

**BY ORDER OF THE COMMANDER
AIR FORCE GLOBAL STRIKE COMMAND**

**AIR FORCE GLOBAL STRIKE COMMAND
INSTRUCTION 36-283**



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Personnel

**INTERCONTINENTAL BALLISTIC MISSILE
TRAINING SYSTEM MANAGEMENT
(MAJCOM/NAF/WING)**

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This instruction implements AFPD36-22, *Air Force Military Training* and AFI36-2251, *Management of Air Force Training Systems*, and applies to Headquarters Air Force Global Strike Command (HQ AFGSC), Space and Missile Systems Center (SMC), Space Innovation and Development Center (SIDC), 20th Air Forces (20 AF), all subordinate units that possess and maintain (usually under contractor support) operations training devices, as well as Air Force Reserve and Air National Guard units that also possess and maintain operations training devices. Requests for waivers or deviations from this instruction must be addressed in writing to: HQ AFGSC/A3T, 245 Davis Ave E., Barksdale AFB, LA, 71110. Refer recommended changes and questions about this publication to the Office of Primary Responsibility HQ AFGSC/A3T using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through the appropriate functional chain of command. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/>.

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1. General:

1.1. Scope. This instruction establishes procedures for the development, acquisition, testing, operation, certification, validation, modification/modernization and support of operations training devices for new or existing weapon systems in support of formal and operational training. It emphasizes that an operations training device in support of a weapon system is an integral part of an overall training system and shall be given the same priority as that of the weapon system, itself. As such, the operational requirements for operations training devices should be established concurrently with the acquisition of or modification to weapon systems.

1.2. Agencies. This instruction specifies the responsibilities of the HQ AFGSC Directorates of: Operations (A3), Plans, Programs and Requirements (A5/8), Installations, Logistics and Mission Support (A4/A7) and Manpower, Personnel and Services (A1); SMC; SIDC; 20 AF; and the Missile Wings. Additionally, this instruction describes the interaction with Air Education and Training Command (AETC), the Air Force Operational Test and Evaluation Center (AFOTEC), the Electronic Systems Center (ESC), the Ogden Air Logistics Center (OO-ALC), and other Major Commands (MAJCOMs), Unified Commands, Services, Department of Defense (DoD) Agencies and Allies.

1.3. Training System Assessment. Operations training devices must be continuously assessed to ensure they are performing as expected and meet concurrency requirements with the prime mission system. Metrics should be used to track training device concurrency to ensure operations training devices within HQ AFGSC and operations training devices within AETC that support HQ AFGSC are upgraded concurrently with the operational systems they support in order to maintain a realistic training environment through the lifecycle of the weapons system. Metrics should also be used to measure task coverage, training device effectiveness and replication of the operational tasks. Additionally, metrics should track training device utilization through evaluations of failure rates, repair time and down time.

1.4. Hardware Additions. Non-configured additions (equipment not identified in any Technical Order (TO)/Technical Manual (TM), such as printers, phones, fire alarm panels, etc.) may be made to operations training devices only when absolutely essential for training mission accomplishment or safety. They must not be electronically integrated with trainer circuitry nor in any way alter form, fit or function of a configured item without prior HQ AFGSC/A3T approval. When placed in the operations training device, they must represent a like item in the operational system. Organizations installing non-configured additions will notify HQ AFGSC/A3T in writing prior to installation and upon removal of non-configured additions.

1.5. Software Version Releases. As new software versions are planned for the training device, notify HQ AFGSC/A3TO for tracking and planning purposes. HQ AFGSC/A3TO will determine SIMCERT requirements for the new software version. Training device software should be updated and checked out prior to performing operational updates of weapons system software.

1.6. Classified Information Protection. Facilities containing operations training devices may include equipment that contains classified data and should be considered for controlled area protection in accordance with (IAW) Department of Defense (DoD) directives. All equipment that contains classified data is considered classified at the level of that data, so long as the data is present. In all cases the data must be removed per security guidelines to declassify the

equipment. When the data cannot be removed, the equipment remains classified and must be safeguarded accordingly.

2. Roles and Responsibilities:

2.1. Directorate of Manpower, Personnel, and Services (HQ AFGSC/A1):

2.1.1. Establishes policy, procedures and funding requirements for Space Professional Development Program.

2.1.2. Directs policies and issues relating to professional development, education, training and certification.

2.1.3. Develops, integrates and implements, where appropriate, National Security Space community professional development initiatives.

2.1.4. Develops the Manpower Estimate Report (MER) for new systems.

2.2. Directorate of Operations (HQ AFGSC/A3):

2.2.1. Defines relationships with respect to operations training device acquisition, support and modification programming, planning and budgeting policies and responsibilities to include HQ AFGSC use of operations training devices that are managed/supported outside of HQ AFGSC. Develops Memoranda of Agreement (MOA) as required.

2.2.2. Establishes the HQ AFGSC Training, Testing, Exercise and Evaluations Command Lead (HQ AFGSC/A3T) who is responsible for policy and guidance for AFGSC ICBM training systems. HQ AFGSC/A3T roles and responsibilities include the following:

2.2.2.1. Establishes required characteristics for operations training device acquisitions and modifications.

2.2.2.2. Establishes and implements HQ AFGSC Training device certification (SIMCERT) policy and guidance, and develops and maintains the HQ AFGSC SIMCERT program.

2.2.2.2.1. Determines the need, type, procedures and frequency of SIMCERT certifications/re-certifications.

2.2.2.2.2. Approves waivers or deviations to SIMCERT requirements.

2.2.2.3. Approves waivers and deviations affecting operations training devices in HQ AFGSC and ICBM training devices within AETC supporting HQ AFGSC in coordination with HQ AFGSC/A5.

2.2.2.4. Maintains a master listing of all simulation/operational software programs and supplemental software changes approved for use or testing in the operations training devices.

2.2.2.5. Supports Electronic Systems Center/Space and Missile Systems Center (ESC/SMC) managed acceptance tests, AFOTEC-conducted Operational Test and Evaluations (OT&E), 595th Space Group operational testing, Computer Resources Life Cycle Management Plan (CRLCMP) and any other special project testing for space operations training devices in conjunction with HQ AFGSC/A5.

2.2.3. Ensure participation in Integrated Concept Teams and Training Planning Team (TPT) meetings to ensure quality and concurrency of operations training devices in acquisition. The HQ AFGSC/A3 Branch Chief which has primary responsibility for the operational system,

assumes responsibility of co-chair, along with AETC, for the TPT after operational acceptance. Identifies test team training requirements to the TPT.

2.2.4. Ensures development, tracking and distribution of metrics on utilization and effectiveness of operations training devices. Analyzes trends to identify training system shortfalls and new requirements. Ensures operations training devices provide accurate, credible training IAW HQ AFGSC instructions and the applicable system specific task lists.

2.2.5. Works with Numbered Air Force (NAF)/Wing training experts to review, prioritize and submit deficiency reports to the appropriate Office of Primary Responsibility (OPR) for corrections.

2.2.6. Hosts an annual training conference (Training Advisory Group (TAG)) to include discussions on operations training devices.

