

**THE  
NAVAIR  
OPERATIONAL TEST PROGRAM SET  
(OTPS)  
ACQUISITION  
AND SUSTAINMENT  
PROCESS**



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## **1.0 Introduction**

### **1.1 Purpose**

The purpose of this document is to define the overarching standard processes to be used by all naval aviation weapon system programs for acquiring and supporting/sustaining Operational Test Program Sets (OTPSs) developed to operate on the Consolidated Automated Support System (CASS) Family of ATE, referred to in this document as “CASS”. Similar to a weapon system, CASS has configuration control, architecture, and functional requirements for the software that operates on it, especially OTPS software. OTPSs must therefore be developed and sustained in accordance with the requirements of this document.

### **1.2 Document Organization**

The document is organized into two major sections:

- Section 2 defines the OTPS Acquisition Process
- Section 3 defines the OTPS Sustainment Process

### **1.3 Policy**

“The NAVAIR OTPS Acquisition and Sustainment Process” is published under the authority of NAVAIRINST 5400.118B, “DESIGNATION OF AVIATION SUPPORT EQUIPMENT PROGRAM MANAGER AIR (PMA260)” which assigns PMA260 with the responsibility to manage the processes for acquisition and life cycle support of both Common Support Equipment (CSE) and Peculiar Support Equipment (PSE), including OTPSs.

NAVAIRINST 5400.118B also assigns PMA260 with responsibility to develop and maintain a generic Test Program Set (TPS) procurement package and process for use by NAVAIR Program Managers (PMs), as well as by NAVSEA and SPAWAR. Additionally, PMA260 is tasked with assessing planned TPS acquisitions for compliance with CASS strategies, and budgeting for and acquiring new TPSs used for offloading and retiring legacy ATE.

NAVAIRINST 13630.2E, “OPTIMIZING WEAPON SYSTEM AVIONICS SUPPORT USING AUTOMATIC TEST SYSTEMS”, establishes policy, assigns responsibilities, and provides procedures for optimizing the use of CASS and associated TPSs by the Naval Aviation Systems Team. PMA260, the CASS PM, has responsibility for leadership across all areas related to aviation support equipment processes, including providing to the weapon system PM an initial assessment of weapon system program OTPS acquisitions prior to proposal initiation and again prior to fielding, and authorizing OTPSs to be used on the CASS Family.

In synopsis, PMA260 budgets for and manages the acquisition of all CSE (e.g., CASS) and OTPSs being offloaded from legacy ATE. Life cycle support and sustainment of CSE, including CASS, is the responsibility of PMA260. The respective weapon system PMs budget for and manage the acquisition of OTPSs for new weapons systems, their subsystems and components, as well as the sustainment of Legacy ATE "Offloaded" OTPSs transitioned from PMA260. Life cycle support and sustainment of PSE, which includes weapon system OTPSs, is the responsibility of the weapon system program that has cognizance over the PSE.

The processes used to support and sustain fielded CASS Family OTPSs are the same, regardless of original funding source.

Further, PMA260 is responsible for ensuring that information assurance (IA) requirements are satisfied by all software programs (e.g., OTPS software) that interface with CASS Family members. In this context, IA requirements are defined broadly to include all IA mandates that can be interpreted as being relevant for software programs and their interfaces/interactions with their execution environment, or to software in general. IA requirements may derive from any of the following:

- Department of Defense (DoD), Intelligence Community, and Federal directives (e.g., DoD Directive No. 8500.1E)
- Instructions (e.g., DoD Instruction No. 8500.2P)
- Manuals (e.g., Chairman of the Joint Chiefs of Staff Manual (CJCSM) No. 6510.01A)
- Memoranda (e.g., DoD Chief Information Officer (CIO) Memorandum No. 6-8510)
- Mandated configuration guides (e.g., the Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs))
- Other significant guidance documents (e.g., the National Security Agency's (NSA) Guidance for Addressing Malicious Code Risk, or the Common Criteria (CC) for Information Technology Security Evaluation.)
- National Institute of Standards and Technology (NIST) Publications

The information in this document will be updated as necessary to reflect the most recent NAVAIR policy, guidance and lessons learned for OTPSs. To obtain the latest version of this document contact NAVAIR PMA260D2, the ATE Planning Team Lead, or visit the NAVAIR PMA260 web site (<https://pma260.navair.navy.mil>).

## 1.4 References

- (a) CASS Operational Requirements Document (ORD) dated 3 July 2001 with annex dated 6 June 2006
- (b) MIL-PRF-32070, "Performance Specification, Test Program Sets"
- (c) NAVAIR Generic OTPS Request for Proposal (RFP) (NGOR)
- (d) NAVAIR Instruction 13630.2E, "Optimizing Weapon System Avionics Support using Automatic Test Systems"
- (e) NAVAIR Acquisition Guide
- (f) NAVAIR Logistics Handbook

- (g) SECNAVINST 5400.15C, “Department of the Navy (DoN) Research and Development, Acquisition, Associated Life-Cycle Management, and Logistics Responsibilities and Accountability”
- (h) DoDI 5000.02, “Operation of the Defense Acquisition System”
- (i) NAVAIRINST 13680.1D, “Depot Level Rework Program for Support Equipment End Items”
- (j) NAVAIRINST 4130.1D, “Naval Air Systems Command Configuration Management Process”
- (k) NAVAIR 00-25-300, “Naval Air Systems Command Technical Manual Program”
- (l) CNAFINST 4790.2B, “The Naval Aviation Maintenance Program”

## **2.0 The OTPS Acquisition Process**

### **2.1 Introduction to Operational Test Program Set (OTPS) Acquisition**

Once the need for an OTPS has been established, the weapon system PM follows the processes in the NAVAIR Acquisition Guide which identifies key activities and critical documentation required for acquisitions.

NAVAIR Instruction 13630.2E establishes policy and identifies PMA260 and Weapons Systems Program Manager responsibilities relative to the acquisition and sustainment of both ATE and OTPSs. To effectively execute this responsibility, PMA260 has developed a template for OTPS acquisition titled the NAVAIR Generic OTPS Request for Proposal (NGOR). See paragraph 2.2.6 for a description of the NGOR.

CASS Operational Requirements Document (ORD) dated 3 July 2001 with annex dated 6 June 2006 includes OTPS Key Performance Parameters (KPPs) described in its Appendix (A), “Guidance for OTPS Development in Support of Weapons Systems Tested on the Consolidated Automated Support System (CASS)”. Implementing the NGOR will satisfy OTPS KPP requirements.

The CASS Implementation Plan (CIP) is a database used by PMA260 and weapon system PMs to, among other things, determine initial OTPS site outfitting requirements. Data is entered into the CIP via CIP datasheets which are unique for each OTPS acquisition. See Section 4.1.8 for a description of the CIP and Section 4.1.5 for a description of an OTPS

### **2.2 Acquisition Planning**

This section provides information that is peculiar to OTPS acquisition to assist weapon system PMs in OTPS acquisition planning.

#### ***2.2.1 Cost Estimating***

OTPS cost estimates should include:

- Funding OTPS-specific acquisition Integrated Product Team (IPT) members including an independent government acceptance team
- Obtaining and preparing copies of Government Furnished Information (GFI) which consists of Unit Under Test (UUT) and ATE data
- Obtaining and maintaining Government Furnished Equipment (GFE) which typically includes UUTs, ATE and ancillary items

PMA260 can provide assistance in preparing cost estimates.

### 2.2.2 Contract Strategy

Table 1 lists factors to be considered when determining contract strategy. A Government development strategy can be used for any of the situations listed in this table.

Contract Type	Factors			
	UUT Design	UUT Data Availability	UUT Availability	ATE Availability
Full and Open Competition	Mature	Yes – available as GFI	GFE	GFE
Limited Competition	Stable	Yes, but not available as GFI; at least two contractors have knowledge of UUTs (e.g., UUT manufacturer and weapon systems integrator)	GFE	GFE
Sole Source (industry/government)	Stable	Yes, but not available as GFI	GFE	GFE
Government Development	Stable	Limited data available	Government	Government

**Table 1 - Factors Influencing Contract Strategy**

### 2.2.3 Determining Quantities

The Weapons Systems Planning Document (WSPD) is used in part to determine sites where OTPS support is required. Other site requirements may include the Fleet Support Team (FST) and training activities.

PMA260 will provide assistance in calculating the number of OTPSs per site.

### 2.2.4 Production Contract Considerations

When determining the production Contract Line Item Number (CLIN) quantities, consider having a modest range for OTPS acquisition quantities (e.g., 12 to 16) or having multiple options

for additional OTPSs to address uncertainties in projected UUT reliability, test execution times, and evolving site outfitting requirements. Also, Foreign Military Sales (FMS) needs should be considered and an FMS OTPS option should be included if there is a possible requirement.

Production units can be obtained via:

- An option on the development contract
- A contract after the final data package has been delivered to the government
- Manufacture by a government activity

Each of these approaches has advantages and disadvantages depending on the schedule, quantity and complexity of the OTPS.

### **2.2.5 OTPS-Peculiar Risks**

The risk assessment for the OTPS acquisition must address GFE and GFI, including availability and status of GFE, and accuracy of UUT data. PMA260 will work with the weapon system PM to understand these risks and develop mitigation strategies.

