team (NETT) and selected Air SS subject matter experts will conduct an assessment during fielding, using a written survey. The analysis will include evaluations of Programs of Instruction, lesson plans, personnel selection criteria, and Situational Training Exercises (STXs). The NETT analysis of demonstrated skills by unit personnel will provide data for the evaluation. Data collected by the NETT and the results of the analysis will be staffed throughout institution conducting Air SS training and will be used to improve or make changes to the Air SS Training Support Package as required.

#### **7.1.3.2.3 Customer Feedback**

The following tools will be used to seek and receive feedback: written surveys, interviews, focus groups, and questionnaires.

#### **7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

AARs will be used as described above to provide course material, as well as functional use evaluations.





AC/DC Power							
Printing							
Other (Civilian		5MY					

Rationale: Estimated cost to conduct NET.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b><u>Training Products</u></b>							
Training Pubs							
TSP							
IMI							
ETM							
STP							
IETM	155K						

ARTEP/MTP							
Printing							
Distribution							
Other (Literature)	60K						

Rationale: Estimated cost to produce training products.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b><u>TADSS</u></b>							
Training Aids							
Devices	5449K						
Simulators							
Simulations							



<b>Facilities/ Land</b>							
Facilities							
Land							
Site Surveys							
Concrete Pads							
AC/DC Power							
Equipment							
Maintenance							
Other							

Rationale: Estimated cost for the land and test facilities.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b>Training</b>							



Officer							
Contracts/Support							
Civilian Pay							
Travel/Per Diem							
Facilities							
Equipment							
Printing							
TEA							
PFTEA							
Other							

Rationale: Estimated cost to conduct evaluations and quality assurance.

## **8.0 Self-Development Training Domain**

This strategy applies to all Air SS operators and maintainers. Learning is a lifelong process. Institutional, organizational, and operational training alone cannot provide the insight, intuition, imagination, and judgment needed in combat. This requires commanders at all levels to create an environment that encourages subordinates to establish personal and professional development goals. Further refinement of those interests should occur through personal mentoring by commanders and first line leaders. Conduct of battle-focused officer and NCO professional development programs are essential to leader development. Exploiting reach-back, distributed learning, and continuing education technologies support these programs.

## **8.1 Self-Development Training Concept and Strategy**

Product Manager (PM) Air SS will provide exportable Interactive Multimedia Instruction (IMI), distributed learning (dL) and train-the-trainer material. These items will be packaged so that individual Soldiers can conduct self-taught, self-paced learning. The package will monitor the Soldier's progress and level of understanding. The training will include IMI and computer based training (CBT) to provide the student with virtual hands on experience. The training will encompass both operator and maintainer training. The courseware will comply with Army Training Information System Architecture and be distributed over the Reimer Digital Library. Personnel remain MOS qualified and will utilize the Individual Training Plan (ITP) for their respective Military Occupational Specialty (MOS). Self-development is a function of the MOS ITP.

### **8.1.1 Product Lines**

Product lines will consist of hardware, software, publications, courses, lessons, training aids, training facilities and management services that will provide the capabilities that trainers and Soldiers need to train in the self-development domain.

#### 8.1.1.1 Training Information Infrastructure

TBD

#### **8.1.1.1.1 Hardware, Software, and Communications Systems**

The Air SS consists of hardware in the form of Army aircraft crew Aviation Life Support Equipment (ALSE) composed of integrated, modular, mission tailorable ALSE and protective ensembles. Individual operators and aircrews must know how to use the components and integrate them into air crew operations. Air SS development requires continuous integration of improved capabilities to increase functionality. Units will require personal computers and required software for accessing Interactive Multimedia Instruction (IMI) for soldier self-development programs.

#### **8.1.1.1.2 Storage, Retrieval, and Delivery**

Digital access and storage of Air SS operational training and information will be made available through one or more of the following locations:

- Video Teletraining (VTT)
- Army Distributed Learning (dL)
- Army Knowledge Online (AKO)
- Reimer Digital Library (RDL)

#### **8.1.1.1.3 Management Capabilities**

Air SS will utilize those existing capabilities identified for AW and future upgrades.

#### **8.1.1.1.4 Other Enabling Capabilities**

Flight crews and Aviation Life Support Equipment (ALSE) specialists must read and understand aeronautical information publications from host countries and International Civil Aviation Organizations (ICAO) to properly employ Air SS capabilities in global operations.

#### **8.1.1.2 Training Products**

Trainers and Soldiers will have the same access to training products as explained in paragraph 6.1.1.2 and 7.1.1.2 for self-development.