2.2.7. Provides command authorization, distribution, monitoring and disposition of operations training devices.

2.2.8. (Missile Procedures Trainer [MPT] only.) Evaluates Materiel Deficiency Reports (MDR), Product Quality Deficiency Reports (PQDR), functional evaluation program reports and SIMCERT deficiencies for training device impact with NAF level experts.

2.2.9. Reviews and evaluates training device modification proposals and engineering feasibility studies and prioritizes all approved modification proposals and studies with NAF level experts.

2.2.10. Assigns stand-alone training systems to closely-aligned program elements.

2.2.11. Maintains an operations training resource inventory, oversees movement of operations training devices, and manages disposition of excess operations training devices (in coordination with the System Program Office (SPO)).

2.2.12. Identifies and prioritizes operational requirements to HQ AFGSC Command Lead for training system acquisition and modification; advocates modification recommendations.

2.2.13. Uses Instructional Systems Development (ISD) to determine required training equipment capabilities.

2.2.14. Establishes/develops policy, guidance, standards, tasks, and formal operations training requirements for space combat operations training and evaluation.

2.2.15. Oversees operations technical order/manual requirements, monitors accuracy, and facilitates corrective action.

2.2.16. Manages the operations standardization and evaluation program.

2.3. Directorate of Installations, Logistics and Mission Support (HQ AFGSC/A4/7):

2.3.1. Establishes logistics support management and Quality Assurance (QA) policy and guidance in coordination with HQ AFGSC/A3/A5 for AFGSC-owned operations training devices.

2.3.2. Establishes and maintains a configuration control management program for AFGSC-owned operations training devices.

2.3.3. Ensures configuration control status records are maintained for each fielded training device through NAF level experts.

2.3.4. Participates in TPTs as required.

2.3.5. Assists unit Project Officers (PO) in resolving weapon system supply difficulties for those weapon system parts utilized in the trainer. Assists units in resolving Contractor Logistics Support (CLS)/Contractor Support (CS) difficulties.

2.3.6. Reviews Administrative Contracting Officer (ACO) letters of delegation to POs.

2.3.7. Establishes standards, tasks, and formal training requirements for maintenance training systems; develops maintenance training, evaluation policy, and guidance.

2.3.8. Manages maintenance training system sustainment activities.

2.3.9. Jointly responsible with 20 AF/A4 for procurement, configuration control, and administration of the ICBM Maintenance Trainer Program.

2.3.10. Ensures currency of maintenance training system TOs/TMs.

2.3.11. Develops and monitors metrics on maintenance training device usage.

2.3.12. Identifies maintenance training system requirements to A5 and the TPT.

2.3.13. Maintains a maintenance training resource inventory, oversees movement of training devices, and manages disposition of excess training devices (in conjunction with the SPO).

2.4. Directorate of Plans, Programs and Requirements (HQ AFGSC/A5/8):

2.4.1. Serves as the HQ AFGSC focal point for coordinating the acquisition of operations training devices in conjunction with coordinating acquisition of a new weapon system or major modifications/upgrades to an existing weapon system.

2.4.2. Ensures operational training requirements are identified for a new weapon system and major modifications/upgrades to operations training devices during the acquisition process.

2.4.3. Ensures Required Asset Availability (RAA) date is established so that acquisitions of operations training devices are assigned the same priority as the weapon system. Ensures operations training devices are scheduled to be available in time for the deployment of a new weapon system.

2.4.4. Advocates for HQ AFGSC requirements during the acquisition, modification and support of operations training devices.

2.4.5. Prior to operational acceptance, the HQ AFGSC/A5/8 branch chief with primary responsibilities for the operational system co-chairs, along with AETC, the TPT. The HQ AFGSC/A5/8 branch chief with primary responsibilities for the operational system ensures A5/8 participation in the TPT after operational acceptance of the system.

2.4.6. Ensures operations training device concepts and requirements are documented in requirements publications.

2.4.7. Provides technical and operational assistance to acquisition SPOs during program development.

2.4.8. Coordinates with AETC on acquisitions of operations training devices supporting HQ AFGSC to ensure that procurement of operations training devices for Initial Qualification Training (IQT) and Mission Qualification Training (MQT) are combined, where possible, to

achieve economies in procurement and commonality of IQT and MQT space operations training devices. Advocates for SIMCERT funding early in program acquisition.

2.4.9. Programs for resources and funding needed for operations training devices in conjunction with the SPO.

2.4.10. Ensures space operations training device SIMCERT requirements are included during contract acquisition and are included in delivery.

2.4.11. Ensures appropriate training is provided in conjunction with system modifications and new acquisitions.

2.4.12. Issues policies, procedures, and guidance for implementation of DoD acquisition guidance regarding training system development and management.

2.4.13. Programs funding for approved training requirements based on AFGSC priorities.

2.4.14. Leads and facilitates AFGSC Integrated Planning Process (IPP) activities.

2.4.15. Develops the Program Objective Memorandum (POM).

2.4.16. Co-chairs the operations training Technical Planning Integrated Product Team (TPIPT).

2.4.17. Participates in TPTs as required by the TPT chair.

2.5. Space and Missile Systems Center (SMC):

2.5.1. Serves as the focal point for acquisition logistics.

2.5.2. Identifies, defines, designs, develops, produces, acquires, delivers, installs and upgrades logistics support capability requirements through the acquisition process for AFGSC operations training devices.

2.5.3. Co-chairs the Training TPIPT with A5/8.

2.5.4. Participates in the TPT.

2.5.5. Participates in the annual AFGSC Training Conference (TAG), as required.

2.5.6. The Training Acquisition Office (TAO) provides training and acquisition expertise to the SPOs at SMC for the development of operations training devices that meet AFGSC and AETC needs.

2.5.7. The STAO assists SPOs in the development of operations training devices before and after new system contract awards.

2.5.8. Responsible for Operations technical management to include: TOs/TMs and engineering drawings and specifications.

2.6. Space Innovation and Development Center (SIDC):

2.6.1. Performs operational testing on new/modified operations training devices, as required.

2.6.2. Maintains and operates the AFGSC Distributed Mission Operations Center of Excellence for Space (DMOC-S) implementing the distributional training capability of AFGSC operations training devices.

2.7. 20th Air Force:

2.7.1. Provides staff assistance for operational concerns, as requested by HQ AFGSC/A3T, and

monitors the use of trainers in support of training/evaluation programs.

2.7.2. Whenever possible, provides staff assistance operations training device expert at NAF and Wing level for each mission unique operations training device.

2.7.3. Participates in the annual AFGSC Training Conference (TAG) and TPTs, as required.

2.7.4. 20 AF/A4: Jointly responsible with AFGSC/A4/7 for procurement, configuration control, and administration of the ICBM Maintenance Trainer Program.

2.7.5. Conveys common missile operations training needs to HQ AFGSC/A3T. This does not preclude system-unique acquisition or modification. Common training needs may support multiple units or locations.

2.8. Missile Wings:

2.8.1. Submit unit requested training device changes, modifications, updates or enhancements through their respective NAFs to HQ AFGSC/A3T for processing via an AF Form 1067, **Modification Proposal**. If applicable, coordinate trainer deficiency reports with CLS to ensure that the reported deficiency is not a system malfunction.

2.8.2. (MPT only) Establish a screening point to collect and evaluate AF Forms 1067.