### **2.2.6 RFP Preparation**

The NGOR is a generic RFP template that weapon system PMs shall use for OTPS development and acquisition “contracts” (i.e., commercial contracts or in-house government efforts). It provides technical requirements for the development of OTPSs, supplements MIL-PRF-32070 and adds specific Navy requirements for development of CASS OTPSs. Available at [www.acq.osd.mil/ats](http://www.acq.osd.mil/ats), the NGOR procurement package applies to both commercial contracts and government efforts, and it contains the following elements:

1. Language for contract Sections B through M
2. Attachments:
  - (1) Statement of Work (SOW) for Intermediate Level TPS/OTPS Development for Units Under Test (UUTs) for use with CASS
  - (1a) SOW Appendix A - UUT Listing
  - (2) Performance Specification Supplement (Addendum to MIL-PRF-32070)
  - (3) General Acceptance Test Procedure (GATP) For TPS/OTPS
  - (4) Technical Data Package (TDP) Contract Requirements
  - (5) Technical Manual Contract Requirements (TMCR)
  - (6) Provisioning Statement of Work (PSOW)
  - (7) Addressee List
  - (8) Distribution Statements
  - (9) DD Form 254 (Contract Security Classification Specification)
3. Contracts Data Requirements Lists (CDRLs)

Contact PMA260 for assistance tailoring the NGOR to address program-unique requirements.

### **2.2.7 Pre-procurement Assessment of OTPS Procurement Plan**

Prior to the initiation of an OTPS acquisition, the weapon system PM will meet with PMA260 to review the draft RFP (i.e., completed NGOR) and address at a minimum the following OTPS-related topics:

- Points of contact (POCs); weapon system PM IPT structure
- Compatibility with CASS and ability of CASS to satisfy weapon system testing requirements as determined through engineering analysis
- Contracting strategy
  - Requirements for PMA260 (i.e., sites, ATE, ancillaries, data, schedule, CASS Family OTPS Development Tools to be provided by PMA260)
  - GFE, GFI requirements
- UUT information
  - Part Number (P/N)
  - Nomenclature
  - Identification of WRAs and SRAs to be tested
  - Preliminary Mean Time Between Failure (MTBF) data for each UUT
- Preliminary fielding sites and quantities of required OTPSs, CASS stations and ancillaries
- Schedule with program, systems engineering and logistics events identified
- CIP datasheet initiation
  - Assignment of OTPS program name
- Draft RFP
  - Identify the revision dates of the NGOR and MIL-PRF-32070 used to prepare the RFP
  - Identify all tailoring changes or modifications to the NGOR for the planned OTPS acquisition

### **2.3 Solicitation, Source Selection and Contract Award**

PMA260 can provide advisory services to the acquisition IPT throughout the solicitation, source selection and contract award phases.

### **2.4 Managing Deviations during the Contract**

To provide early insight into potential CASS Family impacts, PMA260 shall be made a copy-to addressee for all Requests for Deviation (RFDs).

### **2.5 Products**

The OTPS development process provides OTPS products for the end users (e.g., the Fleet), as well as OTPS products and data required for OTPS sustainment.

The delivery requirements for data prepared by the OTPS Developer are specified on the appropriate NGOR CDRL. The standard OTPS development products and data are listed in Table 2. This list is not all inclusive.

<b>Product List</b>			Prepared By OTPS Developer	Prepared By Government	Fleet Delivery	Sustaining CI and Data	Reference Data	<b>Description/Comments</b>  (Note: For new OTPSs, all Products except for Support Equipment Recommendation Data (SERDs), OPH and CIP data will be resident in the ATS Source Data Repository (ASDR), See Section 4.1.9 and Enclosure 5 for a complete description of ASDR)
OTPS Hardware and Software	OTPH		X		X	X		Includes ID, Test Fixtures, Holding Fixtures, Cables, etc.
	OTPM	CASS	X		X	X		Magneto Optical (MO) disk containing OTPS executable code .
		RTCASS		X	X	X		Digital Versatile Disc (DVD) containing OTPS executable code and Master Test Program Set Index (MTPSI) data. Merged by government onto RTCASS OTPS disk, which is reproduced and distributed by government.
OTPS Data	MTPSI	CASS	X	X	X	X		Fleet-deliverable CASS MTPSI cards in either electronic (*.pdf) or hardcopy format are produced by either the OTPS developer or the government using the *.tpsi file and an MTPSI tool (e. g., VisualMTPSI). These CASS MTPSI cards are temporary and will be replaced when the applicable FST incorporates the cards into one or more CASS weapon system MTPSI decks.
		RTCASS		X	X	X		*.ut files (included in RTCASS OTPM)
	OTPI	CASS	X		X	X		Compact Disc (CD) containing OTPI in portable document format (PDF) format.
		RTCASS		X	X	X		PDF files (included in RTCASS OTPM)

<b>Product List</b>		Prepared By OTPS Developer	Prepared By Government	Fleet Delivery	Sustaining CI and Data	Reference Data	<b>Description/Comments</b>  (Note: For new OTPSs, all Products except for Support Equipment Recommendation Data (SERDs), OTPH and CIP data will be resident in the ATS Source Data Repository (ASDR), See Section 4.1.9 and Enclosure 5 for a complete description of ASDR)
OTPS Data	OTPH TM	X		X	X		Fleet version on CD in PDF format; distributed via NATEC web site and Automatic Data Requirements List (ADRL).
	ULSS		X	X	X		In PDF format.
	TDP	X			X		Includes source data and copy of Joint Engineering Data Management Information and Control System (JEDMICS) files, if applicable.
	OTPS Software Source Data	X			X		Includes build files/procedures, unique software tools, etc.
	MTPSI Source Data	X			X		*.tpsi files in software source data; a copy is also on CASS OTPM.
	OTPI Source Data	X			X		
	OTPH TM Source Data	X			X		Developed IAW MIL-STD-3001
	ULSS Source Data		X		X		
	Engineering Support Data (ESD)	X			X		
	Logistics Management Information (LMI) Data	X			X		
	Maintenance Plan (MP)	X			X		Signed MP
	CIP Data		X		X		Resident in CIP database
	SERDs	X			X		Resident in Support Equipment Mangement System (SEMS) database

<b>Product List</b>		Prepared By OTPS Developer	Prepared By Government	Fleet Delivery	Sustaining CI and Data	Reference Data	<b>Description/Comments</b>  (Note: For new OTPSs, all Products except for Support Equipment Recommendation Data (SERDs), OTPH and CIP data will be resident in the ATS Source Data Repository (ASDR), See Section 4.1.9 and Enclosure 5 for a complete description of ASDR)
	Interim Support Items List	X				X	
	Government Test Report		X		X	X	
	PPAT Report	X			X	X	
	Fleet Introduction Report	X			X	X	
	Request for Deviations	X			X	X	Deviations approved by the PCO

**Table 2 - OTPS Development Products and Data**

## 2.6 Initial Outfitting

The weapon system PM is responsible for coordinating the delivery of all CASS OTPS products to end users as directed by the CNAF Support Equipment CASS/TPS Class Desk who will determine fielding priorities. The associated software and data may be reproduced, packaged, and shipped separately from the OTPH to the end user.

Correct versions of all OTPS components and data are delivered to the end users as follows:

- OTPH – Delivered as directed by the weapon system PM and CNAF. The SERMIS process must be used to log and track all OTPH deliveries.
- OTPM
  - CASS – Per weapon system PM direction, the latest version of the software media are reproduced in sufficient quantity and delivered to Fleet sites with corresponding OTPH.
  - RTCASS
    - Per PMA260 direction, OTPS software are merged into the RTCASS OTPS DVD, P/N RT-TPS-xxx (which contains all RTCASS OTPSs), then reproduced

and delivered to Fleet sites as an unlimited release. PMA260 directs "limited" release of the RTCASS OTPS DVD to specific sites as required.

Or

- Per weapon system PM direction, PM representatives may build/reproduce/deliver RTCASS temporary OTPM for OTPS IOC events. This software will be distributed by PMA260 on the next unlimited Fleet release of the RTCASS OTPS DVD, P/N RT-TPS-xxx.
- OTPI
  - CASS – Per weapon system PM direction, PM representatives reproduce and deliver with the OTPM as described above.
  - RTCASS
    - Per PMA260 direction, merged into the RTCASS OTPS DVD, P/N RT-TPS-xxx (which contains all RTCASS OTPIs) and delivered as described above.

Or

- Per weapon system PM direction, PM representatives may build/reproduce/deliver RTCASS temporary OTPI as part of the OTPS IOC. This OTPI will be distributed on the next unlimited Fleet release of the RTCASS OTPS DVD, P/N RT-TPS-xxx as described above.
- MTPSI
  - CASS – Per weapon system PM direction, PM representatives deliver to the Fleet as required a CD or paper MTPSI that is developed from the MTPSI source data (\*.tpsi) files.
  - RTCASS
    - Merged into the RTCASS OTPS DVD, P/N RT-TPS-xxx (which contains all RTCASS MTPSI data) and delivered as described above.

Or

- PM representatives may build/reproduce/deliver the MTPSI as part of the OTPS IOC. This MTPSI data will be distributed on the next Fleet release of the RTCASS OTPS DVD, P/N RT-TPS-xxx.
- Technical Manual (TM) – A PDF file, if applicable, is provided to NATEC for reproduction/distribution to all sites.
- ULSS – Reproduced and distributed by the PM representatives to the Fleet prior to the initial OTPH deliveries.