#### **8.1.1.2.1 Courseware**

Trainers and Soldiers will have the same access to training products as explained in paragraph 6.1.1.2.1 and 7.1.1.2.1 for self-development.

#### **8.1.1.2.2 Courses**

Trainers and Soldiers will have access to dL courses that will further their self-development of the Air SS. Courses include:

- Army Correspondence Courses
- Civilian Education Courses
- Functional Courses
- Specialty Courses

#### **8.1.1.2.3 Training Publications**

All training materials, publications and technical manuals must be available through the Army publications system in both hard copies and digital formats.

#### **8.1.1.2.4 Training Support Package (TSP)**

The Air SS TSP will provide training products, materials, and information that supports individual and collective task that will be integrated into a training and management exercise. The multimedia TSP will be a tutorial "how to" module that permits audiences to be self-taught, wherever feasible, and will include a diagnostic test module that permits identification of Soldier training proficiency by module. Certification and sustainment training will be facilitated by the multimedia TSP left with the unit following NET. A validated Air SS TSP will be loaded into the Training Development Capability (TDC) database and a complete Air SS Training Support Plan (TSP) will be placed on the Army Doctrine and Training Digital Library (ADTDL) for unit use in certification and sustainment training after approval by the United States Army Aviation Center of Excellence (USAACE) Directorate of Training and Doctrine (DOTD).

#### 8.1.1.3 Training Aids, Devices, Simulators and Simulations (TADSS)

As required.

#### **8.1.1.3.1 Training Aids**

Operational Training Aids, Devices, Simulators and Simulations (TADSS) at the unit and Training Support Centers (TSC) will be the primary source for trainers and Soldiers to achieve self-development.

#### **8.1.1.3.2 Training Devices**

Operational Training Aids, Devices, Simulators and Simulations (TADSS) at the unit and Training Audiovisual Support Centers (TASC) will be the primary source for trainers and Soldiers to achieve self-development.

#### **8.1.1.3.3 Simulators**

Not applicable at the self-development level.

#### **8.1.1.3.4 Simulations**

Not applicable at the self-development level.

#### **8.1.1.3.5 Instrumentation**

Not applicable at the self-development level.

#### **8.1.1.4 Training Facilities and Land**

Not applicable at the self-development level.

**8.1.1.4.1 Ranges**

Not Applicable

**8.1.1.4.2 Maneuver Training Areas (MTA)**

Not Applicable

#### **8.1.1.4.3 Classrooms**

Not applicable at the self-development level

#### **8.1.1.4.4 CTCs**

Not applicable at the self-development level

#### **8.1.1.4.5 Logistics Support Areas**

Not applicable at the self-development level

#### 8.1.1.4.6 Mission Command Training Centers (MCTC)

#### **8.1.1.5 Training Services**

Not applicable at the self-development level

**8.1.1.5.1 Management Support Services**

Not applicable at the self-development level

#### **8.1.1.5.2 Acquisition Support Services**

Not applicable at the self-development level

#### **8.1.1.5.3 General Support Services**

Not applicable at the self-development level

### **8.1.2 Architectures and Standards Component**

Not applicable at the self-development level

#### **8.1.2.1 Operational View (OV)**

Not applicable at the self-development level

#### **8.1.2.2 Systems View (SV)**

Not applicable at the self-development level

### **8.1.2.3 Technical View (TV)**

Not applicable at the self-development level

### **8.1.3 Management, Evaluation, and Resource (MER) Processes Component**

Not applicable at the self-development level

#### **8.1.3.1 Management**

Not applicable at the self-development level

#### **8.1.3.1.1 Strategic Planning**

Not applicable at the self-development level

**8.1.3.1.2 Concept Development and Experimentation (CD&E)**

Not applicable at the self-development level

#### **8.1.3.1.3 Research and Studies**

Not applicable at the self-development level

#### **8.1.3.1.4 Policy and Guidance**

Not applicable at the self-development level

#### **8.1.3.1.5 Requirements Generation**

Not applicable at the self-development level

#### **8.1.3.1.6 Synchronization**

Not applicable at the self-development level

**8.1.3.1.7 Joint Training Support**

Not applicable at the self-development level

#### **8.1.3.2 Evaluation**

Not applicable at the self-development level

**8.1.3.2.1 Quality Assurance (QA)**

Not applicable at the self-development level

#### **8.1.3.2.2 Assessments**

Not applicable at the self-development level

#### **8.1.3.2.3 Customer Feedback**

The following tools will be used to seek and receive feedback:

- Electronic media for surveys, help desks, collaboration
- Interviews
- Focus Groups
- Questionnaires
- Written surveys

#### **8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

AARs will be used as described above to provide course material, as well as functional use evaluations.

