

**DoD  
AUTOMATIC TEST SYSTEMS  
EXECUTIVE DIRECTORATE**

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**DoD AUTOMATIC TEST SYSTEMS  
MASTER PLAN**

**2017**

# DoD AUTOMATIC TEST SYSTEMS MASTER PLAN 2017

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## **REFERENCES**

- (a) DoD Instruction 5000.02 of January 7, 2015
- (b) USD(AT&L) Memorandum of 28 July 2004
- (c) DoD Directive 4151.18 of March 31, 2004
- (d) 2016 DoD ATS Selection Process, Revision A
- (e) DoD ATS Joint MOA among Service Acquisition Executives of September 2004
- (f) OUSD(A&T) Memorandum of 2 February 2004
- (g) USAF DAF Memorandum of 26 November 2007
- (h) USAF ATS PEO Memorandum of 29 April 2016
- (i) USAF AFLCMC/WNA Memorandum of 12 May 2017

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## **1.0 Executive Summary**

This document provides a consolidated Master Plan for the implementation of the Department of Defense (DoD) Automatic Test System (ATS) acquisition policy and investment strategy. It examines the historical evolution of DoD ATS acquisition management policy, describes the Services' ATS management organizations, identifies the major participants in the DoD ATS management structure, and defines the evolving DoD ATS modernization strategy.

The plan elaborates the management processes involved in implementing the DoD ATS procurement policy stated in references (a), (b) and (c) which direct Services to satisfy Automatic Test Equipment (ATE) hardware and software needs by using designated ATS families as the preferred solution to minimize total life-cycle cost of ownership. The ATS Master Plan presents established criteria for designating future DoD ATS families and for adding testers to current designated families. It discusses the process for obtaining approval to acquire automatic testers that do not comply with DoD ATS policy. It references the tools required for selecting and implementing ATS solutions to satisfy weapon system requirements using the reference (d) DoD ATS Selection Process.

The ATS Master Plan is published pursuant to the agreement among the Service Acquisition Executives (SAEs) as documented in the Joint Memorandum of Agreement, reference (e). The DoD ATS Executive Directorate (ATS ED) is responsible for reviewing and updating the DoD ATS Master Plan on a regular basis. The 2017 DoD ATS Master Plan supersedes and replaces the 2012 and previous DoD ATS Master Plans.

## **2.0 DoD ATS Policy, Goals and Strategy**

### **2.1 Background**

A brief history of the significant events that resulted in the present DoD ATS acquisition policy and the establishment of the ATS ED and its predecessor ATS Executive Agent (EA) organization is provided as follows:

**29 April 1994:** Following congressional direction in 1992 and 1993, OSD (A&T) released policy on ATS acquisitions which stated that DoD components shall satisfy all acquisition needs for ATE hardware and software by using designated ATS families. The memorandum further designated the Army's Integrated Family of Test Equipment (IFTE) and the Navy's Consolidated Automated Support System (CASS) as the initial DoD ATS families, and specified that commercial off-the-shelf (COTS) testers and components are permitted for use at Depot and Factory levels of maintenance. The memorandum appointed the Navy as the DoD Executive Agent for ATS (ATS EA) and requested a coordinated Executive Agent Charter for issuance as a DoD Directive, recommended organizational and funding adjustments to implement this policy, and proposed acquisition changes to be incorporated in DoD Directive 5000.2.

**10 June 1994:** The Assistant Secretary of the Navy for Research, Development and Acquisition (ASN(RD&A)) issued a memorandum in which ASN(RD&A) undertook the assignment as ATS EA and accepted the following responsibilities:

- 1) Definition and management of DoD ATS standards;
- 2) Guiding ATS family product engineering;
- 3) Establishment of ATS Research & Development (R&D) requirements;
- 4) Review of ATS specifications and procurements;
- 5) Maintenance of a waiver process for OUSD(A&T);
- 6) Serve as ATS Lead Standardization Activity.

ASN(RD&A) appointed the Naval Air Systems Command, Aviation Support Equipment Program Office (PMA260) as Director of the Executive Agent Office (ATS EAO). As required by OUSD(A&T), the Army, Air Force and Marine Corps assigned ATS Senior Executives who are responsible for ATS management within their Services. To coordinate ATS matters across the Services, the ATS EAO established an ATS Management Board (AMB) comprised of the O-6 level ATS leaders in each of the Services plus US SOCOM.

**10 January 1997:** The DoD ATS Selection Process (reference (d)) was first promulgated to present the processes and procedures to be used by Program Managers (PMs) throughout DoD to select the appropriate ATS solution to meet the testing requirements for their weapon systems. The document included software models to assist in the cost benefit analyses and described the policy deviation process to be followed when use of a DoD designated ATS family is not the optimal solution.

**6 February 1997:** The ATS Executive Agent forwarded to the Component Acquisition Executives a Joint Memorandum of Agreement to document processes and procedures to be used in the acquisition of automatic test systems.

**2 February 2004:** As a result of a GAO audit of DoD automatic testing, OSD, via reference (f), directed that Navy (NAVAIR PMA260) serve as the DoD ATS Executive Directorate (ATS ED) and perform the functions previously performed as the DoD ATS EAO.

**22 June 2004:** In accordance with OSD direction, the Deputy Assistant Secretary of the Navy (Logistics) accepted the role of DoD ATS Executive Director and reiterated that NAVAIR PMA260 will continue the supporting and implementing functions previously discharged as the DoD ATS EAO.

**September 2004:** The Army, Navy and Air Force SAEs signed the Joint MOA (reference (e)) and agreed to the policies and procedures contained in this ATS Master Plan.

**November 2007:** The USAF issued a memorandum identifying Versatile Diagnostic Automatic Test Station (VDATS) as the USAF standard ATS family.

**January 2015:** DoD Instruction 50000.02 (Reference (a)) was published requiring that sustainment planning must be an integral element of the capability requirements and acquisition

process from inception and as such that the program manager “minimize unique ATE by utilizing designated DoD automatic test system families for all ATE hardware and software in DoD field and depot operations.”

**March 2015:** OPNAV N98 identified a requirement for DoN Intermediate (I) level, off aircraft, automatic testing for afloat and shore units utilizing electronic Consolidated Automated Support System (eCASS) as the ATS for I-level sustainment. This requirement is applicable to both United States Navy (USN) and United States Marine Corps (USMC) units supporting the F-35.

**May 2015:** With the emergence of a Navy intermediate level ATS maintenance requirement for support of the F-35, the Joint Program Office F-35 Support Equipment IPT Leader began attending DoD ATS Management Board meetings.

## **2.2 DoD ATS-Related Policy**

Reference (a) requires that sustainment planning must be an integral element of the capability requirements and acquisition process from inception and as such that the program manager "minimize unique ATE by utilizing designated DoD automatic test system families for all ATE hardware and software in DoD field and depot operations."

The intent of reference (a) is to define an acquisition environment that makes DoD the smartest, most responsive buyer to meet our warfighters' needs while reducing the total cost of ownership. With regard to automatic testing, this is to be accomplished through the use of approved DoD ATS Families as the preferred choice to satisfy automatic testing support requirements. Use of approved DoD ATS Families minimizes the life cycle cost of providing automatic test systems for weapon systems support at DoD field, depot, and manufacturing operations, and promotes joint service automatic test systems interoperability. Reference (d) elaborates on DoD ATS selection policy

Approved DoD ATS Families were designated by references (b) and (g) and are as follows:

- 1) Consolidated Automated Support System Family of Testers (CASS FoT)
- 2) Integrated Family of Test Equipment (IFTE)
- 3) Versatile Diagnostic Automatic Test Station (VDATS)
- 4) Marine Corps Automatic Test Equipment Systems (Now referred to as just Marine Corps Automatic Test Systems)
- 5) Joint Service Electronic Combat Systems Tester (JSECST)

The objective of the DoD ATS policy is also to minimize unique types of ATS in DoD, thereby reducing redundant ATS non-recurring investments and lessening logistics burdens and long-term costs. By minimizing unique ATS acquisitions through employment of standard family ATS, DoD seeks to leverage its ATS investment assets across the entire DoD establishment.