- Supplemental Data – Any supplemental OTPS software and documentation (e.g., Supplemental OTPI), including classified, will be distributed by weapon system PM representatives.

### **2.6.1 RTCASS OTPS Distribution**

When directed by the weapon system PM, PM representatives may distribute OTPM, OTPIs, and MTPSI data for RTCASS OTPS IOC events IAW the following sequential process:

- a. MDA declares IOC
- b. PM representatives:
  1. Accept OTPS CIs from developer
  2. Upload sustaining CI and Data (Table 2) into ASDR
  3. Build/test/reproduce one or more distributable interim release disks for RTCASS OTPS IOC events containing:
    - OTPS software
    - OTPI
    - MTPSI
  4. Inscribe unique P/N(s) on interim release disk label(s). These P/Ns are identifiers in the following format:

RTTPSaaa-bb-xxx

where:

"aaa" - represents the weapon system PM's numerical identifier (e.g., "209" for PMA209)

"bb" - represents a two-character-long integer (with a leading zero, if necessary), unique for each disk. Typically, this number will be "01" for each PM's first disk and will be incremented by one for every new disk. If more than 99 disks are assigned temporary P/Ns, then the dash ("-") preceding "bb" should be replaced by a third integer, allowing "100", etc. to be used.

"xxx" - represents the disk's version number, a three-character-long integer (with leading zeros). Ideally, this number will be "001" for the first version of each disk and will never be incremented.

5. Release IOC naval message
  6. Distribute RTCASS OTPS IOC OTPS disk(s) to IOC sites
  7. Forward copy of disk(s) to ASDR
- c. PMA260 representatives:
    1. Merge new OTPM, OTPI, and MTPSI data into RT-TPS-xxx disk
    2. Release updated RT-TPS-xxx disk via a Technical Directive (TD), which indicates disposal of any interim release OTPS disk(s) explicitly identified by (temporary) P/N.

## **2.8 Fielding**

In accordance with NAVAIRINST 13630.2E, a joint (weapon system PM and PMA260) Production Fielding Decision Meeting will be held at which the Milestone Decision Authority (the weapon system PM or PMA260) will formally authorize an OTPS to be used to RFI a UUT and approve site outfitting plans.

The MDA is the only entity that can authorize an OTPS to be used to RFI a UUT. PMA260 is the only entity that can authorize an OTPS to be used on the CASS Family. PMA260's authorization continues as long as the OTPS sustainment process in this document is followed.

The sustainment process for fielded OTPSs is described in Section 3.

## **3.0 The OTPS Sustainment Process**

### **3.1 OTPS Sustainment Introduction**

Sustainment involves the supportability of fielded OTPSs during the Operations & Support phase of the DoD 5000 model. Sustainment begins when any portion of the LRIP or production quantities have been fielded for operational use.

Per SECNAVINST 5400.15C, weapon system PMs will establish IPTs to execute their responsibilities, including in-service support.

From DoDI 5000.02: Life cycle sustainment considerations include initial provisioning; supply; maintenance; transportation; sustaining engineering; data management; configuration management; environment, safety, and occupational health; inventory management; supportability; and interoperability.

The NAVAIR Logistics Handbook, available at <https://home.navair.navy.mil/air66wiki/MainPage.ashx>, provides guidance relative to providing logistics support of NAVAIR acquisition programs and is applicable to OTPS sustainment.

As specifically related to OTPS sustainment, functions required to be performed include hardware and software CM, inventory management (including interfacing with Fleet users), ISE, data management, and OTPS maintenance.

### **3.2 OTPS Sustainment**

To maintain authorization to use an OTPS on the CASS Family, the sustainment processes in this document must be followed by the weapon system PM.

#### ***3.2.1 OTPS Sustainment Responsibilities***

The cognizant weapon system PM is responsible for sustainment of OTPS products and data. Weapon system PMs are responsible for their respective PSE OTPS CIs. PMA260 is responsible for sustainment of CSE OTPS CIs, ASDR, common ATS hardware, station software, support software, maintenance software, documentation, and related data. PMA260 is also responsible for funding updates to OTPS CIs driven by changes to the CASS family.

PM representatives are responsible for:

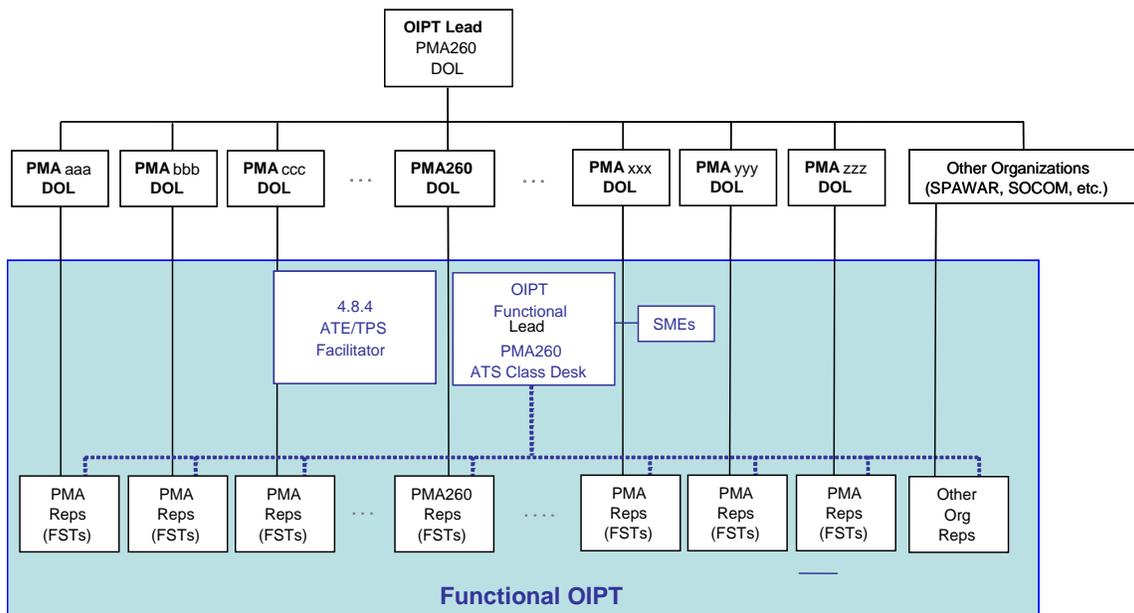
- Maintaining OTPS CIs IAW the processes documented herein and the following documents, which are available on the PMA260 web site:
  - CASS User's Guide for TPS Developers (also known as (aka) T00K)
  - CASS Station Interface and GPI Pin-out Data (Appendix C of T00K)
  - Prime Item Development Specification for CASS (aka CASS B1 Spec)

- Requirements Verification Traceability Matrix (RVTM) - performance and verification requirements specification for RTCASS
- NGOR
- PMA260 CM Plan for Aviation Support Equipment
- ASDR CM Users Guide
- CASS TPS Advisories
- Reporting any problem with the CIs listed in Enclosure 4, Table 4 via CASS/RTCASS System Problem Report (SPR) to PMA260D2. The "CASS/RTCASS SPRs" link on the PMA260 web site can be used to access this database.
- Reporting any OTPS problems IAW paragraph 3.2.10.2.
- Ensuring their respective data within ASDR is current with or more advanced than the latest Fleet release. Sites that use ASDR for CM workflow (e.g., check-in, check-out) will routinely have OTPS data within ASDR that is beyond the latest Fleet release.
- Providing ASDR with thorough descriptions of, and all relevant, supporting data about each software update. This includes a completed Version Description Document (VDD) form (shown in Enclosure 3) and the following:
  - A copy of all affected source data including an updated MTPSI \*.tpsi file and build files/procedures
  - Difference listings that readily identify the specific changes (before and after) made to each source file
  - A copy of each applicable reference document (e.g., Engineering Investigation Request, Software Change Request (SCR), Support Software Change (SSC)/TD describing the relevant problem(s) and solution(s)
  - Updated header information in the main TPS program that provides appropriate revision information
  - Updated comments field near the affected code change that describes the code change rationale IAW best software CM practices
  - Test results (e.g., electronically-captured, end-to-end runs of all updated TPS software on the targeted ATE) that demonstrate the code changes were successfully implemented without negative consequences
- Ensuring their respective data within the CIP is current and accurate; any needed changes must be relayed to PMA260D2.
- Working with PMA260 representatives to identify and maintain all peculiar software tools used to sustain their respective OTPS CIs.
- Establishing depot rework capability per NAVAIRINST 13680.1C (“DEPOT LEVEL REWORK PROGRAM FOR SUPPORT EQUIPMENT END ITEMS”) for OTPH if required.
- Managing and delivering all OTPS supplemental software and documentation, including classified, using existing processes.