**8.1.3.3 Resource Processes**

The USAACE DOTD will ensure training is properly resourced by the Program Objective Memorandum (POM) briefing presented by the PM to Aviation Functional Area leadership. Resources provided by the PM will include the initial issue of Air SS Increments 1a, 1b and any system specific Training Aids, Devices, Simulations, Simulators, and Instrumentation as identified in a validated requirements document. Estimated cost are detailed below, with more information to follow as concepts mature.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b><u>Manpower-TD</u></b>	1035K						
Contractor	175K						
Civilian	5MY						
Enlisted							
Warrant							
Officer							
Contracts/Support	175K						



AC/DC Power							
Printing							
Other (Civilian		5MY					

Rationale: Estimated cost to conduct NET.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b><u>Training Products</u></b>							
Training Pubs							
TSP							
IMI							
ETM							
STP							
IETM	155K						

ARTEP/MTP							
Printing							
Distribution							
Other (Literature)	60K						

Rationale: Estimated cost to produce training products.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b><u>TADSS</u></b>							
Training Aids							
Devices	5449K						
Simulators							
Simulations							



<b>Facilities/ Land</b>							
Facilities							
Land							
Site Surveys							
Concrete Pads							
AC/DC Power							
Equipment							
Maintenance							
Other							

Rationale: Estimated cost for the land and test facilities.

<b>ITEMS RESOURCED</b>	FY14 or \$000K	FY15 or \$000K	FY16 or \$000K	FY17 or \$000K	FY17 or \$000K	FY18 or \$000K	FY19 or \$000K
<b>Training</b>							



Officer							
Contracts/Support							
Civilian Pay							
Travel/Per Diem							
Facilities							
Equipment							
Printing							
TEA							
PFTEA							
Other							

Rationale: Estimated cost to conduct evaluations and quality assurance.

**A Milestone Annex**

TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET A		PAGE 1 OF 1 PAGES	REQUIREMENTS CONTROL SYMBOL	
SYSTEM  Air Soldier System	ACAT  III	OFFICE SYMBOL  ATZQ-TDT-N	AS OF DATE  27 January 2014	
POINTS OF CONTACT	NAME	OFFICE SYMBOL	TELEPHONE	
MATERIEL COMMAND  Product Manager Air Warrior	LTC Spencer Guida	SFAE-AV-AS-JCA	256-876-4675	
Logistics Mgmt Specialist	Mr. Issaias Ortis Jr.	SFAE-AV-AS-JCA	256-876-6537	
TRADOC PROPONENT	U.S. Army Aviation Center of Excellence			
Chief, Aviation Brigade Requirements Division, CRD USAACE	LTC Robert G. Bailey	ATZQ-CDM	334-255-3653	
Chief, Aircrew Integrated Systems (ACIS) Branch, CRD, USAACE	Mr. John Popovich	ATZQ-CDM-A	334-255-9130	
Combat Developer (CD):	Mr. John Popovich	ATZQ-CDM-A	334-255-9130	

Soldier Branch, ACDD, ARCIC, TRADOC		Mr. Michael Jesse	ATFC-RU	757-788-4903
Training Developer (TD):		CW4 Karl Verley	ATZQ-TDT-N	334-255-1976
Training Developer (TD):		SFC Ryan McFarland	ATZQ-TDT-N	334-255-9656
Senior Analyst, Navigator Development Group, INC		Mr. Mark Murdock	ATZQ-CDM-A	334-255-3271
SUPPORTING PROPONENTS:				
ITEM	DATE	RESPONSIBLE AGENCY/POC		TELEPHONE
Mission Needs Statement (MNS):	25 Jul 1995	CRD, ACIS Branch USAACE	Mr. John Popovich	334-255-9130
System MANPRINT Management Plan (SMMP):	TBP			
Operational Requirements Document (ORD):	19 May 1997	CRD, ACIS Branch USAACE	Mr. John Popovich	334-255-9130
Integrated				

Logistics Support Management Plan (ILSMP):	TBP			
Training Test Support Package (TTSP):	TBP			
Qualitative and Quantitative Personnel Requirements (QQPRI):	TBP			
Basic of Issue Plan (BOIP):	TBP			
New Equipment Training Plan (NETP):	TBP			
COMMENTS: (Continue on reverse side if necessary)				