## **2.3 DoD ATS Goals**

Under the guidance of the OSD AT&L Deputy Assistant Secretary of Defense for Maintenance Policy and Programs (DASD MPP), the DoD ATS Executive Directorate has established four main goals for DoD ATS:

### **2.3.1 Reduce the Total Cost of Ownership of DoD ATS**

The primary DoD ATS goal is to reduce the total cost of ownership of DoD ATS. The key to attaining this goal has been stopping the proliferation of unique test systems by standardizing on designated ATS families. Additionally, ATS selections are based on a cost and benefit analysis over the complete system life cycle.

### **2.3.2 Interoperable ATS**

The flexibility required by the warfighter in modern conflict scenarios requires that the Services move toward the capability for interoperability among Automatic Test Systems. Interoperability of ATS functions is needed within the Services and across the Services. The closed architectures of most legacy DoD ATS prohibit interoperability. Standards need to be defined to help the DoD move toward this interoperability goal.

### **2.3.3 Reduce Logistics Footprint**

The need to rapidly deploy support, along with weapon systems, requires that all logistics footprint be minimized.

### **2.3.4 Improve the Quality of Test While Reducing Repair Cycle Time**

Improving the quality of diagnostics and fault isolation will reduce the time required to test, repair and return to service failed systems and components. This will in turn lead to reduced requirements for spares and reduced repair cycle time.

## **2.4 DoD ATS Management Strategy**

The DoD ATS Executive Directorate is implementing the four goals through a five-step ATS strategy as follows:

- 1) Use designated DoD ATS families to reduce total ownership costs;
- 2) Implement a DoD ATS Technical Architecture Framework to serve as the target to which all DoD ATS will evolve;
- 3) Services jointly develop test technologies and leverage each other's investments in ATS-related R&D;
- 4) Periodic "snapshot in time" system-level demonstrations of the technologies;

- 5) Given their different maintenance operational environments, Services execute their own implementations of the ATS technologies and the ATS Framework through technology insertions or acquisition of new systems.

The ATS ED maintains a DoD ATS Acquisition Handbook to aid the Program Manager who is unfamiliar with automatic testing of electronic systems and the acquisition process for Automatic Test Systems. Its purpose is to provide in a simplified, non-technical format all the information needed to make educated decisions concerning off-system automatic testing of electronic components in the PM's weapon system. The ATS Acquisition Handbook may be downloaded from the ATS ED Web Site at <http://www.acq.osd.mil/log/MPP/ats.html>.

## **2.5 Service ATS Acquisition Strategy**

### **2.5.1 Army ATS Acquisition Strategy**

ATS provides a highly mobile, rapidly deployable, general purpose, reconfigurable testing, screening, and repair capability for Army weapon systems to maintain their readiness to shoot, move, and communicate. This facilitates the diagnosis and repair of critical components at the unit and sustainment levels of maintenance providing rapid logistical support to legacy and future warfighter combat platforms.

The supported platform's maintainer finds a problem with a weapon system capability and, when available, replaces the defective Line Replaceable Unit (LRU), rapidly returning the platform to its combat/support mission. The intent of ATS is to diagnose/screen the replaced LRU allowing the soldier to repair the faulty component and return it for issue as needed. Previously, defective equipment was retrograded to a depot or OEM for test and repair. The ATS facilitates forward area rapid repair and availability of critical components, as well as significantly reducing time and expense related to "no evidence of failures" (NEOF).

Current and future Army's ATS programs support the current Modular Force structure. The Direct Support Electrical System Test Set (DSESTS), originally deployed in the early 1980s, is a system-specific ATS which supports only Abrams and Bradley variants. The Integrated Family of Test Equipment (IFTE) Base Shop Test Facility Version 3 (BSTF(V)3), originally deployed in early 1990s, supports a variety of ground combat systems and limited aviation components. The IFTE BSTF(V)5 (also known as the Electro-Optics Test Facility (EOTF)) currently being fielded provides support to Kiowa OH-58D Mast Mounted Sights electro-optical LRUs at field aviation intermediate maintenance (AVIM) support activities. In development is the IFTE Next Generation ATS (NGATS), which will be the latest ATS of the Army's IFTE product line. NGATS represents the Army's implementation of the multi-service Agile Rapid Global Combat Support System (ARGCS) Advanced Concept Technology Demonstration (ACTD). NGATS will be capable of assuming all current and projected ATS missions.

The spiral development of capabilities will allow the planned incremental replacement of aging ATS experiencing increasing obsolescence issues. The NGATS is designed with backward compatibility to replace DSESTS beginning in FY18, IFTE BSTF(V)3 in FY19, and

IFTE BSTF(V)5 in FY19. This evolutionary strategy will yield one common Army ATS, NGATS, which be networked within the Army logistics system to support the US Army's Common Logistics Operating Environment (CLOE).

The Army vision for the repair of electronic, radio frequency (RF) and electro-optic components for Army Transformation is standardized ATE, incorporating an open architecture to accommodate technology improvements. The open architecture standards for ATE will be outlined in future Army Technical Architecture revisions.

### **2.5.2 Navy/Marine Corps Air ATS Acquisition Strategy**

The Navy fully embraces the objective of minimizing unique types of ATS to reduce non-recurring investments in ATS and to lessen operating and support costs.

The ATS acquisition strategy of the Navy (including Marine Corps Air) is to build around CASS as the Navy's standard Family of Testers (FoT). This policy was first published in SECNAVINST 3960.6 in 1990 and continues in OPNAVINST 3960.16A and NAVAIRINST 13630.2 series. ATE acquisitions are managed centrally by NAVAIR PMA260 who is responsible for ensuring that all Navy ATE acquisition programs follow Navy policy.

Navy ATS selection decisions are based on objective analytical analysis using the System Synthesis Model Plus (SSM+). Per Navy policy, the first priority in selecting a tester for a given requirement will be to use one of the standard Navy CASS FoT configurations. If the need cannot be satisfied by the CASS FoT, other DoD families such as NGATS or VDATS will be the next choice. New design ATE will be an alternative of final resort only.

The Navy fully supports implementation of DoD ATS ED-approved ATS critical framework elements and specifications in the DoD ATS Technical Architecture Framework.

The Navy encourages programs to use field (Intermediate and Organizational level) testers in the Depot and factory test environments to ease the vertical transport of costly test programs.

While NAVAIR PMA260 is responsible for acquisition and life cycle management of the CASS FoT, the weapon system Test Program Sets (TPSs) that operate on the CASS FoT are generally acquired and life cycle managed by the Platform Program Offices. However, the generic TPS acquisition and sustainment processes are managed by PMA260.

### **2.5.3 Air Force ATS Acquisition Strategy**

The Air Force fully supports the standardization of ATS from flightline to depot maintenance.

The Automated Test Systems and Support Equipment Product Group Charter, signed November 2016, re-establishes AFLCMC/WN-ATS at Robins AFB as the ATS leadership office for the Air Force. The Product Group Charter directs that all Air Force ATS requirements,

whether for new, replacement, modification, Organizational, Intermediate, or Depot, will be coordinated through AFLCMC/WN-ATS for approval. AFLCMC/WN-ATS, the ATS Product Group Manager, will either provide a solution for a program's ATS requirement or process a system program office or procuring program office drafted waiver through the DoD ATS Management Board. This policy was re-emphasized in reference (h).