### **3.2.1.1 CASS Family Sustainment OIPT**

The CASS Family Sustainment Overarching Integrated Product Team (OIPT) ensures that a systems-level approach is taken during sustainment of the CASS Family. Additionally, the OIPT allows for a common and standardized forum of problem reporting and enhances the

communication and information sharing across the entire ATS community. This OIPT is depicted in Figure 1. OIPT membership includes the Director of Logistics (DOL) or a designated representative from every applicable weapon system PMA as well as stakeholders from the CASS Family FSTs and the CASS Software Support Activity (SSA). The OIPT Lead is the PMA260 DOL who directly interfaces with the weapon system PM DOLs or designated representatives and other organizations concerning their respective OTPSs. The OIPT Functional Lead is the PMA260 ATS Class Desk. The OIPT Functional Lead primarily provides guidance to the weapon system PMA representatives, especially regarding certain deficiency reports and their resolution and submits tasking requests to the weapon system PMA representatives. This functional lead is supported by subject matter experts (SMEs) who have extensive knowledge about ATE capabilities, OTPS development, test strategies, etc., and is the facilitator for tasking SMEs in support of the OIPT. The functional members of the OIPT are the weapon system PMA OTPS / ATE Leaders. The functional members will communicate issues and share data with the OIPT and assist in problem resolutions. The functional members will also coordinate and prioritize all tasking requests based on weapon system PMA cost and schedule requirements. The requiring PMA will be responsible for funding tasks. The Functional IPT will have regularly scheduled meetings that will include clear purpose and agenda and be facilitated by an AIR-4.8.4 ATE/TPS Competency Manager.



**Figure 1 – CASS Family Sustainment OIPT**

### **3.2.2 Configuration Items**

Table 2 identifies the types of OTPS products and data that are sustained.

The following CIs will be updated and/or replenished by the cognizant PM's representatives as needed to meet user end requirements:

- OTPM
- MTPSI
- OTPI
- ULSS
- OTPH TM
- OTPH

The following CIs will be sustained by the cognizant PM's representatives, as needed, to help meet near- and long-term weapon system/ATS program objectives:

- TDP
- TPS Software Source Data, including MTPSI Source
- OTPI Source Data
- OTPH TM Source Data
- ULSS Source Data
- Engineering Support Data
- LMI Data
- Maintenance Plan
- CIP Data
- SERDs
- Historical Archives (CDRL deliverables, government documents/reports)

#### **3.2.2.1 Configuration Baseline**

The hardware, software and data configuration baselines for each OTPS shall be maintained as directed by the applicable PM.

ASDR is initially populated with the baseline CIs through:

- Delivery by a TPS Developer and Government Acceptance IPT as described in Section 2.6
- Upload of data for currently fielded OTPSs by the applicable PM or PMA260 representatives
- OTPS migration as described in Section 4.1.10 and acceptance by the applicable PM representatives

Once an OTPS baseline is established in ASDR, this baseline will be maintained to reflect the latest Fleet version or beyond. Weapon system PM representatives that also use ASDR as a tool for internal CM workflow (e.g., check-in, check-out) will routinely have OTPS data within ASDR that is beyond the latest Fleet release (i.e., incremental baseline).

All OTPS source data CIs in ASDR will be maintained on a file-by-file basis to ensure traceability of all changes.

### **3.2.3 OTPS Sustainment Requirements**

In order to maintain authorization to use OTPSs on the CASS Family, PM representatives will sustain OTPS products and data IAW the processes documented herein and the following documents:

- CASS User's Guide for TPS Developers (aka T00K)
- CASS Station Interface and GPI Pin-out Data (Appendix C of T00K)
- Prime Item Development Specification for CASS (aka CASS B1 Spec)
- RVTM - performance and verification requirements specification for RTCASS (Appendix F of B1 Spec)
- NGOR
- PMA260 CM Plan for Aviation Support Equipment
- ASDR CM Users Guide
- CASS TPS Advisories

In addition, OTPS CIs are subject to their respective PM's program-peculiar guidance and requirements (e.g., Platform CM Plan), none of which should conflict with the processes documented herein or the documents listed above.

### **3.2.4 OTPS Sustainment Tools**

Enclosure 4 lists hardware, software, and documentation used to sustain CASS OTPSs. PMA260 through the OIPT will assist PM representatives in obtaining and maintaining the tools necessary for initial FST stand-up and sustainment of these tools.

PM representatives are required to obtain, if necessary, and maintain all peculiar hardware (e.g., VAX support computer), software, and documentation needed to sustain their respective OTPSs.

### **3.2.5 OTPS Change Processes**

### **3.2.5.1 Change Control Boards (CCB)**

All OTPS changes shall be processed IAW the weapon system PM CM Plan and approved via the NAVAIR Change Control Board (CCB) or other authorized change control authority.

In an effort to streamline the Support Equipment (SE) change process, AIR-1.1 chartered PMA260 as a Decentralized Change Control Board (DCCB) authority for SE software changes which do not have any hardware impact. This designation is IAW NAVAIRINST 00-25-300, Section 2.3, and NAVAIRINST 4130.1D, Section 5.4.3.

Weapon system representatives have the option of processing SE software-only changes via the PMA260 DCCB, the NAVAIR CCB or other authorized DCCBs. Any PSE OTPS software changes not processed via the PMA260 DCCB will be routed to PMA260 for concurrence/information (to assess potential CSE impacts) as an associate member of the NAVAIR CCB IAW NAVAIRINST 4130.1D, Section 5.5.1.

All other OTPS changes (i.e., those that affect hardware) require approval through the normal NAVAIR CCB or other designated change control authority. In the case that an OTPS software change is part of an overarching engineering change proposal (ECP) which does have hardware impact, the OTPS software change should be addressed by the overarching ECP. The ECP will then be routed for concurrence/information to PMA260 as an associate member of the NAVAIR CCB IAW NAVAIRINST 4130.1D, Section 5.5.1.

Regardless of the applicable CCB, all changes that affect OTPS software that is used in conjunction with the CASS Family of ATE require PMA260 concurrence.

### **3.2.5.2 OTPH Changes**

Any proposed OTPS change that involves a change to hardware (e.g., OTPH) that affects form, fit, or function must be documented and processed as a Class I ECP. These ECPs must address all impacts to all affected OTPS CIs (e.g., OTPH TM) and must be approved through the normal NAVAIR CCB or other approved change control authority. Only ECPs with corresponding changes to OTPS software will be routed for concurrence/information to PMA260 as an associate member of the NAVAIR CCB IAW NAVAIRINST 4130.1D, Section 5.5.1.

Approved OTPH changes along with any corresponding CASS OTPS software updates are usually packaged as change kits and released via a Support Equipment Change (SEC) IAW NAVAIR 00-25-300, Section 3.4.8. Corresponding RTCASS OTPS software updates will be part of the next scheduled RTCASS TPS release distributed via a SSC IAW NAVAIR 00-25-300, Section 3.4.19.

A Rapid Action Minor Engineering Change (RAMEC) can be used to authorize and direct end users (e.g., Fleet sites) to incorporate approved OTPH changes if those changes can be implemented by using only materials commonly on-hand at each site and/or readily available through normal supply channels. RAMECs are SECs issued via naval message.

### **3.2.5.3 OTPS Software Changes**

A proposed OTPS software change that does not involve a hardware change must be documented and processed as a Software ECP IAW the PM's CM Plan or a software change proposal (SCP) IAW the PMA260 CM Plan for Aviation Support Equipment when using the PMA260 DCCB. These ECPs and SCPs must address all impacts to all affected OTPS CIs. Weapon system PM representatives have the option of processing software-only ECPs via the NAVAIR CCB or a chartered DCCB but all PSE with a potential CSE impact will be routed for concurrence/information to PMA260 as an associate member of the NAVAIR CCB IAW NAVAIRINST 4130.1D, Section 5.5.1. The PMA260 CM Plan for Aviation Support Equipment contains a copy of the SCP form and describes the SCP process. SCPs are submitted to the PMA260 DCCB for approval. An approved OTPS "software-only" change is released as a SSC IAW NAVAIR 00-25-300, Section 3.4.19. CASS-compatible OTPS software updates (unrelated to hardware changes) are packaged as SSC kits and include any corresponding updated OTPI and CASS MTPSI cards. Corresponding RTCASS-compatible OTPS software updates (unrelated to hardware changes) will be included in the next scheduled RTCASS TPS release.

OTPS software changes must incorporate applicable DoDI 8500.2P Mission Assurance Category II software/application IA controls per Section 2.8.

CASS OTPM Fleet releases will be scheduled on an as-needed basis.

RTCASS OTPM (P/N RT-TPS-xxx) Fleet releases will be scheduled on a periodic (e.g., quarterly) basis or when warranted by RTCASS System Software updates. Information about each scheduled release, including its cut-off date for submission of updated TPSs, will be formally disseminated to all stakeholders via the OIPT. OTPS updates that do not meet the cut-off date for one scheduled release will normally be incorporated into the following release. Emergent requirements will be communicated by the relevant PM representatives to PMA260 representatives. When required, a "limited" release of the RTCASS OTPS media (P/N RT-TPS-xxxLx) may be issued by PMA260 with CNAF concurrence to selected sites on a case-by-case basis.

### **3.2.5.4 OTPS Documentation Changes**

Any proposed OTPS documentation (e.g., OTPH drawing, OTPH TM) change related to a hardware change must be addressed in the relevant Class I ECP.

OTPI changes unrelated to a hardware change are processed as described in Section 3.2.5.3.