2.8.3. Provide operations crew members to support operations training device testing/SIMCERTs as requested by HQ AFGSC/A3T.

2.8.4. Ensure operations training devices are configured as nearly as practical to operational equipment and identify/recommend changes of hardware/software when essential to mission accomplishment or safety through their respective NAFs to HQ AFGSC/A3T for processing.

2.8.5. Provide training schedules to the contractor IAW the training device's support contract, if applicable.

2.8.6. Report operations training device gains and losses IAW AFI21-103, **Equipment Inventory, Status and Utilization Reporting** (if listed).

2.8.7. Identify a unit SIMCERT focal point to serve as a recertification test director and assist with SIMCERT procedures. Each unit will designate an OPR for SIMCERT focal points and provide that information to HQ AFGSC/A3TO via written correspondence. Provide unit personnel to conduct SIMCERTs, as required.

2.8.8. Appoint and direct unit Project Officer (PO). The PO serves as the on-site government, single point of contact to work with the support contractor. The PO ensures assigned systems are operated and maintained IAW the CLS or CS contract and that the government fulfills its contract responsibility. Specific PO responsibilities are outlined in AFPAM63-503, **Quality Assurance of Training Systems Contracts**.

2.8.9. Conduct quarterly training reviews to assess training system effectiveness.

2.8.10. Participate in AFGSC training conference (TAG) and TPTs, as required.

2.8.11. Maintain local ICBM maintenance training facilities.

2.9. Other Agencies:

2.9.1. AETC:

2.9.1.1. Develops course resource estimates (CRE) at the request of HQ AF/A3O-ST to identify resource requirements for new training requirements, based on AFGSC's Master Task List (MTL). (HQ AF/ A3O-ST is the Air Staff proponent for changes to AETC formal training courses.)

2.9.1.2. Participates in training system acquisition (HQ AETC/A5T) and identification of MTL, manpower and equipment issues (HQ AETC/A3T).

2.9.1.3. Plans, programs and budgets for AFSC-awarding training after requirements are identified and resources secured from AFGSC.

2.9.1.4. Provides training system acquisition support, including support in the development and review of requirements documents and Type 1 Training.

2.9.1.5. Identifies AETC training system requirements to HQ AFGSC/A5 during weapon system and operations training device acquisition.

2.9.1.6. Provides training system analyses and assessments.

2.9.1.7. Evaluates new training technologies to determine applicability to AFGSC training programs/systems.

2.9.1.8. Co-chairs TPTs.

2.9.1.9. Participates in the annual AFGSC Training Conference (TAG).

2.9.1.10. Provides ISD advice, as required.

2.9.1.11. Budgets and programs sustainment costs (operations and maintenance, other procurement, MILCON) for AETC initial skills and supplemental space operations courses. Unfunded AETC requirements are advocated by HQ AF/XOS in coordination with the HQ AF/DP Personnel and Training Panel.

2.9.2. AFOTEC:

2.9.2.1. Conducts OT&E for new/modified operations training device.

2.9.2.2. Identifies test team requirements for system OT&E to HQ AFGSC/A5.

2.9.2.3. Participates in system specific TPT for which it has testing responsibility.

2.9.3. Electronic Systems Center (ESC):

2.9.3.1. Develops, defines, deploys, procures and sustains (logistics support and configuration management) operations training systems to meet AFGSC and AETC requirements for the life of the associated weapons system. Integrates training systems across weapon systems where applicable.

2.9.3.2. Participates in TPTs as required.

2.9.3.3. Participates in the annual HQ AFGSC Training Conference (TAG), as required.

2.9.4. Ogden Air Logistics Center (OO-ALC):

2.9.4.1. Develops, defines, deploys, procures and sustains ICBM operations training systems to meet HQ AFGSC and AETC requirements for the life of the weapon system.

2.9.4.2. Provides configuration management for ICBM operations training devices.

2.9.4.3. Provides cost estimates and budget submissions for ICBM operations training device acquisition and modification as required by HQ AFGSC/A5.

2.9.4.4. Responsible for ICBM technical data management to include: technical orders, technical manuals and engineering drawings and specifications.

2.9.4.5. Manages ICBM software baseline for ICBM operations training devices. Incorporates changes to software baselines as directed by the AFGSC Operational Control Board.

2.9.4.6. Manages the CLS contract for ICBM operations training devices.

2.9.4.7. Participates in the annual AFGSC Training Conference (TAG).

2.9.5. Other MAJCOMs, Unified Commands, Services, DoD Agencies or Allies: Participate in TPTs, as required, to ensure their system training requirements are defined and documented in the STP.

3. Planning for Training Systems:

3.1. The AFGSC IPP is the primary means of assessing command mission capabilities in the near-, mid- and long-term. DA8 has the lead for the planning process, with the participation of representatives from each of the command's capability teams. Planners use a strategy-to-task approach to develop a Functional Area Assessment (FAA) that identifies and prioritizes required mission-related tasks and subtasks. Current and planned capabilities to perform the tasks/subtasks are then assessed using appropriate measures to determine shortfalls. The shortfalls are prioritized and documented in the Functional Needs Analysis (FNA). Next, a Functional Solutions Analysis (FSA) provides fiscally unconstrained candidate solutions to address the capability shortfalls. Finally, A5/8 develops an Integrated Investment Analysis (IIA) that provides fiscally constrained profiles based on MAA and MNA priorities to influence funds distribution.

3.2. The results of these efforts are documented in Mission Area Plans (MAP). These iterative, baseline planning documents forecast modernization efforts within each mission area to attain required capabilities. The Strategic Master Plan (SMP) is a combination of the information contained in the MAPs and MSP.

3.3. Traditionally, training is viewed as part of the prime mission system and therefore planning, funding and development for the associated training system is embedded in the prime mission system processes. Based on this approach, specific training systems will be addressed in each MAP and the MSP and ultimately the SMP as a subset of the coverage for the prime mission system. The MSP addresses training issues that cross mission areas. Training often constitutes a separate capability and frequently requires a separate materiel solution to ensure full mission readiness. To fully address training requirements, planners and functional managers must include specific details on training systems in planning documents to ensure full training capability requirements are adequately addressed. The combined efforts of A3T, as the advocate for operations training programs; A3 system functional managers, and A5/8 are required to ensure accurate representation of training requirements.

3.4. In addition to training, the planning process addresses the closely related areas of education and exercises. In addition, A3T provides inputs on AFGSC role in AF, combined and joint exercises. The National Security Space Institute (NSSI) is an integral player in Space Education

and Training and should be included in the planning process. AFOTEC and SIDC are integral players in space operations testing and should also be included in the planning process.

3.5. As part of the MSA process, the Training TPIPT explores modernization opportunities for AFGSC training, education and exercises. It provides candidate solutions to MNA training deficiencies in all mission areas identified and documented by AFGSC and AETC during their planning processes. The Training TPIPT canvasses industry and academia to identify technologies and methodologies, develop inputs and offer potential training solutions that cut across mission areas. Membership of the Training TPIPT includes representatives from AF/A3TC, HQ AFGSC/A3, AETC/A5, SMC/AX, ESC, Aeronautical Systems Center (ASC), Air Force Research Laboratory (AFRL) Human Factors Directorate, and industry. The Training Acquisition Office supports this effort by participating in concept calls and evaluations, as co-chair (with DA5) of the Training TPIPT and by providing planning inputs to DA8.