In FY09 the Air Force's Versatile Diagnostic Automatic Test Station (VDATS) was identified as a member of the DoD's standard FoT. As stated in reference (h), the Air Force's first priority in selecting a tester for a weapon system requirement is to use the VDATS FoT or other DoD designated AF Standard FoT. If the requirement cannot be satisfied by a DoD designated AF Standard FoT, then other DoD approved families such as CASS or IFTE will be considered. Next, existing supportable ATS inventory will be considered. Investing program dollars to develop a new ATS will be an alternative of last resort and must be substantiated by a business case analysis approved by AFLCMC/WN-ATS. All new-design ATS and modifications to add new workload to an existing tester must consider inclusion of the critical framework, elements, and specifications in the DoD ATS Technical Architecture Framework.

In the continuing interest of reducing the proliferation of unique ATS and other support equipment and striving toward common solutions, reference (i) identified the following items under the USAF FoT umbrella:

- (a) Common Aircraft Portable Reprogramming Equipment (CAPRE) – Organizational/Intermediate Level Loader/Verifier.
- (b) Bomber Armament Tester (BAT) – Organizational Level Armament Tester.
- (c) Advanced Radar/Electronic Warfare Test Station (ARTS) – Intermediate Level Electronic Warfare Tester.
- (d) Common Munitions Bit/Reprogramming Equipment (CMBRE) – Organizational Level Munitions Tester.

Centralized management of the above testers is the responsibility of the USAF ATS Product Group Manager (PGM).

#### **2.5.4 Ground USMC ATS Acquisition Strategy**

The Ground Marine Corps ATS policy objective is to minimize unique types of ATS and make a standard suite of ATS available to support USMC weapon systems. This ATS suite covers Field Level maintenance for ground maintenance. ATS acquisition is centrally managed by the ATS Team (PMM-151.4) within Program Manager Supply and Maintenance Systems (PM SMS, PMM-151), Portfolio Manager Logistics Combat Element Systems (PfM LCES), Marine Corps Systems Command (MARCORSYSCOM).. An ATS policy is in force that requires all programs to base their support primarily on general purpose ATS unless an analysis shows that an alternative ATS provides a more economical solution. Where feasible, The ATS Team will promote the use of Marine Corps and DoD-designated ATS families. Ground system program managers should plan to leverage Marine Corps and DoD-designated families and

minimize the use of unique test equipment. General and special purpose supportability equipment, to include ATS, is addressed through during major program milestones, decision reviews, and through the Independent Logistics Assessment (ILA) process.

The concept of an open architecture is critical to future evolutions of ATS. The USMC's goal is to apply open architecture standards on all technology improvements to ATS and focus on compatibility with DoD-designated families as ATS evolves.

The Marine Corps employs ATS that are capability targeted and fielded to units that will only utilize the inherent functions of fielded ATS. This flexibility maximizes mission accomplishment and reduces the unit's overall operational footprint.

The intent is to continuously improve Field Level weapon system diagnosis and repair with expeditionary ATS that belong to the standard ATS family of systems. This is accomplished through research and development efforts which include technology insertions that improve the capability of fielded ATS. The intent is to provide an ATS family of systems that can be reconfigured to the smallest footprint possible with the capability needed to complete the mission.

The next generation of ATS is currently being studied and will provide the Marine Corps with the latest technology in a lightweight, rugged platform that will provide users with a scalable organic capability that will be responsive and flexible enough to support the warfighter. The intent is to provide ATS that mitigates risk and provides economies of scale by sharing resources across different weapon system platforms. This approach will improve the readiness of platforms by identifying trends, thereby allowing the warfighter to operate and sustain the force from the sea more effectively.

### **2.5.5 F-35 Joint Program Office (JPO) ATS Acquisition Strategy**

Automatic testing of electronic systems or components has become necessary due to the complexity and high degree of integration employed in the design of the F-35 Lightning II weapons system. The technologies employed on the F-35 Variants coupled with the planned global customer and deployment goals of the program have increased the emphasis on optimizing life-cycle sustainment costs. In keeping with the program goals it is necessary to employ an ATS strategy and decision process that ensures that test requirements, ATE, TPSs, hardware and software decisions, mission systems change activity, and individual customer requirements are all balanced within data availability and program cost constraints.

The ATS selection process established by the DoD ATS ED in the 2016 DoD ATS Selection Process document will be used to determine the most cost effective and responsive answer to ATS requirements for the F-35 Sustainment Program. It will also be impacted by the acquisition of Line Replaceable Component (LRC)/Shop Replaceable Component (SRC) data and the potential use of Non-Disclosure Agreements (NDAs). The selected process definitions and instructions can be found in the DoD ATS Selection Process document dated 2016. This in conjunction with the participant services Draft Statement of Requirements (DSOR), that

identifies each services unique ATS requirement, determines the appropriate ATE and TPS development strategy.

Early analysis and program acquisition decisions have resulted in the use of LM-STAR® as the ATS for F-35 Depot repair activities. LM-STAR® was recommended by the aircraft developer and these stations were funded with F-35 sustainment dollars. The continued use of LM-STAR® to conduct production and sustainment testing of the LRC's during completion of the aircraft systems development and full rate production is currently being reviewed for other alternatives.

In March 2015 OPNAV N98 identified a requirement for DoN Intermediate (I) level, off aircraft, automatic testing for afloat and shore units utilizing electronic Consolidated Automated Support System (eCASS) as the ATS for I level sustainment. This requirement will be applicable to both United States Navy (USN) and United States Marine Corps (USMC) units supporting the F-35. The F-35 Support Equipment IPT will work with PMA260 to define the F-35 TPS acquisition team and the F-35 TPS development process.

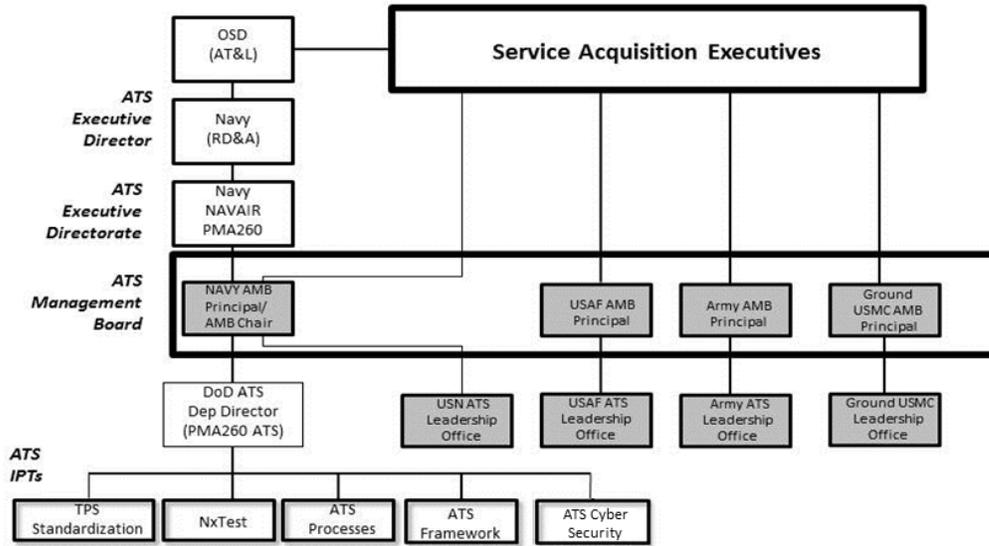
### **3.0 Management of DoD ATS**

The Deputy Assistant Secretary of Defense for Maintenance Policy and Programs (DASD MPP) provides oversight and guidance for DoD ATS ED functions and activities.

Per reference (e), the Army, Navy and Air Force SAEs agreed to the following:

- 1) Ensure compliance with DoD ATS policy and provide Service-specific policy for acquisition of ATS;
- 2) Provide appropriate Service representatives to serve on the ATS Management Board and on its various Integrated Product Teams;
- 3) Provide appropriate R&D resources to support Joint Service test and diagnostics technology R&D efforts.