MTPSI data changes unrelated to a hardware change must be updated in the applicable OTPS software. The MTPSI data is included in the subsequent SSC kit described in Section 3.2.5.3. Changes to both software and data must meet standard MTPSI requirements defined in Appendix J of the CASS User's Guide for TPS Developers.

Updates to the TDP should only result from a properly documented ECP. A proposed TDP change that does not involve a Class I ECP is documented and processed as a Class II ECP as directed by the cognizant PM's CM Plan. Class II ECPs do not impact the OTPM or OTPI.

Proposed OTPH TM changes are documented, tracked and processed by the applicable PM representative via Technical Manual Source Data Record (TMSDR). When a TM change is deemed to be urgent, the cognizant PM representative pushes an Interim Rapid Action Change (IRAC) or electronic Rapid Action Change (eRAC) to the Fleet, providing updated data in advance of the formal TM update. After all appropriate TM changes have been incorporated into the editable TM source data and a distributable version of the TM is made, the cognizant PM representative pushes the updated TM to NATEC for distribution and archiving.

### ***3.2.5.5 Validation of Updated OTPS Products***

Validation of updated OTPS products must be conducted to ensure suitability for Fleet release. OTPS validation methods include analysis, test sampling, and/or full verification OTPS end-to-end/diagnostics testing. Although the OIPT member who introduced a particular OTPS change is primarily responsible for its validation, the other affected OIPT members must be notified and, when appropriate, involved with validation efforts. Regression testing will be coordinated through the OIPT and results will be shared.

Weapon system PM representatives will be responsible for validating their proposed OTPS software changes for all applicable ATE variations (e.g., CASS and RTCASS).

PMA260 will be primarily responsible for validation of RTCASS OTPS software changes caused by RTCASS conversion tool changes; however, the affected OIPT stakeholders may take active roles in validation of the executable TPS code.

Regardless of the origin of the OTPS changes, all validation efforts will be coordinated through the OIPT to ensure a systems-level approach is taken and to avoid adverse impacts to software release schedules. All validation results will be documented, submitted to ASDR, and communicated to all affected OIPT functional stakeholders. All required validations will be performed prior to TD verification.

### ***3.2.5.6 Technical Directive (TD) Verification***

TD verification must be conducted IAW NAVAIR 00-25-300.

### ***3.2.6 Distribution of Updated OTPS Products and Data***

Updated OTPS components, related end items, and data will be distributed as follows:

- OTPH Changes – Will be distributed/incorporated via RAMEC or SEC at the direction of the cognizant PM. The SERMIS process must be used to log and track all OTPH shipments that affect the serial numbers, part numbers or quantities of CIs at an end user site.
- OTPM
  - CASS – Reproduced and distributed per direction of the cognizant PM.
  - RTCASS – TPS executables merged into RTCASS OTPS DVD (containing all RTCASS TPSs), then reproduced and distributed on a periodic basis by PMA260. PMA260 may direct "limited" release of RTCASS OTPS DVD to specific sites to meet high-priority requirements.
- OTPI
  - CASS – Reproduced and distributed per direction of the cognizant PM.
  - RTCASS – TPIs merged into RTCASS OTPS DVD.
- MTPSI data (CD, card(s), etc)
  - CASS – Reproduced and distributed per direction of the cognizant PM
  - RTCASS – Embedded in OTPM. Separate delivery not required. Viewed or printed by end users on-demand.
- Supplemental software and documentation – Reproduced and distributed per direction of the cognizant PM.
- TM
  - Weapon system PM representative provides NATEC with the updated TM, if applicable. NATEC pushes the updated TM to Fleet activities via the ADRL, loads a copy into Technical Manual Application System (TMAPS) and pushes a copy of the PDF file to its data repository for archival purposes.
  - Partial TM updates may be issued by the cognizant PM representative as IRACs until they are replaced by the next full TM release. IRACs are issued as naval messages IAW NAVAIR 00-25-100, the Naval Air Systems Command Technical Manual Program. Extensive IRACs and/or those with figures/illustrations are also issued in hardcopy format.
- ULSS – Reproduced and distributed by cognizant PM representative
- TDP/Drawings –The cognizant PM representative provides updated TDPs (editable native source files and PDF images) to ASDR and drawings to JEDMICS (PDF image) IAW the NAVAIR Technical Data Package Acquisition Guide (Air-3.3, 11 May 2004).
- TPS Software Source Data – ASDR and, if applicable, PM-assigned configuration manager
- MTPSI Source Data – ASDR and, if applicable, PM-assigned configuration manager
- OTPI Source Data – ASDR and, if applicable, PM-assigned configuration manager

- OTPH TM Source Data – ASDR and, if applicable, PM-assigned configuration manager
- ULSS Source Data – ASDR and, if applicable, PM-assigned configuration manager
- Engineering Support Data – ASDR and, if applicable, PM-assigned configuration manager
- LMI Data – ASDR and, if applicable, PM-assigned configuration manager
- Maintenance Plan – ASDR and, if applicable, PM-assigned configuration manager
- SERDs – SEMS database

The term “TPS software source data” above also includes build files as described in Table 2. ASDR should also be updated with a copy of the delivered end items (e.g., CASS TPS executable code) as described in Section 3.2.1.

All updated OTPS CIs sent to Fleet sites should be addressed to "MMCO, Work Center 020" at Fleet sites for inventory tracking purposes.

### **3.2.7 OTPM Update Process Summary**

The following is a summary of sequential steps taken by weapon system PM representatives and the OIPT to update OTPS software source code:

- a. Pull applicable TPS source data from ASDR
- b. Make appropriate changes to source data
- c. Build updated CASS (Blue) and RTCASS\* (Green) OTPS disks
- d. Validate changes for CASS and RTCASS\*
- e. Generate and submit SCP/ECP and draft TD for CASS (Blue) release
- f. Update ASDR as described in Section 4.1.9
- g. Verify CASS (Blue) TD
- h. Reproduce and ship CASS (Blue) disk and TD to Fleet Sites

\* when applicable

The following is a summary of steps taken by PMA260 representatives for a scheduled RTCASS OTPM release:

- a. Establish proposed list of changes for next scheduled RTCASS OTPS release
- b. Ensure ASDR contains the required TPS source code and related data (e.g., VDD)
- c. Assess RTCASS system software changes (e.g., VDD) for possible impact on TPSs
- d. Pull applicable TPS source code from ASDR
- e. When applicable, run pertinent TPS source code through conversion tools and assess for impacts
- f. When applicable, coordinate all TPS changes with cognizant FST

- g. Engineering team assess TPS risk areas (high, medium, low)
- h. Build RTCASS OTPS DVD using relevant system software
- i. Validate updated software (e.g., OIPT coordinate regression testing on selected TPSs)
- j. Ensure TPS run sheets are captured, if applicable
- k. Update CIP to identify TPSs approved for RTCASS, if changed
- l. Generate SCP and draft TD
- m. Update ASDR (e.g., TPS Green code)
- n. Build final media (i.e., RT DVD, P/N RT-TPS-xxx)
- o. Verify TD
- p. Submit SCP and draft TD to PMA260
- q. Upon signature of SCP and release of TD by PMA260, reproduce and ship disks to Fleet sites

### **3.2.8 Interim Changes and Work-Arounds**

Other than IRACs and eRACs, interim changes to fielded CIs shall not be released to end user sites.

To mitigate a problem with fielded OTPS software and/or hardware, PM representatives may, upon weapon system PM direction, issue a temporary workaround procedure (TWP) via naval message and accompanying hardcopy (if required). These paper-only TWPs authorize end user sites to work around existing problems with fielded OTPS elements until an official update can be processed and released via TD. TWPs are not a method of releasing software CIs to end users and are not to be used for distributing software OTPM changes to end user. Each TWP shall have a unique identifier (i.e., part number) for CM and tracking purposes and shall not remain active for more than one year. The TD that renders a TWP obsolete shall state that the TWP has been superseded. Any TWP that has not been resolved within twelve months from its release shall be reissued.

### **3.2.9 Configuration Status Reporting**

PM representatives shall maintain a list of all of their program's current Fleet release versions of OTPM, OTPIs, MTPSI decks (if applicable), and OTPH TMs. The list shall also include all outstanding TWPs and IRACs. This configuration status information shall be made available to all end users.

### **3.2.10 Discrepancy Reports and Their Resolution**

#### **3.2.10.1 Discrepancy Reporting**

There are multiple methods available to identify and report OTPS related discrepancies. Many of these methods can also be used to identify and submit proposed enhancements to a single or a multitude of OTPSs.

Various entities can identify deficiencies with OTPS CIs, including ATE developers, TPS developers, CASS technical working group (TWG) members, engineering activities, FSTs, NATEC representatives, FMS customers, and Fleet users.

IAW CNAFINST 4790.2A, the Fleet officially reports discrepancies with OTPSs exclusively as engineering investigation (EI) requests, product quality deficiency reports (PQDRs), and technical publication deficiency reports (TPDRs).

EIs and PQDRs are submitted IAW CNAFINST 4790.2A using the Joint Deficiency Reporting System (JDRS), which is accessible via web site:

<https://jdrs.mil>

TPDRs are submitted IAW CNAFINST 4790.2A using TMAPS available via the NATEC web site:

<https://mynatec.navair.navy.mil>

Users may propose an enhancement to a single OTPS or all OTPSs via naval message, at Fleet user forums, during boots-on-the-ground inspections, etc. For example, many of the CASS Fleet Support Review (FSR) action chits identify proposed OTPS enhancements. The database for FSR action chits is on the PMA260 web site portal (<https://pma260.navair.navy.mil>). PMA260 will forward the action chit to the OIPT for processing.