4. Training System Requirements Generation and Acquisition:

4.1. When a material solution outside of AFGSC resources is needed to correct deficiencies identified during IPP, this need initiates the first step in the Joint Capabilities Integration and Development System (JCIDS) process. DA5 is responsible for identification of requirements to SMC and ESC and serves as the liaison between the acquisition and operations communities.

4.2. Training Requirements Identification Process. AFGSC and the functional communities all play an important role in identifying required training capabilities. As prime mission system requirements are refined, A5/8, A4/7 and A3 must ensure training requirements are addressed simultaneously. AETC provides ISD advice and CRE based on AFGSC-identified training requirements. The process will vary depending upon the specific requirements and whether a system acquisition or modification is more appropriate. Impact on other training systems must also be assessed. An accurate trained personnel requirement and POM inputs are also fundamental to this effort. See AFGSCHOI 16-10, Headquarters Air Force Global Strike Command Corporate Structure for details. The training system must be delivered, installed, and logistically supportable by the identified RAA date, which in turn supports operational acceptance/IOC.

4.3. AFGSC/CC assigns command leads and capability teams whose roles and responsibilities are defined in AFGSCI 38-9, *HQ Air Force Global Strike Command Organizations and Functions*.

4.4. Integrated Concept Team. The ICT assists the command lead in acquisition tasks. The team is comprised of action officers from HQ AFGSC and other DoD agencies with expertise in operations, hardware and software engineering, logistics, contracting, safety, security and training. ICT membership may change as requirements are updated during acquisition.

4.5. Training Planning Team. The TPT is the primary body for identification of training requirements in the acquisition and management of training systems. DA8 is responsible for establishing the TPT early in the acquisition process (as early as Milestone A/Phase A). Prior to operational acceptance of the weapons system, the A5/8 branch chief primarily responsible for the operational system co-chairs the TPT, along with AETC. After operational acceptance of the weapons system, the A3 branch chief with primary responsibility of the weapons system co-chairs the TPT, along with AETC. As a minimum, the TPT will include representatives from A3TO, the SMC Wing with primary responsibility for the weapons system and SCNG/ST

Training Acquisitions Officer. The TPT chair has the authority to task any member of the TPT to accomplish actions items or write portions of the STP. TPT members are from all pertinent areas in training system life cycle design, development, acquisition, support, modification, funding, and management. Membership changes as the program matures and becomes operational; however, the TPT conducts planning and management activities throughout the system life cycle.

4.5.1. The TPT is formed and co-chaired by the AFGSC A5/8 branch chief with primary responsibility for the weapons system and AETC. Additional members may be added at the discretion of the TPT chair. The AFGSC A3 branch chief with primary responsibility for the weapons system will serve as an alternate chair.

4.5.2. TPT responsibilities include:

- Advocating for a complete training system, including funding

- Analyzing and identifying training needs

- Identifying training and training resource requirements (AFGSCI 36-2202, Mission Ready Training, Evaluation and Standardization Programs, outlines the process for submitting new or changed training program requirements)

- Developing the training concept

- Horizontal integration of training systems across weapon systems

- Developing and maintaining the STP

- Documenting training planning decisions and rationale

- Resolving training-related problems and issues

4.6. Key Documents in Training System Acquisition:

4.6.1. System Training Plan. The STP is an iterative planning document that defines the justification, design, development, responsibilities, funding, resources, support, modification, operation, and management of a training system. A STP is required for all AFGSC systems and is approved by the appropriate Capability Area Command Lead. Once approved, it is directive in nature and is used by the PEMs to determine training priorities for POM funding requests. It supports acquisition and modification processes, requirement documents, milestone/phase decisions, and identifies the concepts and strategy to attain and maintain desired training capability. In addition, the STP establishes milestones and schedules to ensure training system development, testing, and fielding to support the prime mission system at operational acceptance. The STP also documents the results of training task analyses. It is prepared as soon as possible after Milestone A/Phase A and reviewed and updated throughout acquisition. It is reviewed annually by the TPT once the system is fielded to ensure training system effectiveness and identify requirements for modification or new acquisition. AF/A3TT reviews all Acquisition Category I and II STPs. See AFI 36-2251, Management of Air Force Training Systems Attachment 2 for additional STP information and format.

4.6.2. Command, Control, Communications, Computers and Intelligence (C4I) and Information Technology (IT) documentation. The program manager/designated representative must ensure applicable documents are accomplished to address certification requirements for incorporation of training systems into communications architectures. There are several key documents that may

be required. The Command, Control, Communications, Computers and Intelligence Support Plan (C4 ISP) identifies C4I needs, dependencies and interfaces focused on interoperability, supportability and sufficiency. C4ISP development begins at the initiation of acquisition and continues throughout. The System Security Authorization Agreement (SSAA) documents security policy, architecture and processes and is a formal agreement among the Designated Approval Authority (DAA), Certification Authority, the program manager and the user. The program manager develops the SSAA based on DODI 8510.01 DoD Information Assurance Certification and Accreditation Process (DIACAP). The Certificate of Networthiness helps ensure the system adheres to security policy and is compatible with the Air Force Enterprise Network. The Certificate to Operate verifies the system and AFGSC are ready for implementation on the Air Force Enterprise Network. Connection Approval is the final system certification by the site DAA prior to connection with the local infrastructure.

4.6.3. Requirements Documents. Acquisition for space systems is governed by processes and procedures in DoDI 5000.2, Operation of the Defense Acquisition System. The JCIDS and acquisition management system use integrated architectures and an analysis of doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) in an integrated, collaborative process to define desired capabilities to guide the development of systems. Required capabilities are described in the Initial Capabilities Document (ICD). As acquisition progresses, the Capability Development Document (CDD) is used to support program initiation and refine the integrated architecture. The Capability Production Document (CPD) defines requirements during Production and Deployment/Phase C. DA5 develops these requirements documents.

4.6.4. Concepts. Written by A3, operating, functional and enabling concepts articulate required capabilities. They serve a critical role in development by providing a focus for capabilities-based resource allocation and experimentation throughout the full spectrum of joint and combined operations. Concepts also develop an understanding of the linkage between fielded capabilities/programs and proposed systems/processes, and the warfighting impact of proposed methods of employment, specific capabilities, and potential effects. Concepts impact DOTMLPF.

4.6.5. Single Acquisition Management Plan (SAMP). The SAMP is a concise, integrated document developed by the program manager that describes all relevant issues, recommends an acquisition approach and is tailored to specific program needs. The SAMP provides the management framework to support program decisions. Training may be addressed in various sections of the SAMP. A SAMP or amendment is required as the result of either:

1. Acquisition Strategy Panel direction for the initiation of a new program; or
2. A major change in acquisition or program management strategy, to include changes to scope, dollar value, or contract type.

4.6.6. **MTL.** The MTL is developed by the program manager or designated representative, coordinated with appropriate HQ AFGSC/A3 divisions and updated by the TPT. It is derived from analysis of mission tasks, prime mission and training system tasks, legacy mission equipment and additional requirements based on personnel, safety, cost, and environmental constraints. The MTL establishes a training requirements baseline and is a necessity for AETC CRE development.