### 3.1 DoD ATS ED Organization



**Figure 1: DoD ATS Organization**

#### 3.1.1 DoD ATS Executive Directorate

The DoD ATS ED is responsible for the overall management and coordination of ATS joint strategies among the Services. Specific tasks assigned by OSD and the SAEs are as follows:

- 1) Sponsor and serve as chair of the ATS Management Board;
- 2) Develop and publish, with AMB concurrence, a strategic plan for DoD ATS;
- 3) Establish and charter Integrated Product Teams and Working Groups as necessary;
- 4) Develop and publish, with AMB concurrence, a coherent DoD-wide R&D program plan that integrates Service ATS R&D efforts;
- 5) Approve and implement, with AMB concurrence, ATS interface specifications and rules, and coordinate their inclusion in the DoD Information Technology Standards Registry (DISR);
- 6) Serve as the designated DoD voting member on IEEE's Standards Coordinating Committee 20;
- 7) Serve as DoD's representative to industry consortia and foundations such as the Interchangeable Virtual Instrument Foundation, LXI Consortium, the National Defense Industrial Association Automatic Testing Committee, and the Test and Diagnostics Consortium;
- 8) Make acquisition recommendations to Service PMs and MDAs, and inform MDAs and SAEs in cases when PMs select a non-policy compliant ATS solution;

- 9) Assist DoD Program Managers by developing, in conjunction with the AMB, and publishing decision-making tools such as the DoD ATS Master Plan, the DoD ATS Selection Process document and the DoD ATS Handbook;
- 10) Approve, with AMB concurrence, ATS Family designation requests and designate new ATS families.

### **3.1.2 DoD ATS Management Board**

The O-6 level ATS Management Board is a Joint-Service board comprised of representatives from the Army (PM FP/PD TMDE), Air Force (AFLCMC/WN-ATS, ATS PGM), Marine Corps (MARCORSYSCOM PMM-151.4, ATS Team), and Navy (NAVAIRSYSCOM, PMA260). Chaired by the Director of the ATS ED, the AMB provides advice and recommendations to the ATS ED and to Weapon System PMs and IPTs (WIPTs). The AMB also reviews policy deviation requests, and provides recommendations to the appropriate decision authority. The AMB will act as follows:

- 1) Provide advice and recommendations to the SAEs, MDAs, PMs and WIPTs on ATS matters;
- 2) Define, coordinate and manage DoD ATS acquisition and oversight processes;
- 3) Perform ATS analyses and coordinate Joint Service ATS actions, including sponsoring Joint ATS R&D initiatives;
- 4) Develop and implement processes as required to support DoD's ATS policies, and assist the Executive Director in developing tools to assist DoD PMs with ATS-related decisions;
- 5) Monitor ATS policy compliance by reviewing ATS acquisitions and modernization planning;
- 6) Define the criteria for new ATS families and review ATS Family designation requests.

### **3.1.3 Joint Services Integrated Product Teams**

Several IPTs have been chartered under the ATS ED and AMB to carry out the main technical functions of the ATS ED. Key points of contact within the ATS ED and each Service ATS organization are available through each Service ATS Leadership Office to assist and advise WIPTs on these processes.

Presently, there are five Joint IPTs serving under the auspices of the ATS ED:

#### ***3.1.3.1 NxTest IPT***

The Next Generation Test (NxTest) IPT serves as the Joint Services ATE Technology Team. Its purpose is to define, develop, demonstrate and plan implementation of emerging test technologies into the DoD maintenance test environment. The IPT is chaired by the U.S. Army (Picatinny RDAR-WSF-A), and includes members from the U.S. Navy (NAWCAD Lakehurst AIR-4.8), the USAF (ATS PGM) and the USMC (MARCORSYSCOM PMM-151.4, ATS Team).

### ***3.1.3.2 ATS Framework IPT***

The ATS Framework IPT focuses on continuing development of the ATS Technical Architecture Framework to support ATS convergence, TPS transportability, and elimination of the requirement for Service-unique ATS. The ATS Framework IPT has defined elements of the framework as hardware and software components, interfaces between components, information models for required data entities and data relationships, and rules and processes for describing how components, interfaces and information models must interact. The IPT is chaired by the U.S. Navy (NAWCAD Lakehurst AIR-4.8.6.12), and includes members from the USAF (ATS PGM), the U.S. Army (PD TMDE), and the USMC (MARCORSYSCOM PMM-151.4, ATS Team and TMDE Department, ATEP Branch, MCLB, Albany GA).

### ***3.1.3.3 TPS Standardization IPT***

The ATS TPS Standardization IPT (TPSS IPT) is chartered to review and standardize TPS engineering, logistics and acquisition processes. It developed a TPS performance specification, MIL-PERF-32070, and its successor, MIL-PERF-32070A. This IPT is chaired by the U.S. Navy (NAVAIR PMA260), and includes members from the USAF (ATS PGM), the U.S. Army (Picatinny RDAR-WSF-A), and the USMC (TMDE Department, ATEP Branch, MCLB, Albany GA). While coordinating closely with the NxTest IPT, the TPSS IPT is currently focused on defining the next generation test programming language, development tools, and sustainment approaches.

### ***3.1.3.4 ATS Processes IPT***

The ATS Processes IPT is responsible for developing ATS acquisition processes, procedures and tools to be promulgated across the Services. The IPT is responsible for the DoD ATS Master Plan, the DoD ATS Selection Process, and the DoD ATS Acquisition Handbook. The ATS Process IPT reviews these documents annually and updates these documents as appropriate. The IPT is chaired by the U.S. Navy (NAVAIR PMA260) and membership includes representatives from the USAF (ATS PGM), the U.S. Army (PD TMDE), and USMC (MARCORSYSCOM PMM-151.4/ATS Team).

### ***3.1.3.5 ATS Cyber Security IPT***

The ATS Cyber Security IPT is responsible for developing an ATE-tailored cyber security architecture which allows for Global Information Grid (GIG) connectivity and net-centric operations. The purpose of the IPT is two-fold: first, to define the elements that contribute to the above mission and structure a GIG-compliant cyber security architecture to achieve the mission. The generic ATS cyber security architecture must support new diagnostics needs and permit flexible insertion of new technology with minimum impact on existing ATS components. The second purpose of the Cyber Security IPT is to define, develop, demonstrate and plan implementation of emerging cyber security technologies into the DoD ATS environment. The IPT is chaired by the U.S. Navy (NAVAIR PMA260) and membership

includes representatives from the USAF (ATS PGM), the U.S. Army (PD TMDE), and USMC (MARCORSYSCOM PMM-151.4/ATS Team).

### **3.1.4 Service Program Managers and Program Executive Officers**

Per direction of the SAEs in reference (e), PMs and PEOs will act as follows:

- 1) Comply with OSD and Service ATE/ATS-related policy when acquiring and modernizing automatic test systems, and
- 2) Develop cost and benefit analyses over the system life cycle upon which to base any ATS selection.