Non-Fleet users may report OTPS deficiencies via the PMA260 web site.

PMA260 has developed an OTPS SPR Database which is available at the PMA260 web site for the purpose of reporting deficiencies identified during sustainment of PMA260 CASS Family products.

PM representatives shall record and track all types of deficiencies with their respective OTPSs. This information shall be made available to the CASS Family Sustainment OIPT.

### ***3.2.10.2 Handling Discrepancies***

Discrepancies will be handled IAW the following procedures utilizing the CASS Family Sustainment OIPT depicted in Figure 1. In addition, all EIs and PQDRs will be processed IAW CNAFINST 4790.2A and established processes. Discrepancy handling involves initial investigation through discovery of its root cause and its proposed resolution.

All OTPS discrepancies are routed to the cognizant PM representatives for initial investigation. The cognizant representative will inform (via email, inclusion in the INFO list on EI responses, etc.) the OIPT Functional Chair of the discrepancy and the progress of its investigation. The OIPT Functional Chair will involve all appropriate stakeholders under the OIPT and will ensure that a systems-level approach is taken in the proposed resolution. The OIPT Functional Chair may also provide SMEs, as appropriate, to assist in investigations, root cause determination, and development of proposed resolutions, including depot rework. Any conflict or issue at the functional OIPT level will be reported to the OIPT chair for coordination with applicable weapon system PM DOL(s).

PMA260 may lead the investigation/resolution of specific OTPS-related discrepancies or proposed enhancements using the functional OIPT. For example, an FSR action chit that describes a proposed enhancement to many or all OTPSs would typically be led by PMA260, and implementation would be coordinated with all affected PM representatives. OTPS migration described in Section 4.1.10 is an example of a major OTPS enhancement effort led by PMA260.

Functional OIPT representatives of each PMA will have visibility into the status of all discrepancies being worked by the functional OIPT, fostering communication of systemic problems and reinforcing accountability for all reported problems. Functional OIPT representatives will be given accounts for the CASS/RTCASS SPR database, which stores details about CASS/RTCASS station software and support software problems, proposed enhancements, and resolution status.

Weapon system PM representatives will ensure the OIPT Functional Chair is copied on all EI responses. In addition, PM representatives must ensure the OIPT Functional Chair is informed of all other deficiencies with their respective OTPSs tracked via local procedures/databases.

The proposed resolution of each discrepancy will be forwarded to the appropriate PM and the OIPT Functional Chair for review. The appropriate PM(s) will make the final implementation decisions.

The OIPT Functional Chair will assist with the coordination of resolutions involving multiple PMAs.

Proposed resolutions that will not be implemented due to limited funding/resources will be tracked as unresolved problem reports. Investigation results may avoid future investigations of the same problem by keeping all stakeholders informed about known, unresolved problems. Solutions to unresolved problems may be implemented at a future date.

Discrepancies or resolutions involving external interfaces (e.g., training, CASS, facilities) beyond OTPS CIs will be coordinated by the OIPT Chair.

### **3.2.10.3 *Implementing Discrepancy Changes***

IAW PM direction, all approved OTPS changes will be implemented into all affected CIs listed in Section 3.2.2. Changes will be documented, processed, and validated as described in Section 3.2.5.

## **4.0 Definitions and Acronyms**

### **4.1 Definitions**

#### ***4.1.1 Common Support Equipment (CSE)***

SE acquired for use on multiple weapon systems and on multiple platforms is designated as CSE. CASS is one example of CSE. Life cycle support of CSE is the responsibility of PMA260.

#### ***4.1.2 Peculiar Support Equipment (PSE)***

SE acquired for use on a single weapon system regardless of number of platforms is designated as PSE. Life cycle support of PSE is the responsibility of the cognizant weapon system PM for the PSE. An OTPS is one example of PSE.

#### ***4.1.3 Automatic Test System (ATS)***

An ATS includes ATE hardware, documentation and operating software; OTPSs, which include the hardware, software and documentation required to interface with and test individual weapon system component items; and associated TPS software development tools, referred to as ATE Support Software. The term “ATS” also includes ATE self-test and calibration elements.

An ATS is the complete system used to identify failed components, adjust components to meet specifications, and assure that an item meets required performance specifications in support of a RFI certification.

#### ***4.1.4 Automatic Test Equipment (ATE)***

ATE refers to the test set (aka station) hardware and its operating software. The hardware itself may be as small as a man-portable suitcase or it may consist of eight or more racks of equipment weighing over 6,000 pounds. ATE is often ruggedized commercial equipment for use aboard ships or in mobile maintenance facilities (MMFs). ATE used at fixed, non-hostile environments such as depots or factories may consist purely of commercial off-the-shelf (COTS) equipment.

The heart of the ATE is its primary computer which is used to control complex test instruments such as digital voltmeters, waveform analyzers, signal generators, and switching assemblies. This equipment operates under control of test software to provide a stimulus to a particular circuit or component in the unit under test (UUT), and then measure the response at various pins, ports or connections to determine if the UUT has performed to its specifications.

The ATE has its own operating and support software which performs housekeeping duties such as self-test, tracking preventative maintenance requirements, test procedure sequencing, and storage and retrieval of digital technical manuals (TMs).

ATE is typically very flexible in its ability to test different kinds of electronics. It can be configured to test both black boxes (aka WRAs) and circuit cards (aka SRAs). When connected to the ATE, the WRAs and SRAs are usually referred to as Units Under Test (UUTs).

The CASS Family of ATE is depicted in Figure 2 and includes Mainframe CASS (Hybrid, RF, EO, High Power and CNI configurations), Reconfigurable Transportable CASS (RTCASS) and the modernized future CASS test set known as eCASS. CASS functionality is augmented by ancillary equipment when needed, typically when supporting new, advanced weapon systems. Ancillary equipment is limited to weapon systems special needs and is fielded based on work load. eCASS will include some of the capabilities within each station that are now satisfied by CASS ancillary equipment.

CASS is used afloat (CV and L-Class ships) and ashore at COMNAVAIRFOR, COMNAVIARESFOR, COMNAVSURFOR, NAVAIR, NAVSEA, CNATT, SPAWAR, SOCOM, USMC and FMS sites as well as at Fleet Readiness Centers and Depots.