4.7. Training System Requirements Analysis. A TSRA is a systematic analysis of new prime mission systems or major system modifications to determine training system requirements. A TSRA is required for all AFGSC acquisitions or as determined by the TPT. The TSRA is a formal, documented effort using the ISD process and supportability analyses. Human factors, manpower, personnel, risk assessment, training, safety, facilities, and health hazards considerations are key areas of the assessment. A TSRA should be conducted early in acquisition and address requirements throughout the system life cycle. This includes Type 1 Training necessary to achieve initial and follow-on training. The SPO program manager is responsible for the TSRA, working in conjunction with representatives from A5/8, A3, A4/7 and AETC. In most cases, the TRSA is a contractor effort. To facilitate the process, the TPT develops a consolidated list of common mission tasks by functional area from the MTTL. See AFI 36-2251, Attachment 3 for additional TSRA information.

4.8. Facilities. Determination of appropriate training facilities and the need for new facilities frequently requires a site survey. These surveys are led by HQ AFGSC/A5/8 with assistance from AFGSC/CE, the user and AETC (if applicable). Facility requirements and location must be approved by AFGSC and AETC (if applicable) before plans are final. MILCON is programmed and funded by the user command unless the MILCON is in support of a lead command-managed acquisition program (programmed/funded by the lead command).

4.9. Technical Orders. Technical orders used for system operations and maintenance must be validated by the contractor and verified by the government. Technical orders must have completed the contractor's validation as a minimum before the start of Type 1 training. If verification has been completed, red-line copies are acceptable for Type 1 training. Final technical orders must be available for use prior to the start of formal schoolhouse training. See AFI 21-114, ICBM Maintenance Management and AFGSCI 10-1202, Crew Operations, for added details.

4.10. SIMCERT. An overview of SIMCERT requirements should be included in the STP/SAMP/HSI. Initial certification should be complete within 90 days of operations training device delivery. Additional certifications will be completed within 60 days of installation of major modifications.

4.11. SIMVAL. For AFGSC, the SIMVAL program is conducted in conjunction with the SIMCERT program. All SIMVAL requirements are incorporated with the SIMCERT program.

5.0. Training System Requirements:

5.1. Off-line Requirements. Operations training devices will be physically separated from the operational system. Electronic transfer of information from the operational system to the operations training device to provide real-world scenarios for training purposes is permitted. However, the link between the mission operational equipment and operations training devices must preclude transfer of data from the operations training device to the operational system. The use of tapes, CD-ROMs or other transportable media is acceptable. Operational system inputs for training purposes will not be injected in real-time, via a physical connection, to the training system. Training devices will have the capability to connect to a dedicated training network to support AF distributed training requirements using real-world command, control and communications (C3) systems. If the training device is capable of configuration to connect to real-world C3 systems, units must establish procedures to prevent training on an operational system. These procedures and any deviations from off-line requirements must be approved by

HQ AFGSC/A3. Submit waiver requests to HQ AFGSC/A3T.

5.2. Characteristics. AFGSC requires that certain characteristics be present in all operations training devices upon delivery. See **Attachment 3, AFGSC Operations Training Systems Required Characteristics.**

5.3. SIMCERT Requirements. SIMCERT is a program designed to ensure operations training devices are maintained to their design configuration and provide accurate and credible training. A SIMCERT will be completed to ensure all newly acquired operations training devices meet designated training requirements and effectiveness levels. The SIMCERT program consists of initial certifications and recertifications. In addition, some SIMCERTs require a System Performance Evaluation (SPE) to assess operational suitability. It will set up an audit trail regarding specification and baseline data for compliance and subsequent contract solicitation or system modification. Reference the individual SIMCERT Master Plans for types, frequency and detailed specific SIMCERT requirements.

5.3.1. Initial Certification. New trainers, existing trainers just entering the SIMCERT program, as well as trainers previously decertified due to major modifications, all require an initial certification. Initial certifications will normally be conducted upon delivery of the operations training device in conjunction with development/qualification test and evaluation (D/QT&E), acceptance testing and/or initial/qualification operational test and evaluation (I/QOT&E). The results of this initial certification will establish the baseline standard and configuration for all future fielded like devices. The initial certification will consist of a task list evaluation administered by the HQ AFGSC/A3TO SIMCERT team. Task list evaluation results will establish the operations training device's certified task list baseline. Results of D/QT&E and acceptance test procedures (ATP) will establish the system performance and operational suitability baseline. The baseline will then be used by HQ AFGSC/A3TO technical personnel to develop SPE checklists that will become the basis for subsequent recertification evaluations.

5.3.2. Recertifications. In addition to an initial certification, the SIMCERT program consists of Category 1, 2 and 3 (CAT 1, 2, 3) recertifications. Recertifications are conducted on an annual basis, or, when operations training devices have undergone minor modifications, or when deficiencies, noted in a previous certification, have been corrected. Recertifications ensure operations training devices continue to perform to their delivered/expected design specifications, performance criteria and configuration levels. CAT 1 recertifications are accomplished by the unit's SIMCERT focal point; CAT 2 recertifications are completed as directed by the HQ AFGSC/A3TO SIMCERT team or program managers acting as SIMCERT directors in conjunction with the SIMCERT focal point; and, CAT 3 recertifications are conducted as determined by HQ AFGSC/A3TO.

5.3.2.1. CAT 1 recertifications will be performed annually on all operations training devices unless an initial certification, a CAT 2 or CAT 3 recertification is performed. CAT 1 recertifications will consist of a JPRL evaluation conducted by each unit SIMCERT focal point. Units will perform the SIMCERT recertification procedures as determined in the SIMCERT Master Plan for each operations training device. Every two years as part of a CAT 1 recertification, HQ AFGSC/A3TO technical personnel will conduct an SPE and will evaluate hardware/software performance using diagnostic tests, verify configuration using technical data and measure operational suitability factors using on-site logistic and maintenance data.

5.3.2.2. CAT 2 recertifications are performed on trainers receiving minor modifications. HQ AFGSC/A3TO will provide a SIMCERT director to direct the completion of a task list evaluation on the prototype/first site installed trainer. The task list evaluation will be conducted by the unit's SIMCERT focal point. HQ AFGSC/A3TO technical personnel will perform an SPE and will evaluate hardware/software performance using diagnostic tests, verify configuration using technical data and measure operational suitability factors using on-site logistic and maintenance data. Certification of follow-on sites (if applicable) will be conducted as determined by HQ AFGSC/A3TO based on the results of the first recertification and an assessment of the modification degree of risk to training effectiveness. When special capabilities or new equipment are added, a CAT 2 recertification should be required on all modified system trainers.

5.3.2.3. CAT 3 recertifications are used to evaluate training tasks decertified/downgraded as a result of initial certifications, CAT 1 or CAT 2 recertifications. When a deficiency is corrected that caused a decertification/downgrade, that task will be recertified. The scope of the CAT 3 recertification will be determined by HQ AFGSC/A3TO and could be accomplished by either the agency that performed the evaluation leading to the decertification/downgrade or other designated agencies. For example, a CAT 3 recertification resulting from a HQ AFGSC/A3TO conducted CAT 2 recertification deficiency could be conducted and reported on by the unit's SIMCERT focal point when HQ AFGSC/A3TO so determines. A trainer degraded by logistic deficiencies will be decertified for those tasks affected if those deficiencies cannot be corrected within 21 days. The unit's SIMCERT focal point will verify correction of the deficiency and its impact on affected training tasks.