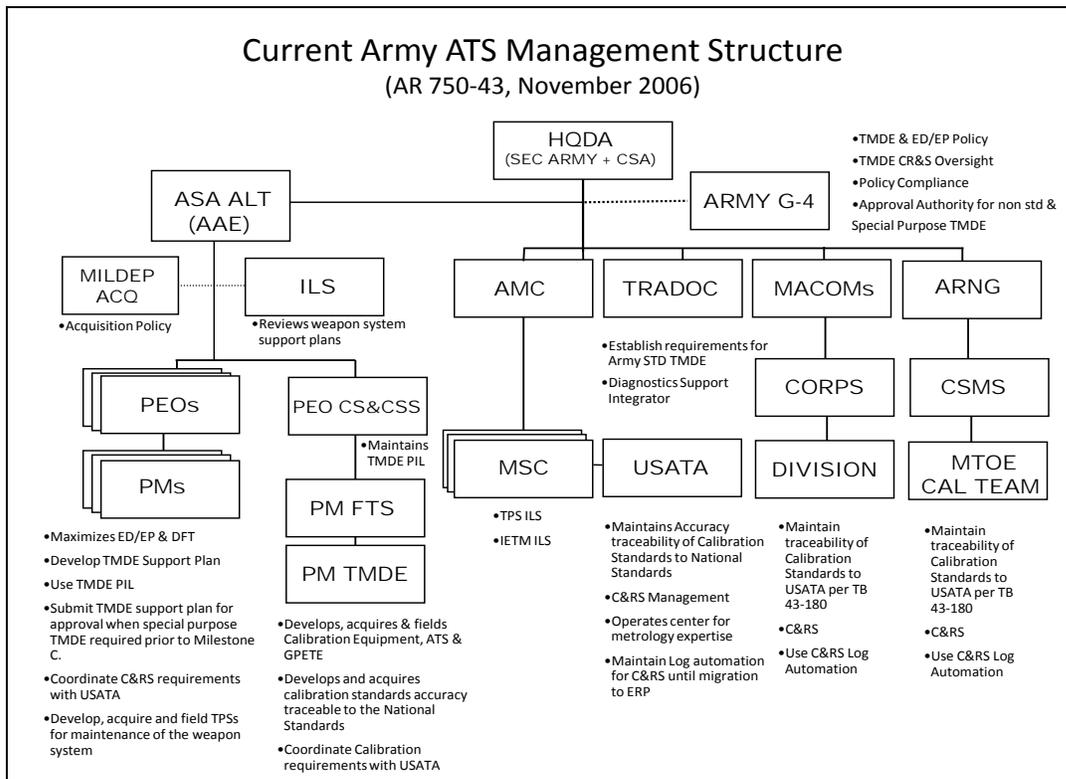
### **3.1.5 Service ATS Leadership Offices**

Each Service has established an ATS Leadership Office (ALO) with oversight of their Service's implementation of the ATS policy and primary responsibility for ATS coordination. The ALO has the lead for coordinating Joint Service projects and is represented on the various Joint Service ATS IPTs and working groups. These organizations include subject matter experts in the areas of the ATS selection process, preparation of Cost Benefit Analyses (CBAs), TPS acquisition, and ATS capabilities. The office ensures that ATS policy and related procedures are promulgated throughout their Service, provides assistance to weapon system PMs and IPTs in ATS matters, and monitors acquisition and modernization planning for policy compliance. The ALO processes ATS policy deviation requests and forwards them to the AMB.

### 3.2 Service Organizations

ATS management functions required to implement the DoD ATS policy discussed above are performed by the following Service organizations:

#### 3.2.1 Army Organization



*\*\*Note: AR 750-43 is currently under revision; PM FTS is now PM FP; PM TMDE is now PD TMDE; USATA reports through Army Aviation and Missile Command (AMCOM) to AMC\*\**

**Figure 2: Army ATS Management Structure**

The DA focal point for TMDE policy is the DCS, G-4. To aid in the effective development, distribution, calibration repair, funding, and modernization of all TMDE, a total Army centralized management structure under HQDA has been established.

The Commanding General, United States Army Materiel Command (USAMC), is the national sustainment maintenance manager for the Army. The CG, USAMC and the Army Acquisition Executive (AAE) are the principal agents for executing Army TMDE policy and program. In the management structure depicted above, each agent is designated authority to recommend TMDE policy to HQDA and to plan, program, budget, acquire, deploy, sustain, and otherwise manage DA TMDE functions within their assigned areas of responsibility.

### **3.2.2 Navy Organization**

The intra-Navy forum for management of Navy ATS issues is the Navy Test and Monitoring Systems (TAMS) Executive Board (EB) which is chaired by the Naval Sea Systems Command (NAVSEA 04). NAVSEA is the lead Systems Command for TAMS. NAVAIR was designated as ATE Lead Systems Command by OPNAV and NAVSEA. NAVAIR (PMA260) is a member of the TAMS EB. The TAMS EB has chartered an Automatic Test & Diagnostics Standing Committee (ATDSC) for the purpose of reviewing NAVAIR, NAVSEA, SPAWAR, MARCORSYSCOM, and DIRSSP ATE and TPS management processes. The TAMS ATDSC is responsible for recommending process improvements to the TAMS EB. The ATDSC is chaired by the NAVAIR Deputy Program Manager for Avionics Support Equipment (PMA260D). Membership is comprised of ATS managers from NAVSEA, SPAWAR, MARCORSYSCOM, DIRSSP, and the ATS ED.

Within the Navy, ATS is divided into two groups: common ATS applicable to multiple weapons systems, and peculiar ATS applicable to a single weapon system. Primary acquisition responsibility for peculiar ATS and for weapon system TPSs lies with the appropriate weapon system PM. The primary acquisition manager for common ATS within the Navy is NAVAIR PMA260. The responsibility for integrating the total Navy ATS program lies with NAVAIR PMA260 in coordination with NAVSEA for NAVSEA/DIRSSP programs, SPAWAR for space and warfare programs, and MARCORSYSCOM for Marine Corps non-aviation programs.

### **3.2.3 Air Force Organization**

The ATS Product Group Manager (PGM) at AFLCMC/WN-ATS is the Air Force Single Manager for ATS. The ATS PGM's role is to implement AF policy and manage all common and some peculiar Air Force ATS, and to provide ATS requirements solutions, acquisition, and staff representatives from Logistics (A4) and acquisition (AQ) on ATS matters including policy to reduce the ATS proliferation of past decades and to foster an approach which supports open architecture and future workload transportability at the lowest life cycle cost. Additionally, the AF ATS PGM addresses ATS requirements, funding, policy compliance, status of acquisition programs, and sustainment issues with HQ AFMC, program offices, using commands, and depots.

The ATS PGM is the Air Force member of the ATS Management Board (AMB).

### **3.2.4 Marine Corps Organization**

The Marine Corps Systems Command (MARCORSYSCOM) is responsible for the acquisition of weapon systems used by non-aviation Fleet Marine Forces. MARCORSYSCOM Program Managers are assigned the primary responsibility for weapon system acquisition, including any special purpose test equipment. MARCORSYSCOM PMM-151.4, ATS Team is responsible for the procurement and life cycle management of General Purpose Electronic Test Equipment, to include Automatic, Electronic, Electro-Optical and Mechanical test equipment. The ATS Team provides test equipment support recommendations for systems that

MARCORSYSCOM procures. The ATS Team is responsible for developing TPS for fielded systems and systems under development as part of supported program management offices maintenance strategies. The ATS Team also provides technical assistance in the validation of requirements for Special Purpose Test Equipment. Classic examples are dedicated test sets, special tools and TPSs. The ATS Team reports to the PM SMS (PMM-151), PfM LCES, MARCORSYSCOM. NAVAIR manages all Marine Corps ATS requirements for aviation maintenance.

### **3.2.5 F-35 Joint Program Office Organization**

The JPO Support Equipment Integrated Product Team is responsible for F-35 ATS support across the United States Navy, Marine Corps, Air Force and all F-35 partner countries. The JPO is developing an ATS F-35 Program Instruction to establish how F-35 automatic testing and TPS development will be conducted, coordinated, managed, monitored, and sustained while adhering to DoD/Foreign Participants and Foreign Military Sales (FMS) customers' current ATS directives and policies.

The instruction integrates the products, processes, and service elements of automatic test systems and sustainment enablers to establish how the JPO Product Support Manager (PSM) and its various IPTs, Product Support Integrators (PSI), Product Support Providers (PSP) and participant services, partner nations, and FMS customers will work in unison to deliver and execute automatic testing and sustainment. This instruction will be applicable to all automatic testing for all U.S. Service/Foreign Participants and FMS customers that will operate the F-35 Air System.