TRADOC FORM 569R-E, Aug 89

TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B				PAGE 1 OF 6 PAGES				REQUIREMENTS CONTROL SYMBOL											
SYSTEM  Air Soldier System- Increment 1a				TRADOC SYMBOL  ATZQ-TDT-N				AS OF DATE:  27 January 2014											
TRAINING PACKAGE ELEMENT/PRODUCT: New Equipment Training Products (TBD)																			
LEGEND:				MILESTONES BY QUARTER															
				FY 14				FY 15				FY 16				FY 17			
				1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
System Critical Task List																			
Program of																			



Instructor and Key Personnel (Combat Developer/NETT)																				
Validate and Verify NET TSP																				
First NET																				
Doctrine and Tactics Training (DTT)																				
<p>NOTES: Use one sheet for each Training Element or product and use as many sheets as required for a complete list.</p>																				
<p>COMMENTS: (Continue on reverse side if necessary)</p>																				

TRADOC FORM 569-1-R-E, Aug 89															81/2				
<p>TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B</p>										<p>PAGE 2 OF 6 PAGES</p>					<p>REQUIREMENTS CONTROL SYMBOL</p>				
<p>SYSTEM Air Soldier System- Increment 1a</p>										<p>TRADOC SYMBOL ATZQ-TDT-N</p>					<p>AS OF DATE: 27 January 2014</p>				
<p>TRAINING PACKAGE</p>																			

ELEMENT/PRODUCT: Institutional Training Products (TBD)

LEGEND:	MILESTONES BY QUARTER															
	FY 14				FY 15				FY 16				FY 17			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Initial Individual Training Plan (ITP)																
Annotated Task List																
Course Administrative Data (CAD)																
Program of Instruction (POI)																
System Tasks in Training Development Capability (TDC) system																
Training Aids, Devices, Simulators and Simulations (TADSS)																

Army Training Literature:																	
Electronic Technical Manuals, Soldiers' Manual, Trainers' Guide, Army Training and Evaluation Program Products																	
Distributed Learning																	
Interactive Multimedia Instruction (IMI)																	
Professional Development Courses																	
Resident Course Start Date																	
Training Effectiveness Analysis																	
NOTES: Use one sheet for each Training Element or product and use as many sheets as required for a complete list.																	
COMMENTS: (Continue on reverse side if necessary)																	


TRADOC FORM 569-1-R-E, Aug 89														81/2			
TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B				PAGE 3 OF 6 PAGES				REQUIREMENTS CONTROL SYMBOL									
SYSTEM  Air Soldier System- Increment 1a				TRADOC SYMBOL  ATZQ-TDT-N						AS OF DATE:  27 January 2014							
TRAINING PACKAGE ELEMENT/PRODUCT: Unit Sustainment Training Products (TBD)																	
LEGEND:		MILESTONES BY QUARTER															
		FY 14				FY 15				FY 16				FY 17			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
New Equipment Training Support Package																	
Distributed Learning																	



TRADOC FORM 569-1-R-E, Aug 89

81/2

<p>TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B</p>		<p>PAGE 4 OF 6 PAGES</p>				<p>REQUIREMENTS CONTROL SYMBOL</p>											
<p>SYSTEM  Air Soldier System- Increment 1b</p>				<p>TRADOC SYMBOL  ATZQ-TDT-N</p>				<p>AS OF DATE:  27 January 2014</p>									
<p>TRAINING PACKAGE ELEMENT/PRODUCT: New Equipment Training Products (TBD)</p>																	
<p>LEGEND:</p>		<p>MILESTONES BY QUARTER</p>															
		<p>FY 14</p>				<p>FY 15</p>				<p>FY 16</p>				<p>FY 17</p>			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<p>System Critical Task List</p>																	
<p>Program of Instruction</p>																	



and Key Personnel (Combat Developer/NETT)																	
Validate and Verify NET TSP																	
First NET																	
Doctrine and Tactics Training (DTT)																	
<p>NOTES: Use one sheet for each Training Element or product and use as many sheets as required for a complete list.</p>																	
<p>COMMENTS: (Continue on reverse side if necessary)</p>																	

TRADOC FORM 569-1-R-E, Aug 89															81/2		
<p>TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B</p>					<p>PAGE 5 OF 6 PAGES</p>					<p>REQUIREMENTS CONTROL SYMBOL</p>							
<p>SYSTEM Air Soldier System-Increment 1b</p>					<p>TRADOC SYMBOL ATZQ-TDT-N</p>					<p>AS OF DATE: 27 January 2014</p>							
<p>TRAINING PACKAGE ELEMENT/PRODUCT: Institutional Training Products (TBD)</p>																	