5.3.3. HQ AFGSC/A3TO, Operations Training Branch, serves as the AFGSC SIMCERT program manager. Depending on the reason for the certification, and, as determined by HQ AFGSC/A3TO, the SIMCERT will either be conducted by the HQ AFGSC/A3TO SIMCERT director or the unit's SIMCERT focal point. A SIMCERT team is required and will be comprised of unit representatives: specifically, an instructor or evaluator, SMEs, operations training device operator(s), and a crew member to fill each of the required crew positions.

5.3.4. Each unit will designate an OPR for SIMCERT focal points and provide, by letter, that information to HQ AFGSC/A3TO.

5.3.5. Pass/Fail Criteria. The training device must train at least 95% of the weapon system tasks and simulate 100% of their known weapon system stimuli, IAW Attachment 2. The training device must meet this requirement to receive a pass grade from HQ AFGSC/A3T. For initial SIMCERTs, a failure to meet this criteria will result in a recommendation from HQ AFGSC/A3T to non-concur with operational acceptance of the system.

6. Support of Fielded Training Systems:

6.1. Once a prime mission system has attained operational acceptance, responsibility for monitoring the effectiveness and currency of the associated training system transfers to A3. The A3 division responsible for the prime mission system is responsible for the training system. The TPT, chaired by the A3 branch chief with prime mission system responsibility, continues to update the STP through annual reviews to ensure funding, schedule, and training requirements are adequately addressed throughout the life cycle. An A3 representative other than the applicable branch chief may serve as alternate chairman and team leader to work day-to-day TPT

issues. The TPT charter is updated to reflect the new structure. Modifications to fielded systems necessitate concurrent modifications to associated training systems.

6.2. Training System Assessment:

6.2.1. Training systems for fielded prime mission systems must be continually assessed to ensure they meet the user's needs and are concurrent with the prime mission system. The TPT has primary responsibility for this function. TPTs for each system will meet annually to assess training system effectiveness. The TPT reviews all aspects of the training system and reports on the health of the system to A3T or A4/7. Metrics that track utilization and effectiveness of training systems support this assessment (see Attachment 3 and AFGSCI 21-114, ICBM Maintenance Management). Units will report metrics for operations training systems to A3T by 31 January and 31 July. A3T will provide this data to the TPT to aid in their assessment and identification of new training requirements. The TPT's primary goal is to ensure the STP is current and that training system shortfalls are identified and adequately addressed. In assessing training system performance, the TPT will review compliance with applicable guidance, trends, use rates, logistics support, funding (budgeted and programmed), courseware, configuration management, hardware, software, instructor workload, manning and system deficiencies. The TPT will ensure training system requirements are forwarded to the appropriate agency to initiate action.

6.2.2. Squadron representatives identify, document and track training requirements. Group-level training program reviews (such as Standardization and Training Review Panels) generate consolidated inputs on training system effectiveness and new requirements. The units will conduct quarterly reviews of wing training and evaluation programs, including error analysis, initial and unit qualification training issues, training device utilization, training system deficiencies and other pertinent information.

6.2.3. Prior to the annual TPT meetings, A3T will publish a "Training Call," requesting inputs from the units on operations training system deficiencies or enhancements. Maintenance deficiencies are handled IAW AFGSCI 21-114. Units identify operations deficiencies and recommendations to A3T through their respective NAF. The TPT prioritizes the deficiencies based on mission impact. This prioritization forms the basis for the TPT input to A3T on modifications to each operations training system.

6.2.3.1. In the case of a funding shortfall, A3T will ensure the appropriate functional manager and PEM are aware of the need for corrective action, taking action to identify adequate support in the execution, budget, and planning cycles. Coordinate operations training system priority in the context of overall system funding with Deputy A3.

6.2.3.2. Minor changes to AETC courseware are forwarded to the appropriate squadron in the 381st Training Group (TRG). Major changes are accomplished IAW AFGSCI 36-2202 and coordinated through AF/A3O-ST. Course changes with resource impacts require HQ AF/A3 approval. If the changes impact training resources, AETC will normally prepare a CRE needed to initiate and sustain the changes (may lead to an AETC POM submission which HQ AF/A3F will need to advocate). If AETC resources are available, the changes will be implemented based on AF/XOSO direction. Insufficient funding requires input by the HQ AFGSC or AETC PEM into the command corporate process.

6.2.3.3. The TPT may identify training shortfalls that require an AFGSC materiel solution, either as a modification to an existing system or development of a new system. In this case, A3T will identify the requirement to A5 to ensure it is addressed by the JCIDS, is validated and is reflected in updated requirements documents and the applicable CONCEPTS. The training requirement is added to the funding projection for the system it supports. The AFGSC PEM is responsible for modifications less than \$10 million. Modifications greater than \$10 million and less than \$65 million require ICT review of the AF Form 1067 prior to JCIDS actions.

6.2.3.4. Some training programs are not linked to a specific fielded system and therefore not subject to TPT oversight. In this case, A3T will review user recommendations to determine if new programs or changes to existing programs are appropriate for command training, then forward the requirement to A5/8. Funding for these training systems will be included in the most closely aligned program element, based on Deputy A3 approval.

6.2.3.5. The TPTs will develop alternate operations training strategies in the STP to be implemented if funding shortfalls adversely impact training system acquisition, modification, or support. Implementation of alternate strategies will not take place without A3 approval. Methodologies that are not compliant with off-line training guidance require an A3 waiver, granted for a fixed time period specified in the waiver request.

6.3. Training System Funding. The STP is the basis for POM inputs for training system sustainment and acquisition. Permanent modifications to prime mission systems must include corresponding modifications to the training system. Funding for training system modifications for technology insertion, performance enhancement, and improved reliability and maintainability shall be included in the prime mission funding. PEMs must ensure that funding for training systems is identified during budget and POM submissions and accurately tracked during execution to ensure training systems are adequately funded.

6.4. Annual Training Conference. A3T will host an operations training conference that will focus on the key elements of command training systems: courseware, facilities, operations training devices, logistics support, administration and management, configuration management, instructors and training media. Operations conference participants include representatives from unit OSOT, 20 AF/A3, SWC, 381 TRG, AETC, SMC/SCNG, HQ AFGSC/A3, the SPOs and AF/A5.

6.4.1. Prior to the conference, A3T will request discussion topics and will also consider issues surfaced during the Training Call, NAF training/evaluation conferences or identified by the TPTs. During the conference, A3T will present a consolidated status report on current and emerging command training systems, based on inputs from the TPTs, the PEMs, and A5.

6.4.2. Action items identified during the training conference will be tracked by A3T until closure. A3T will provide semi-annual status updates on action items to responsible organizations.

6.5. Acceptance of Training Systems. Ensure the following prior to acceptance:

6.5.1. Compliance. The training system must be consistent with the ISD principles, HLA-compliant (as required) and comply with off-line training equipment guidance (see paragraph 5.1.).