## **4.0 DoD ATS Families**

An ATS family consists of ATSs that are interoperable and have the capability to support a variety of weapon system test requirements through flexible hardware and software architectures. These structures permit addition or expansion of testing capability with minimal impact to the ATS logistics support profile, system software, and TPSs.

DoD has promulgated its policy that the Services' acquisition needs for ATE hardware and software will be satisfied by using designated ATS families. An attachment to reference (b) designates the following DoD ATS families:

- 1) Consolidated Automated Support System Family of Testers (CASS FoT)
- 2) Integrated Family of Test Equipment (IFTE)
- 3) Versatile Diagnostic Automatic Test Station (VDATS)
- 4) Marine Corps Automatic Test Equipment Systems (Now referred to as just Marine Corps Automatic Test Systems)
- 5) Joint Service Electronic Combat Systems Tester (JSECST)

#### **4.1 Consolidated Automated Support System Family of Testers (CASS FoT)**

The Navy's Consolidated Automated Support System (CASS) Family of Testers, managed by the Naval Air Systems Command (NAVAIR), PMA260, is the Navy's standard ATE for support of electronic systems and is also a DoD designated ATS Family. The CASS Family primarily provides support for naval aviation systems (Navy air and Marine air) at the intermediate maintenance level of support both ashore and afloat in addition to naval aviation repair depots and international program's repair sites. The CASS Family of Testers is now defined by three generations of Family members grouped as follows:

- 1) Mainframe CASS (nick named CASS or "Big Blue")
- 2) Reconfigurable-Transportable CASS or RTCASS
- 3) Electronic CASS or eCASS.

Mainframe CASS was fielded starting in the early 1990's with 613 stations being deployed around the world and today continues to demonstrate strong performance towards meeting the following primary objectives:

- 1) Increased weapon system material readiness;
- 2) Reduced weapon system initial, support and life cycle costs;
- 3) Reduced proliferation of peculiar support equipment;
- 4) Improved tester availability;
- 5) Navy-wide testing capability for existing and future electronic requirements.

Today Mainframe CASS has capability to support over 3,000 different aviation system repairables and is fielded the following five configurations:

- 1) Hybrid (HYB)
- 2) Radio Frequency (RF)
- 3) Communications, Navigation, and Identification (CNI)
- 4) Electro-Optical (EO)
- 5) High Power (HP)

The aviation Marine Corps required a more transportable ATE so the Reconfigurable-Transportable CASS or RTCASS Family was developed to meet this requirement. The RTCASS Family comprises the following two Marine Corps operational level configurations deployed in Mobile Maintenance Facilities (MMFs) supporting the full range of Marine Corps aircraft:

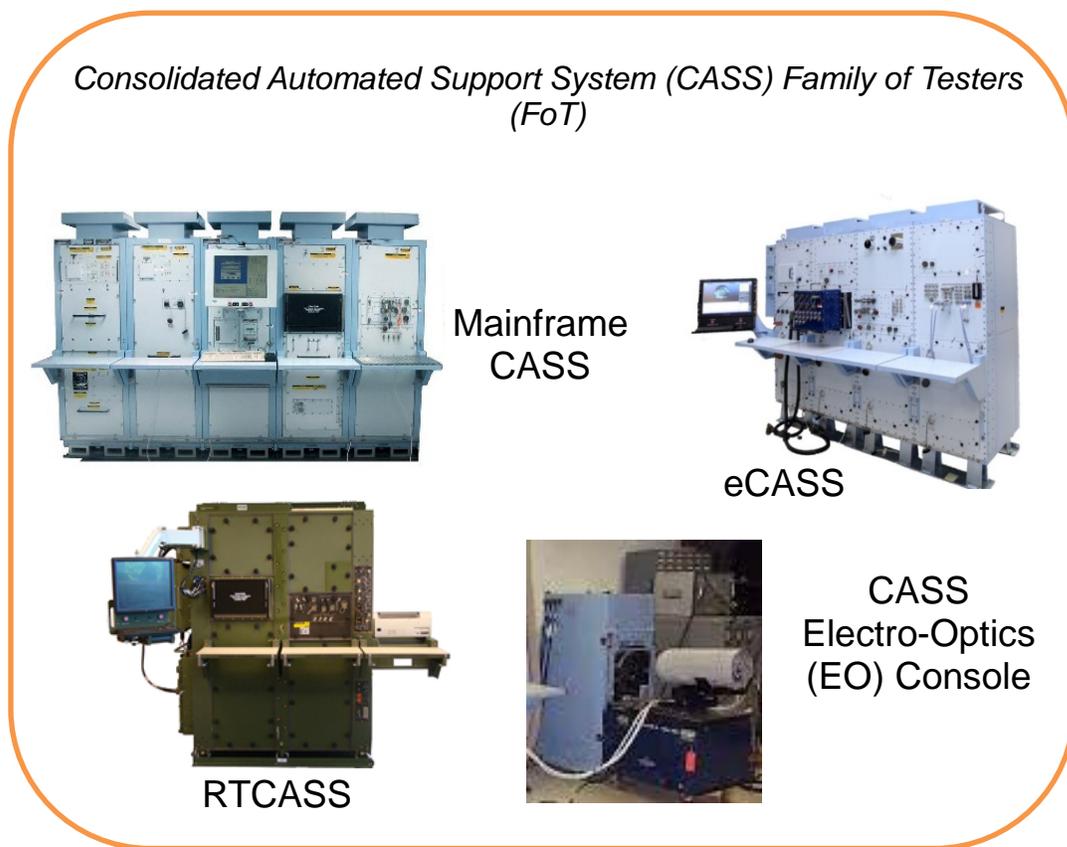
- 1) RTCASS (providing hybrid, digital and RF test capability)
- 2) RTCASS HP (adds high power test capability)

The RTCASS was designed to operate the Mainframe CASS legacy TPSs. The RTCASS and RTCASS HP Family members were made operational in the 2009 timeframe. The RTCASS configuration also supports the US SOCOM V-22 aircraft program. The RTCASS D is a variant of the RTCASS design targeted to repair depot sites that is packaged in commercial level racks and adds select technologies for optimizing board level test capability.

The early production blocks of Mainframe CASS are now approaching 25 years of service and NAVAIR PMA260 has initiated a Mainframe CASS replacement program to address obsolescence issues while adding the test capabilities required by emerging weapon systems. The eCASS Family will begin to replace the Mainframe CASS Family starting in late 2017. As with the RTCASS Family the eCASS is designed to afford easy “migration” of the legacy CASS TSPs to the newer generation eCASS tester. The eCASS Family will field in the following four configurations:

- 1) eCASS Hybrid
- 2) eCASS RF
- 3) eCASS EO
- 4) eCASS HP

By about 2025 the eCASS Family members will replace the Mainframe CASS at the intermediate level of maintenance but CASS will continue to be used at repair depots and by international programs. So, at that time, eCASS will be the primary support for the operational Navy aviation while RTCASS will be the primary support system for the operational Marine aviation. However, eCASS will support Marine aviation afloat.



**Figure 3: CASS Family of Testers**

## **4.2 Integrated Family of Test Equipment (IFTE)**

The Integrated Family of Test Equipment has evolved as the Army's standard ATS for support of all weapon systems. The IFTE family includes Off-Platform ATS (OPATS) and At-Platform ATS (APATS). The OPATS includes the Base Shop Test Station (BSTS) and Base Shop Test Facility (BSTF), the Electronic Repair Shelter (ERS), and the Commercial Equivalent Equipment (CEE). The APATS includes the Maintenance Support Device (MSD)-Version 2 (MSD-V2), and the MSD-V3. IFTE provides a vertically integrated ATS capability for sustainment and field levels of maintenance.