LEGEND:	MILESTONES BY QUARTER															
	FY 14				FY 15				FY 16				FY 17			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Initial Individual Training Plan (ITP)																
Annotated Task List																
Course Administrative Data (CAD)																
Program of Instruction (POI)																
System Tasks in Training Development Capability (TDC) system																
Training Aids, Devices, Simulators and Simulations (TADSS)																
Army Training																







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TRADOC FORM 569-1-R-E, Aug 89	81/2
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## **B References**

1. Soldier as a System (SaaS), Initial Capabilities Document (ICD), Army G3 approved CARDS # 02062 18 Dec 2006.
2. SaaS Initial Capabilities Document (ICD), Joint Requirements Oversight Council (JROC) approved 21 October 2005
3. Core Soldier System (CSS) revision 3, Capability Production Document (CPD), Army G3 approved CARDS # 02070 16 Feb 2010.
4. Air Soldier System (Air SS), Capabilities Development Document (CDD), Army G3 approved CARDS # 05083 22 Nov 2011.
5. Air Warrior Operational Requirements Document (ORD), re-validated November 2003, CARDS #05027.
6. Air Soldier System (Air SS) Draft CPD, anticipated Department of the Army AROC Staffing 18 August 2014
7. TRADOC Regulation 10-5-7 United States Army TRADOC Analysis Center 20 July 2010
8. Army Regulation 5-5 Army Studies and Analyses 13 April 2011

C Coordination Annex

Organization/POC (Date)	Summary of Comments Submitted (A/S/C)			Comments Accepted/ Rejected						Rationale for Non-Acceptance - S, C
				Accepted			Rejected			
	A	S	C	A	S	C	A	S	C	
v2.2.3 James E Baker 2014/10/07 - 2014/10/17	Document Accepted As Written			0	0	0	0	0	0	-
v2.2.2 Approvals - Michael P Donohue 2014/10/03 - 2014/10/13	Document Accepted As Written			0	0	0	0	0	0	-
v2.2.2 Approvals - Robert A Story 2014/10/03 - 2014/10/13	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - USAACE - Aviation School 2014/07/15 - 2014/08/05	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - CYBER CoE - OCOS 2014/07/15 - 2014/08/05	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - PM Fixed Wing 2014/07/15 - 2014/08/05	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - PM Air Warrior 2014/07/15 -	No Comments Submitted			0	0	0	0	0	0	-

2014/08/05										
v2.2 Army - PEO Aviation 2014/07/15 - 2014/08/05	0	1	0	0	1	0	0	0	0	
v2.2 Army - ICoE - Mil Intelligence School 2014/07/15 - 2014/08/05	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - USASOC 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - USAACE - Aviation School 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - TPIO-BC 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - CYBER CoE - OCOS 2014/06/05 - 2014/07/05	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - SCoE 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - PM Air Warrior 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - MSCoE - MANSCEN 2014/06/05 -	1	0	0	1	0	0	0	0	0	

2014/07/05										
v2.1 Peer - MCoE - Infantry & Armor School 2014/06/05 - 2014/07/05	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - ICoE - Mil Intelligence School 2014/06/05 - 2014/07/05	5	1	0	5	1	0	0	0	0	
v2.1 Peer - ATSC Fielded Devices 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - ATEC 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - Aerial ISR Systems 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - 84th Training (USAR) 2014/06/05 - 2014/07/05	No Comments Submitted			0	0	0	0	0	0	-

<b>Key</b>
Completed Review with Comments
Completed Review, No Comments
Active Review Occurring

ATZQ-TD

OCT 08 2014

MEMORANDUM FOR RECORD

SUBJECT: Approval of the System Training Plan (STRAP) for the Air Soldier System (Air SS), Version 2.2

1. Reference: System Training Plan Version 2.2, Air Soldier System.
2. The STRAP for the Air Soldier System (Air SS) is approved. Approved STRAP will be posted to the Central Army Registry (CAR) website. This STRAP can be found at the following web address: <http://www.adtdl.army.mil/>.
3. The USAACE DOTD POC for this action is: Mr. Andrew Lecuyer, 334-255-2584 DSN (558) email: [andrew.b.lecuyer.civ@mail.mil](mailto:andrew.b.lecuyer.civ@mail.mil), U.S. Army Aviation Center of Excellence, ATTN: ATZQ-TDT-N, Fort Rucker, AL 36362-5202.

  
JAMES E. BAKER, JR.  
Colonel, Aviation  
Director of Training and Doctrine

Approval Memorandum for Air Soldier (Air SS) STRAP