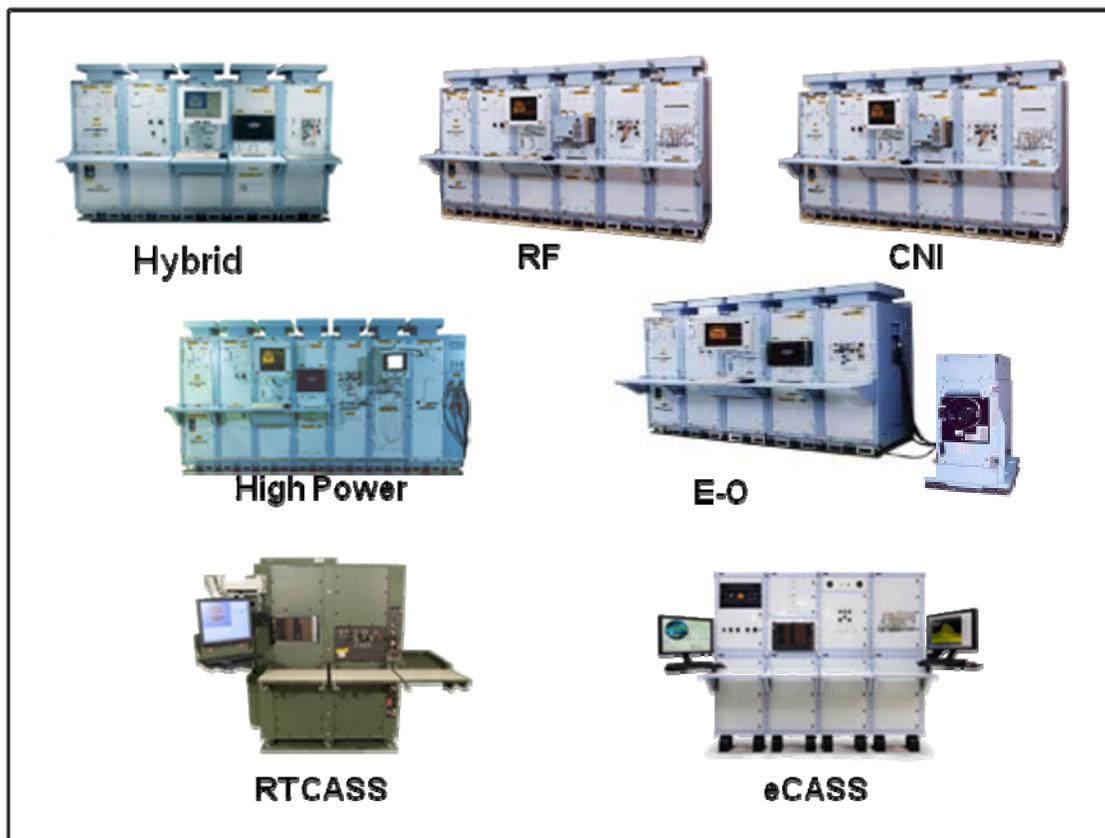


Figure 2 – The CASS Family Members

#### **4.1.5 Test Program Set (TPS)/Operational Test Program Set (OTPS)**

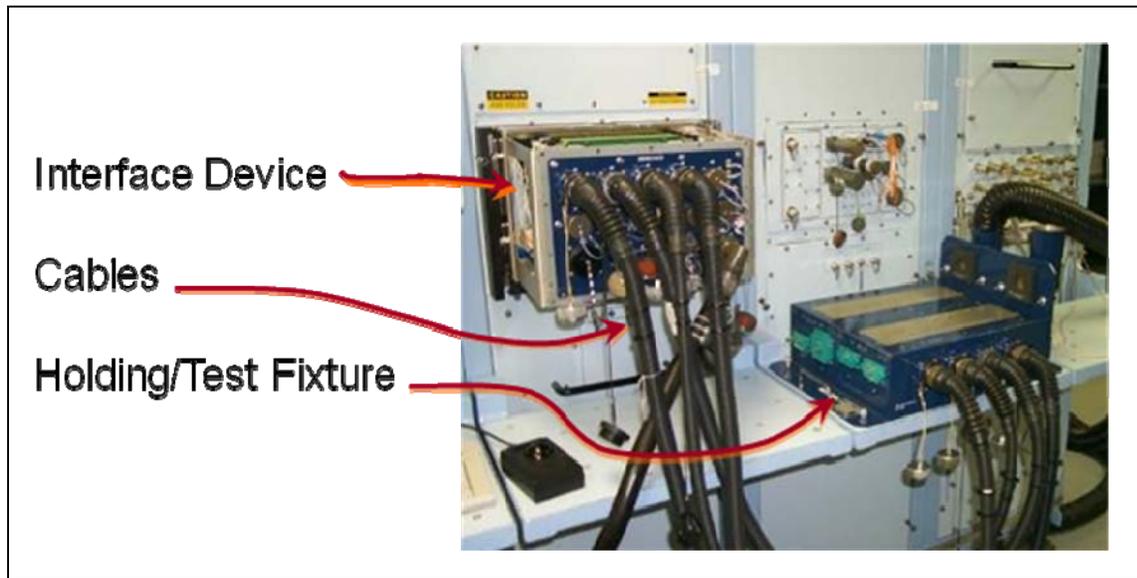
A TPS consists of the software, hardware, and documentation (beyond that associated with the ATE or weapon system technical manual) needed to test, fault detect and isolate, or perform any other evaluation of a specific UUT.

An OTPS is a logically-bundled group of TPSs which use the same set of hardware items (interface devices, cables, mounting plates, etc). An OTPS usually contains TPSs that test one or more WRAs and their SRAs. OTPSs contain the following elements:

- Operational Test Program Hardware (OTPH) – The hardware portion of the OTPS typically consists of the following:
  - Interface Device (ID) – The OTPH component that mates with the ATE's main interface panel and the UUT. IDs, which are often the largest OTPH component, are designed to facilitate connection and enable communication between the ATE and UUT.
  - Test Fixture – A device which provides additional active and passive circuitry to resolve incompatibilities between the UUT and the ATE, which is not appropriate for inclusion in the ID because of weight, size, circuit proximity or heat limitations. It may also be used as a holding fixture to secure the UUT.
  - Holding Fixture – A device designed to maintain proper positioning of an UUT during testing on ATE. It may also be used to direct facility cooling air to the UUT. The holding fixture does not contain any circuitry.
  - Cables – Specifically designed items, with or without branches, having one or more ends processed or terminated in fittings for use between UUTs, OTPH (e.g., interface device) and ATE. These cables can be very specialized, consisting of special materials and fabrication processes to preserve signal integrity and UUT compatibility.

OTPH may also include special connectors, plugs, adapters, alignment tools, specialized electronic test equipment, etc.

Examples of OTPH components are shown in Figure 3.



**Figure 3 – OTH Components**

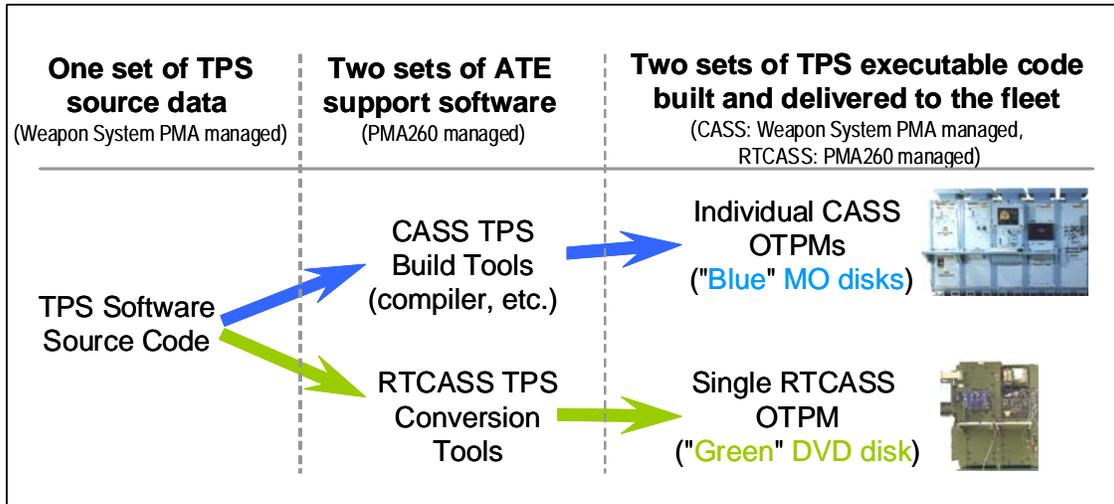
- Operational Test Program Media (OTPM) – The OTPM contains the executable software used to test, fault isolate and adjust/align the applicable UUTs and/or OTH components.
- Operational Test Program Instruction (OTPI) – The OTPI is the resultant merger of all Test Program Instructions (TPIs) associated with an OTPM. Each TPI consists of information needed to support the TPS.
- Master Test Program Set Index (MTPSI) – The MTPSI contains a list of all items required to test a unique UUT on a specific ATE.
- OTH Technical Manual (TM) – The TM contains OTH-related information including description, principles of operation, testing and troubleshooting information for parts removal/installation; the Group Assembly Parts List (GAPL); the Illustrated Parts Breakdown (IPB); and Source, Maintenance and Recoverability Codes (SM&R)
- User Logistic Support Summary (ULSS) – The ULSS identifies the logistics and maintenance support required to operate and maintain the OTPS.

#### **4.1.6 CASS and RTCASS Operational Test Program Media (OTPM)**

CASS and RTCASS OTPM are end user (e.g., Fleet) deliverable configuration items (CIs) that contain TPS executable software. CASS OTPM is issued on older Magneto-Optical (MO) media while RTCASS OTPM is issued on newer Digital Versatile Disk (DVD) media. RTCASS is also

compatible with compact disk (CD) media; however, the total set of RTCASS TPSs requires the larger amount of storage space that DVDs provide.

As depicted in Figure 4, the RTCASS OTPM CI (aka the "Green" disk) is created from the same set of TPS software source code used to create CASS OTPM CIs (aka the "Blue" disks).



**Figure 4 – CASS and RTCASS OTPM Configuration Items (CIs)**

Although built from the same source code, the CASS and RTCASS OTPM CIs are significantly different as shown in Table 3. RTCASS, as a modernized ATE, provides the opportunity to use technology to improve current processes and allow OTPS products to be delivered to the Fleet more efficiently.

<b>ATTRIBUTE</b>	<b>CASS</b>	<b>RTCASS<sup>see note</sup></b>
Physical type of OTPM:	Magneto-optical (MO) disk	Digital Versatile Disc (DVD)
OTPI:	Separate CD	Combined with DVD
MTPSI:	Separate CD and/or hardcopy	Combined with DVD
Number of OTPM required:	At least one MO disk per OTPS. Some CASS OTPSs require multiple MO disks due to storage limitations of MOs.	One (contains all RTCASS TPS executable code)
ATE Support Software:	CASS TPS development and build tools	RTCASS TPS conversion and build tools
Format of distributed TPS code:	Compiled token files, which are interpreted by the CASS Interpreted Program Language (IPL) processor and cannot be easily rehosted onto future generations of ATE	XML files, which are interpreted by the RTCASS test exec

**Table 3 - CASS and RTCASS OTPM Differences**

**Note:** All RTCASS TPS executables are generated by PMA260's representative using RTCASS TPS conversion and build tools.

#### **4.1.7 CASS TPS Development and RTCASS Conversion Tools**

Development or sustainment of an OTPS for the CASS Family requires access to a variety of documentation, hardware, and software tools. Enclosure 4 provides information about those elements.