### **4.2.1 IFTE Off-Platform Testers**

The Base Shop Test Station (BSTS) and Base Shop Test Facility (BSTF) were produced beginning in 1989 and the CEE in 1988. The BSTS and CEE procurements, based on weapon system support requirements, support depot sustainment needs. The BSTF, BSTS and CEE have all transitioned to sustainment. The newest OPATS member of the IFTE family will be the Next Generation ATS (NGATS). The NGATS is currently under development to replace the DSESTS, BSTF(V)3, BSTF(4), BSTF(V)5 and CEEs.

The BSTFs are used for testing weapon system Line Replaceable Units (LRUs) in the field at Sustainment Brigade locations, supporting TPS developers, and fulfilling training requirements for the soldier. The BSTS provides support to TPS developers and fulfills training requirements for the soldier. The CEE is used for LRU and Shop Replaceable Unit (SRU) TPS development, for depot level maintenance programs, and as factory test equipment.

### **4.2.2 IFTE At Platform Automatic Test Systems**

The initial production contract for IFTE At Platform Automatic Test Systems (APATS) started in the early 90s. Technological refresh of these systems is planned for every five years to keep pace with the rapid advancement of commercial technology. All IFTE APATS are procured with Contractor Logistic Support, maximizing the open architecture using COTS operating systems with added capabilities including wireless communication, Digital Versatile Disc writer, and color sunlight readable display. In addition, each contract has a technology insertion clause to support incremental upgrades. The IFTE APATS program continues to support current and future Army, tri-service, and Foreign Military Sale (FMS) requirements. Also, APATS is the Army's enabler for weapon systems' diagnostics, maintenance management, and condition based maintenance data provided to automated logistics systems such as GCSS-A and the CLOE.

The Army requirement for APATS is over 40,000. Due to the rapid improvement in commercial technology and DoD Information Assurance mandates, the first, second, and third generations of APATS called Contact Test Set (CTS), Soldier's Portable On System Repair Tool (SPORT), and Maintenance Support Device respectively are considered obsolete and are currently being replaced. The fifth generation system, Maintenance Support Device – Version 3 (MSD-V3), is a smaller, more capable replacement at-platform tester. Currently in production, it is scheduled to begin fielding in FY12. The MSD-V3 will be capable of performing the Army's

total maintenance mission on-platform, at-platform, and as a detachable walk-around portable maintenance aid as well as a vehicle health management tool installed within each Army platform, as is being implemented with Stryker.

The IFTE MSD is a standard, general-purpose, at-platform tester used at all maintenance levels. The MSD tests and diagnoses complex electronics, engines, transmissions, central tire inflation systems, anti-lock brake systems, among other critical components, in missile, aviation and vehicular weapon systems. Moreover, weapon system maintainers use the MSD to execute Interactive Electronic Technical Manuals (IETM), Electronic Technical Manuals, weapon system specific software applications, upload and download mission planning tools, and troubleshoot weapon systems more efficiently. For vehicular test and diagnostic requirements, an Internal Combustion Engine (ICE) test adapter kit supports the MSD.

### **4.3 Versatile Diagnostic Automatic Test Station (VDATS)**

The Versatile Diagnostic Automatic Test Station was designed and developed by the Air Force through a DoD transformation initiative. Initially the project was directed toward the Warner Robins Air Logistics Center's Electronic Technology Repair Center to eliminate aging unsupportable ATS. VDATS later was identified by the ILCM Framework as the standard ATS system for the entire Air Force and adopted by the AMB as a member of the DoD Family of ATS. Air Force Maintenance for the 21<sup>st</sup> Century is transforming maintenance activities from the flight line to the depot into two integrated networks—a mission generation network and a supporting repair network. Applications for VDATS beyond Air Force depots will be realized through this transformation initiative.

VDATS basic configurations include the DA-1 with 336 hybrid pins, DA-2 with 526 hybrid pins, and RF-1 which is a standard RF roll-up. VDATS basic configurations include both digital and analog instrumentation, a synchro/resolver measurement-simulation instruments, AC and DC power supplies, DC electronic loads, and both Cross-Point Matrix and general-purpose switching. The VDATS family also includes 15 different augmentations to include Auxiliary Bays (AB), half-, single-, or double-bay roll-up racks and Mission Equipment Support Sets (MESS). MESS is additional equipment added to designated spaces in the VDATS core configurations (DA-1 and DA-2) and the RF-1. The VDATS family also consists of the Common Benchtop Automatic Test Set (CBATS). The CBATS is a configurable benchtop tester developed by CACI, Inc. and is available in two configurations, CBATS Model 101 and CBATS Model 102.

Overall VDATS and CBATS are powerful ATS capable of testing both legacy and advanced technology weapon systems. The Air Force owns all VDATS re-procurement data for both hardware and software. Future sustainment of VDATS will be provided organically with parts support from the supply chain at Robins AFB and obsolescence and tech refresh resolution through the ATS Systems Integration Lab (SIL) in 402 SMXG. VDATS reached IOC in FY08 for 18 operational systems. Today there are over 100 VDATS systems in operation with additional procurements in work. There are currently over 100 CBATS systems in operation.

#### **4.4 Marine Corps Automatic Test Systems**

On 21 October 1998 the DoD ATS Executive Agent approved the USMC's Marine Corps Automatic Test Equipment Systems (MCATES) as a new DoD ATS Family with the Third Echelon Test Set (TETS), AN/USM-657, being the basic family member within MCATES. The term MCATES is no longer used by the Marine Corps, and the term ATS is used in its place. The USMC has developed TETS to provide an off system capability to test, diagnose, and screen a wide variety of electronic and electro-mechanical units at the ground forces organic maintenance levels. TETS also functions as stand-alone General Purpose Electronic Test Equipment (GPETE), allowing the operator maximum usage of all TETS assets. TETS supports testing of analog, hybrid, and digital technologies and includes basic, RF and EO configurations. TETS must be highly mobile so it was designed to be man-portable and operable from vehicle power. The two (2) TETS configurations are as follows:

- 1) AN/USM-657 (V)2, RF
- 2) AN/USM-657 (V)3, E/O

The AN/USM-717 family of ATE is intended to complete the original AAO of the AN/USM-657 family. The operational characteristics have been increased in an effort to expand the level of support provided. The upgraded system was renamed the Virtual Instrument Portable Electronic Repair/Tester (VIPER/T), AN/USM-717. The two AN/USM-717 configurations are:

- 1) AN/USM-717 (V)2, RF
- 2) AN/USM-717 (V)3, EO

An additional requirement for an operator/crew and organic level test capability of software defined tactical radios is met with the AN/USM-718 Ground Radio Maintenance Automatic Test System (GRMATS). The GRMATS allows operator/crew units to increase readiness on the line by diagnosing equipment at the lowest possible echelon of maintenance.

Various TPS are developed and managed by the ATS Team to interface between the GPATS or GRMATS and the UUT. These TPS support a wide range of weapons systems to include ordnance and communication-electronic equipment.

The ATS Team is currently investigating how to expand the capabilities of the Electronic Maintenance Support System (EMSS) for use as an at-system tester with associated TPS. It currently interfaces with the Dearborn Protocol Adapter (DPA), various motor transport vehicles, and their associated Interactive Electronic Technical Manuals (IETM). It is expected that this capability will expand to provide additional test and diagnostic solutions for various ordnance platforms.



#### **4.6 Criteria for Adding New ATS Families/New Members**

The use of ATS Families is encouraged and is in compliance with the DoD ATS acquisition policy. However, if the analysis yields a non-family solution and the weapon system/ATS PM believes the solution demonstrates characteristics similar to those of an ATS Family, there are provisions for introducing a new ATS Family into the DoD inventory.