6.5.1.1. The STP has been completed/updated to reflect required training system capabilities.

- 6.5.1.2. Courseware has been developed and validated.
- 6.5.1.3. AETC resource impacts (manpower, equipment, student man-years, etc.) have been resolved.
- 6.5.1.4. If applicable, contractor-conducted training (type 1) is complete.
- 6.5.1.5. Logistics support and a configuration management process are in place.
- 6.5.1.6. Technical data/manuals have been updated.
- 6.5.1.7. SIMCERT programs have been established/updated.

TIMOTHY M. RAY, Brigadier General, USAF
Director of Operations

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

- DoD Directive 5000.1, *The Defense Acquisition System*, 12 May 2003
- DoD Directive 5000.59, *Modeling and Simulation (M&S) Management*, 8 August 2007
- DoD Instruction 5000.02, *Operation of the Defense Acquisition System*, 8 December 2008
- DOD Instruction 8510.01, *Information Assurance Certification and Accreditation Process (DIACAP)*, 28 Nov 2007
- AFPD10-6, *Capabilities-Based Planning & Requirements Development*, 31 May 2006
- AFI10-601, *Capabilities Based Requirements Development*, 31 July 2006
- AFPD16-5, *Planning, Programming, and Budgeting System*, 29 Jul 1994
- AFI16-501, *Control and Documentation of Air Force Programs*, 15 Aug 2006
- AFI16-1001, *Verification, Validation and Accreditation (VV&A)*, 1 June 1996
- AFPD63-1; AFPD20-1, *Acquisition and Sustainment Life Cycle Management*, 3 April 2009
- AFI21-102, *Depot Maintenance Management*, 21 July 1994
- AFI21-103, *Equipment Inventory, Status and Utilization Reporting*, 14 December 2005
- AFI33-324, *The Information Collections and Reports Management Program: Controlling Internal, Public, and Interagency Air Force Information Collections*, 1 June 2000
- AFPD36-22, *Air Force Military Training*, 22 March 2004
- AFGSCI36-283, *ICBM Training System Management*, 1 December 2009
- AFI36-2248, *Operation and Management of Aircrew Training Devices*, 1 May 1998
- AFI36-2251, *Management of Air Force Training Systems*, 5 June 2009
- AFI63-501, *Air Force Acquisition Quality Program*, 31 May 1994
- AFPAM63-503, *Quality Assurance of Training Systems Contracts*, 15 October 1993
- AFPD65-6, *Budget*, 1 May 1998
- AFI99-103, *Capabilities Based Test and Evaluation*, 26 February 2008
- AFGSCI10-604, *Space Operations Weapon System Management*, 1 December 2009

TO 00-5-15, *Air Force Time Compliance Technical Order Process*, 15 May 2009

TO 00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System*, 1 May 2007

Terms

Administrative Contracting Officer (ACO). The person responsible for overall administration of the contract. The agency responsible is the contract administration office to which the ACO is assigned.

Concurrency. The condition that ready-for-training is achieved on the training need date, and that the functions and operation of the training device and its supporting equipment/materials matches the supported prime mission system.

Contractor Logistics Support (CLS). A pre-planned method used to provide all or part of the logistics support to a system, subsystem, modification or equipment throughout its life cycle. CLS covers depot maintenance and, as negotiated with the User command, necessary organizational and intermediate level maintenance, software support, and other operation and maintenance tasks.

Contractor Support (CS). A generic term which describes a support method of supplementing Air Force logistics resources either for a temporary period or for the life of a system or equipment.

Instructional System Development (ISD). A deliberate and orderly process for planning and developing instructional programs that make sure personnel are taught the knowledge, skills, and attitudes essential for successful job performance. Depends on a description and analysis of the tasks necessary for performing the job, objectives, and tests clearly stated before instruction begins, evaluation procedures to determine whether or not the objectives have been reached, and methods for revising the process based on empirical data. (See AFMAN 36-2234)

Master Task List (MTL). Documentation of total training tasks developed for a prime mission system and its respective mission. It includes the entire spectrum of tasks in each functional area (operations, maintenance and support) requiring training. The MTL provides the training task baseline for all acquisition, modification, support, management and funding actions through comparison with predecessor or future prime mission systems.

Missile Procedures Trainer (MPT). A training device that reproduces the environment and command and control functions of an ICBM launch control center. It provides individual or crew training in all aspects of the operational mission. For the purposes of this instruction, this system is a "training device". It is mentioned separately here because of it being referenced as an MPT in other operating instructions and maintenance contracts.

Operations Training Device. Any dedicated training device provided by HQ AFGSC used to train personnel on either space or missile operational tasks. The device may or may not be used to certify student capability to perform an operational task. The training system includes any software, firmware, hardware or devices directly associated with it.

Procurement Contracting Officer (PCO). The person authorized to enter into contracts on behalf of the government.

Project Officer (PO). The senior individual responsible for contract administration and other duties not assigned to the quality assurance representative (QAR). On some contracts, the PO may also be the QAR.

Prime Mission System. Any weapon system, support system, work station or end item that supports a specific military mission, therefore requiring operations, maintenance or support personnel training.

Program Manager. The PM has life-cycle responsible for the prime mission system. PM duties include providing assessments of program status and risk to higher authorities and to the operator or operator's representative; actively managing within approved resources, program cost, performance, and schedule; and providing assessments of contractor performance.

Quality Assurance (QA). A planned and systematic pattern of actions necessary to provide confidence that adequate technical requirements are established, products conform to established technical requirements and satisfactory performance is achieved.

Simulator Certification (SIMCERT). The process of ensuring through validation of hardware and software baselines that a training device and its components provide accurate and credible training. The process also makes sure the system continues to perform to the delivered specifications, performance criteria and configuration levels. It will also set up an audit trail regarding specification and baseline data for compliance and subsequent contract solicitation or system modification.

Simulator Validation (SIMVAL). The process for (1) comparing a training device's operating parameters and performance to current intelligence assessment of a weapon system, threat, and interaction between the weapon system and threat; and, (2) documenting the differences and impacts. This process includes generation of a data baseline of the system, comparison of training device and threat operating procedures and correction of any significant deficiencies. Uncorrected deficiencies are identified and published in validation reports. The process continues throughout the lifecycle of the training device.

System Performance Evaluation (SPE). A physical/visual inspection of trainer assemblies and a review of software to determine correct configuration and performance according to specifications.

System Training Plan (STP). The STP is an iterative planning document that defines the justification, design, development, funding, resources, support, modification, operation, and management of a training device. The STP is designed to provide for planning and implementation of training and to make sure all resources and supporting actions required for establishment and support are considered.

Technical Planning Integrated Product Team (TPIPT). TPIPTs are multi-constituent teams of operators and AFMCAFGSC laboratories, System Program Offices, development planners, and industry to generate, consolidate, and analyze an array of concept options and technology needs that address the operators' needs.

Training Planning Team (TPT). An action group composed of representatives from all pertinent functional areas, disciplines, and interests involved in the life cycle design, development, acquisition, support, modification, funding, and management of a specific prime mission training device.