An ATS Family consists of ATSs that are interoperable and have the capability to support a variety of weapon system test requirements through flexible hardware and software architectures. For a tester to be considered as a new ATS Family the following criteria must be met:

- 1) The tester must be capable of supporting multiple weapon systems and there must be planning in place for implementation as such;
- 2) The tester must have flexible hardware and software architectures that are expandable and tailorable with minimal impact to existing logistic support profiles and TPSs;
- 3) The tester must provide a capability to satisfy a Service performance or operational requirement that cannot be accommodated within the existing DoD ATS family structure;
- 4) The tester must provide a more cost effective/beneficial ATS solution than use or modification of an existing DoD ATS family member;
- 5) The tester must be re-procurable and must have a dedicated government management office with a process in place to ensure that long-term tester viability is maintained and that the tester will evolve to satisfy future requirements.

In general, new ATE may be added to an existing DoD ATS family if all of the following criteria are met:

- 1) The criteria specified above for designation of new ATS families;
- 2) The tester contains the critical hardware and software elements to ensure TPS interoperability between the proposed ATE and the parent designated ATS family.

Organizations desiring to initiate action to establish a new DoD ATS Family must contact the Service ALO.

#### **4.7 Compliant Non-DoD Standard Family ATS Procurement**

New ATS requirements that cannot presently be met by ATS family members can still fit within the guidelines of the DoD ATS policy and be approved for acquisition if they fall into one of the following categories:

- 1) Modifications to existing inventory ATE that do not involve increasing the UUT test capability of the ATS;
- 2) TPS re-procurement actions for use with non-family ATS;
- 3) Approved ATS policy deviations (see paragraph 5.1).

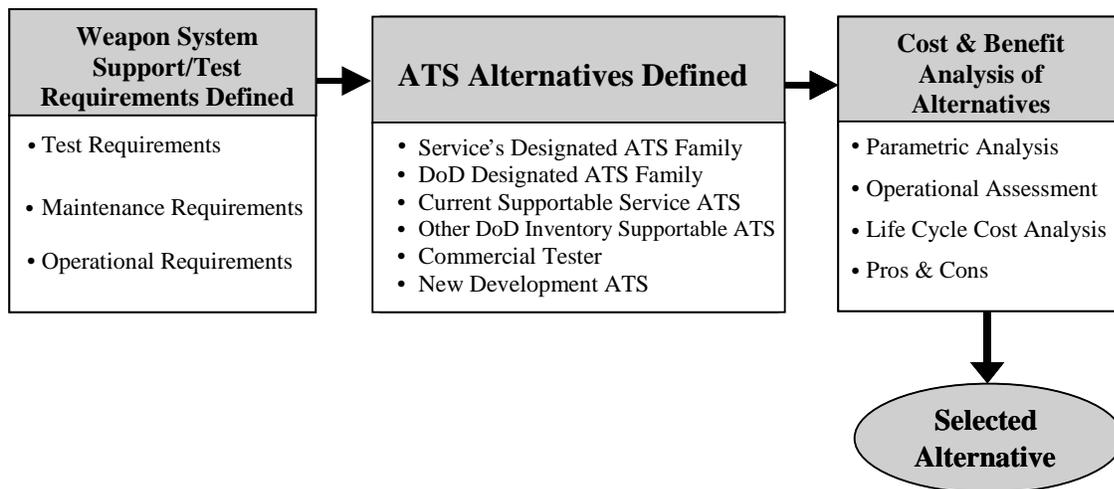
PMs should use the approach described in reference (d), the DoD ATS Selection Process, to analyze and select ATS solutions for weapon system support requirements. The selection technique presented is summarized in section 5 below and is compliant with the intent of DoD ATS acquisition policy. ATS selection procedures for analyzing prospective ATS requirements with the objective of minimizing the proliferation of unique weapon system ATS are introduced in that document.

## **5.0 ATS Selection Analysis Process**

The DoD ATS Selection Process (reference (d)) promulgates a standardized ATS selection process as an effective method for PMs to select ATS that complies with the research, development, and acquisition objectives established by OUSD(A&T) in references (a), (b) and (c). As shown in Figure 4, this Service-level ATS selection analysis process involves the following steps:

- 1) Identify the weapons system’s support/test requirements;
- 2) Define the various support/test alternatives;
- 3) Analyze the alternatives;
- 4) Select the appropriate ATS support alternative.

The DoD ATS Selection Process provides the procedures to be used by DoD PMs to implement the requirements of references (a), (b) and (c) with regard to ATS selection. It presents the process for preparing requests for deviation from the policy when the selection process yields a non-family ATS solution. PMs may obtain assistance and advice on the processes contained therein from their Service’s AMB member and ATS Leadership Office.



**Figure 5: ATS Selection Process**

The principal purpose of the process described in the DoD ATS Selection Process is to enable the Services to make an ATS selection for each requirement that fits within the total DoD investment strategy context, i.e., the costs incurred are to be leveraged to the maximum extent

possible within a Service and/or across the Joint Services spectrum. The following hierarchy is provided for the selection of ATS consistent with DoD ATS acquisition policy:

- 1) Service's Designated ATS Family;
- 2) DoD Designated ATS Family;
- 3) Current supportable Service ATS (approved Policy Deviation Request is required);
- 4) Other DoD inventory ATS (approved Policy Deviation Request is required) ;
- 5) Commercial tester ATS (approved Policy Deviation Request is required);
- 6) New development ATS (approved Policy Deviation Request is required).

DoD ATS policy requires that the selection shall be based on a cost and benefit analysis that ensures that the ATS chosen is the most beneficial to the DoD over the system life cycle.

### **5.1 Policy Deviation Process**

The Service ALO will provide support to weapon system IPTs as required to assist in the ATS selection process and to ensure compliance with any internal Service regulations and/or policies. When the ATS selection process yields a non-DoD Family Tester solution, a Policy Deviation Request shall be required. The Policy Deviation Request preparation and approval process is documented in reference (e) and is provided as follows:

The Service ALO will provide support to the applicable service level weapon system IPT to assist in conducting a Cost & Benefit Analysis of Alternatives and to prepare a Policy Deviation Request in accordance with Attachments 1 and 2 of the reference (d) DoD ATS Selection Process. Guidance for submission and disposition of Policy Deviation Requests per reference (d) is as follows:

- 1) If the Policy Deviation Request is to request the use of an existing Service non-ATS Family ATE without adding additional capability or acquiring additional ATE but only to add new TPSs, the Service may disposition an abbreviated Policy Deviation Request locally. The Service ALO shall notify the AMB of the disposition of any Policy Deviation Requests processed internal to the Service. If there is a program conflict, the Service ALO representative has the option of sending the ATS Policy Deviation Request to the AMB for disposition.
- 2) If the Policy Deviation Request includes adding capability to the existing Service non-ATS Family ATE or developing or procuring a new non-ATS Family ATE, the Service ALO shall forward the Policy Deviation Request to the AMB for review and disposition as follows:
  - a. If the initial analysis reveals an obvious cost, schedule, or performance deficiency with a DoD FoT solution, the Service ALO can make recommendations and assist the system/ATS PM in preparing an Abbreviated Policy Deviation Request to be approved at the service level. Abbreviated requests will follow the same process but may forego the more detailed technical and cost analysis otherwise required.

- b. If a Policy Deviation request is forwarded to the AMB and the AMB concurs with the Policy Deviation Request, the AMB will approve the Policy Deviation Request.
- c. If the AMB disagrees with the Policy Deviation Request, the AMB will make a recommendation to the MDA not to approve the Policy Deviation Request. The MDA may approve the Policy Deviation Request and return it to the PM/PEO for acquisition action or disapprove the Policy Deviation Request and return it to the PM/PEO for reconsideration.

For all Joint Service Programs, any ATS Policy Deviation Requests should be submitted to the AMB for review and disposition.

Existing Service waivers for the use of other than approved DoD ATS Families remain in effect. However, Program Managers will plan for bringing legacy ATS systems into compliance with the DoD ATS technical framework when it makes operational sense and/or is cost effective to do so.