Training System. A systematically developed curriculum including, but not necessarily limited to courseware, classroom aids, training devices and devices, operational equipment, embedded training capability, and personnel to operate, maintain or employ a system. The Training System includes all necessary elements of logistics.

Training Systems Requirements Analysis (TSRA). The initial step in user requirements identification. It consists of mission/task analysis, training requirements identification, objectives/media analysis, and training systems basis analysis.

Attachment 2

TRAINING SYSTEM REQUIREMENTS: CONSIDERATIONS

Initial skills and supplemental training

Unit qualification, mission ready, and recurring training.

Contractor training (course documentation, technical orders, maintenance manuals, and training materials)

Training system sustainment, concurrency

Off-line training systems

Dedicated training devices for equipment familiarization, practicing performance procedures, developing mechanical skills, and reinforcing academic instruction.

Training system fidelity will be determined by analysis of training requirements using the ISD process.

High Level Architecture (HLA) compliance requirements. The training system operates without impacting or being impacted by other simulation requirements for software testing and development, anomaly resolution, or operational maintenance.

Training devices meet HQ AFGSC knowledge and task proficiency levels

Trained Personnel Requirements

Key training equipment performance parameters:

Fidelity

Emulation capability

Positional and crew training

Appropriate spectrum of stimuli

Multiple scenario presentation modes

Instructor feedback tools (real time monitoring, playback, audio-visual, classroom-training device mix)

Attachment 3**AFGSC OPERATIONS TRAINING SYSTEMS REQUIRED CHARACTERISTICS:**

- A 3.1 Train at least 95% of the weapon system tasks and simulate 100% of their known weapon system stimuli. Must be able to train spectrum of stimuli to meet proficiency levels (e.g., a given performance task may have multiple entering arguments)
- A 3.2 Funded as part of the weapon/defense system and given the same priority as the weapon system
- A 3.3 Fielded prior to the deployment of the weapon/defense system (timing for deployment is program dependent)
- A 3.4 Separated physically from the operational system
- A 3.5 Located conveniently near classrooms to maximize training time
- A 3.6 For operations training devices that have classified software, must be able to easily remove classified storage media in safes or otherwise ensure the handling of classified material can easily be accomplished IAW published directives
- A 3.7 Distributed Mission Operations capable
- A 3.8 Look, sound, and feel like the actual operational equipment to support required proficiency levels (this does not mean they must be exactly the same)
- A 3.9 Emulate appropriate position console displays, messages and operational support equipment
- A 3.10 Support scenario and script development (a scenario is a performance situation or event whereas a script is comprised of one or more scenarios making a realistic operational situation)
 - A 3.10.1 Be able to access/utilize database of previously developed scripts and scenarios
 - A 3.10.2 Be able to create/maintain/change/save scenarios and scripts
- A 3.11 During scenario/script conduct, the system shall allow:
 - A 3.11.1 Capability for preprogrammed scenarios/scripts to run automatically
 - A 3.11.2 Capability for manual interaction, i.e., Start/Stop/Pause/Restart/Advance/Rewind options for any point in the scenario/script
 - A 3.11.3 Capability for instructor to manually start/advance/rewind script by “events”, “blocks” or “relative/absolute time”
 - A 3.11.4 Capability for instructor to manually inject database or non-database event at any time
 - A 3.11.5 Capability for instructor to inject correct and incorrect status displays
 - A 3.11.6 Capability for instructor to present anomaly/fault(s) stimuli
- A 3.12 Train students as individuals (by position) or as a crew
 - A 3.12.1 Positional mode — allows students of the same crew position to be trained simultaneously on the same or different task(s) such that the students’ actions are independent and do not impact other students’ training

- A 3.12.2 Crew mode — allows students of different operational positions to work as a crew, emulating the operational environment such that the students' actions are interdependent and impact other crewmember consoles
- A 3.13 Provide a physically separate instructor workstation which should interface with the student workstation to demonstrate correct procedure accomplishment
- A 3.13.1 Provide the capability for each instructor to conduct phone system operation from both the student and instructor workstations. Instructors on the “floor” must have enough mobility to move around entire training device area while being able to answer/make phone calls and start, stop, pause, restart, advance or rewind the scenario/script
- A 3.14 Provide instructor feedback tools, such as:
 - A 3.14.1 Capability for real-time monitoring of student responses/actions to scenarios/scripts
 - A 3.14.2 Capability for immediate playback of student responses/actions in a scenario/script
 - A 3.14.3 Capability to display student actions in classroom and/or training device room through a projection system
- A 3.15 Must operate so that one training system operator/instructor is able to bring the operations training device(s) up from a cold start to ready-to-train within 15 minutes and smoothly restart any paused or rewound scenarios
- A 3.16 Provided with a handbook on the operations training device operations for AF personnel

Attachment 4

METRIC TEMPLATES

Units will provide semiannual inputs on operations training devices, when requested, to HQ AFGSC/A3TO using the formats and instructions below. HQ AFGSC/A3TO will consolidate unit reports to present the overall status of command training systems.

1. Time to Train: Average Time to Combat Mission Ready (CMR)

Units will report the number of calendar days to complete MQT and certification requirements to bring IQT graduates to CMR status.

2. Operations Training Device Fidelity/Task Coverage.

Use the Job Performance Requirements List and Proficiency Levels in AFGSCI 36-2203, Volume 2 to provide a subjective assessment of operations training device fidelity in a stoplight chart. Provide narrative to further explain the rationale for the rating assigned. Our goal is to have operations training devices that look, sound, and feel like the actual operational equipment to achieve and maintain required proficiency levels. These systems should emulate appropriate position console displays, messages and operational support equipment.

Fidelity categories:

Physical (degree of physical representation, appearance, feel and function) Functional (data change rates, display response, system performance) In addition, use the Job Performance Requirements List and Proficiency Levels to indicate the percentage of the training system's coverage of designated tasks at the specified level of learning. (See **Figure A4.1.**)

Figure A4.1. Training System Fidelity/Task Coverage.

Training Device Performance

Training Device	Physical	Functional	Task Coverage	Comments
CTE	R	Y	87%	Part-task emulator used for multiple systems, limited functional capability, physical characteristics do not compare to prime systems
X (example)	Y	R	65%	Software upgrade to prime system not replicated in training system. Functionality and task coverage does not match the prime system in several key areas.
MPT	G	G	92%	Fidelity and task coverage are adequate for training at the appropriate proficiency levels.

Utilization: Report Available/Scheduled/Actual hours per month for each operations training device.

Example: 448 / 336 / 331 (device available 16 hours/day [not including scheduled maintenance] x 7 days x 4 weeks = 448 hours, scheduled for 12 hours/day = 336 hours, 5 hours of lost utilization = 331). Include an explanation for lost training time. The intent is to reflect utilization of available trainer time and lost training time due to unscheduled maintenance, equipment failure, etc.

Reliability: Mean Time Between Maintenance (MTBM). Average time between maintenance events, based on operating hours. Tracked by month.

Maintainability: Mean Downtime (MDT). Average elapsed time between loss of mission capable status and system restoration to at least partial mission capable status. This includes maintenance and supply response, administrative delays, actual on-equipment repair and other activities such as training and preventive maintenance. Tracked by month.