#### **4.1.8 CASS Implementation Plan (CIP)**

The CIP is an automated on-line data management and modeling tool used by PMA260 to determine and track user requirements to support outfitting of CASS test sets, ancillary equipment and OTPSs by configuration, quantity and location. As inputs, the CIP uses Naval Aviation Logistics Data Analysis (NALDA) induction data, flight hour data by type/model/series, OTPS data, weapon system and avionics configuration data, and ATS Source Data Repository (ASDR) data. The CIP model calculates requirements based on aircraft type and quantity, weapon systems being supported, flight hours, UUT failure rates, mean time on station to repair UUTs, and test set availability.

The CIP is used to determine quantities of CASS Family station and ancillary equipment to be procured. The CIP also determines the quantities of CASS OTPSs required by each user site based on workload calculations. In addition, the CIP hosts and maintains the master list of all UUTs repaired on the CASS Family of ATE.

OTPS data in the CIP is initially provided to PMA260 by the procuring activity with input from the TPS Developer and Acquisition Integrated Product Team (IPT). Accuracy of the data in the CIP is essential. Any impact to CIP data due to an OTPS change, including the addition or removal of a weapon system from an OTPS group, must be reported to PMA260.

#### **4.1.9 ATS Source Data Repository (ASDR)**

The ASDR is a centralized data management system that stores all pertinent data from OTPS acquisitions and is used to support the sustainment of OTPS data, the development of future ATS, and the maintenance of existing CASS CIs. PMA260 budgets for ASDR, and AIR-4.8 manages ASDR-related processes. CSE CIs within ASDR are owned and supported by NAVAIR PMA260. However, the PSE CIs within ASDR will continue to be owned and supported by the cognizant weapon system program.

The ASDR infrastructure (e.g., server) currently resides at NAVAIR Lakehurst and is maintained by the CASS SSA. The ASDR server is networked, providing connectivity between the CASS SSA and other government entities such as weapon system FSTs and ATS developers located at the NAVAIR In-Service Support Centers (ISSCs). Access to data in ASDR is controlled via user accounts with varying degrees of read, write, edit, and delete privileges.

ASDR is populated with CASS TPS source code used to produce the current Fleet OTPM (i.e., TPS executable code). Older TPS data must be ported to the modern ASDR structure by re-organizing the data into the “standardized” OTPS data directory structure, transferring the re-organized TPS data from the obsolete native CASS VAX/VMS environment to the PC/Windows environment, and uploading the data into the ASDR software configuration management (CM) tool. Although the TPS source data in ASDR was re-organized from its original state and transferred to a modern environment, it is functionally equivalent to the VAX/VMS version used to produce the currently fielded Fleet OTPM.

In addition, all new OTPS data deliverables except for Support Equipment Requirements Data (SERDs) and CIP data will be entered into ASDR to establish the data baseline and to be placed under CM.

Weapon system PMs and their representatives are responsible for:

- Ensuring the TPS code in ASDR is current with, or is more advanced than, the latest Fleet (i.e., fielded) version.
- Providing ASDR with copies of all of their updated OTPS CIs and adequate supporting data no later than initial Fleet release of any associated OTPS CI. Adequate supporting data includes completed VDDs, Enclosure 3, that thoroughly describe each OTPS CI change.
- Ensuring all OTPS data elements delivered to or uploaded into ASDR complies with the Standard OTPS Data Directory Structure (shown in Appendix K of the CASS User's Guide for TPS Developers).
- Ensuring their OTPS source data within ASDR is managed on a file-by-file basis to provide traceability of all changes.

Additional information about ASDR is provided in Enclosure 5. Help Desk and POC information as well as details about accessing and using ASDR are provided in the ASDR Basic Users Guide and ASDR CM Users Guide. These documents are available on the PMA260 web site.

#### **4.1.10 OTPS Migration**

PMA260 has undertaken an initiative to update selected OTPS products to support all existing (i.e., CASS, RTCASS) and future (e.g., eCASS) CASS Family ATE members. This update process is referred to as “OTPS migration” and includes a standardization process that ensures compatibility with RTCASS and eCASS while maintaining functionality on mainframe CASS. This migration process produces well-documented updates to OTPS products (e.g., TPS source code, TPIs) and related OTPS CIs. One critical objective of the migration process is to not affect the integrity or functionality of the OTPS.

For each selected OTPS, migration is a “one time” process that results in common TPS source code compatible with all CASS Family members. OTPSs that are not targeted for use on RTCASS or eCASS may never be selected for migration. Recently developed and future OTPSs

will not require migration since those OTPSs will be compliant with standardization requirements when delivered IAW the “NAVAIR Generic OTPS Request for Proposal” (NGOR).

Figure 5 provides an overview of the current OTPS migration Process. The steps in this process are as follows:

1. Retrieve current Fleet version of TPS source data provided by weapon system PM
2. Port from VAX to PC environments
3. Place in Standard File Directory Structure IAW current TPS development guidelines
4. Place in ASDR
5. Standardize operator instructions (i.e., “Make Generic”) IAW current TPS development guidelines
6. Update ASDR
7. Use standardized/generic source code to create new "Blue" (i.e., CASS) version of TPS executable code on MO disk for testing
8. Convert to "Green" (i.e., create an RTCASS DVD or CD version of TPS executable code) for testing
9. Test Blue and Green disks
10. If failure(s); fix code, update ASDR, then go to step 7.
11. If no failure, process and release updated code to cognizant TPS representative for inclusion in the TPS baseline release.

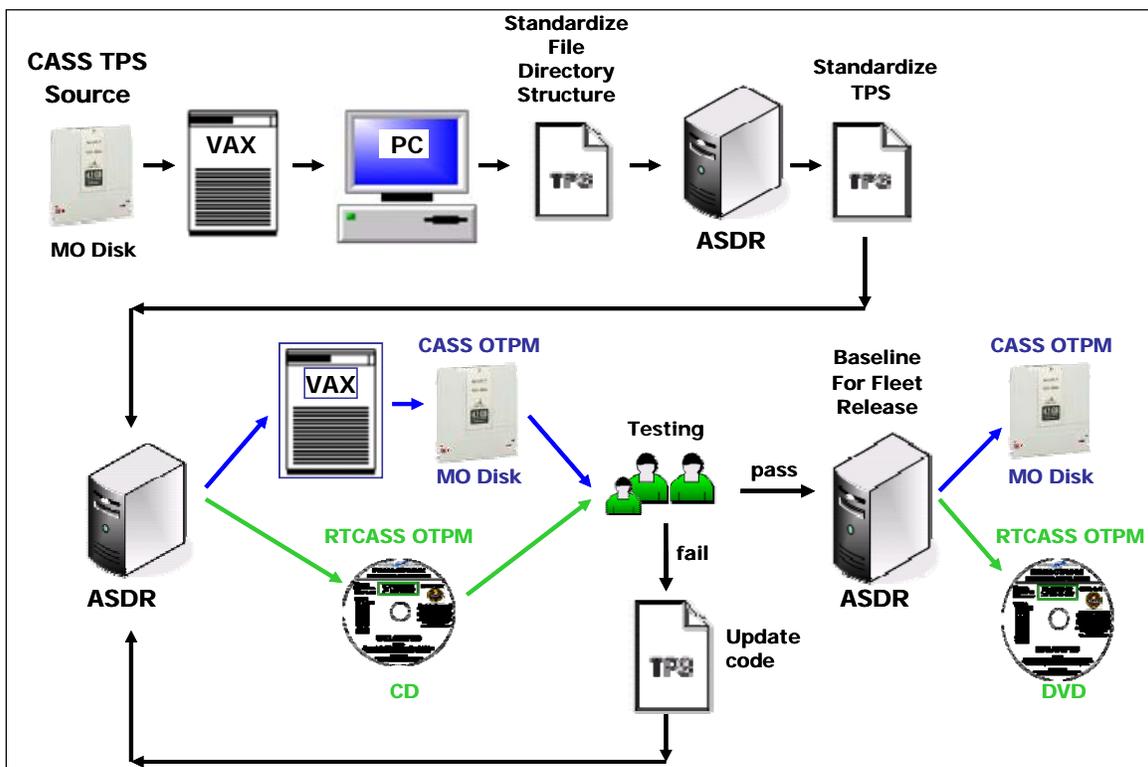


Figure 5 – OTPS Migration Process

Enclosure 6 presents a detailed flowchart of the OTPS migration process and PM responsibilities.

## 4.2 Acronym List

ADRL	Automatic Distribution Requirement List
aka	Also Known As
APML	Assistant Program Manager Logistics
ASDR	ATS Source Data Repository
ATE	Automatic Test Equipment
ATS	Automatic Test System
C&A	Certification and Accreditation
CASS	Consolidated Automated Support System
CASS B1 Spec	Prime Item Development Specification for CASS
CC	Common Criteria
CCB	Change Control Board
CD	Compact Disc
CDR	Critical Design Review
CDRL	Contracts Data Requirements List
CI	Configuration Item
CIO	Chief Information Officer
CIP	CASS Implementation Plan
CJCSM	Chairman of the Joint Chiefs of Staff Manual
CM	Configuration Management
CMP	Configuration Management Plan
CMRS	Calibration Measurement Requirements Summary
CNAF	Commander, Naval Air Forces
CNATTU	Center for Naval Aviation Technical Training Unit
CNI	Communication, Navigation, and Interrogation
CoC	Certificate of Completion
COTS	Commercial-off-the-Shelf
CSE	Common Support Equipment
DCCB	Decentralized Change Control Board
DID	Data Item Description
DISA	Defense Information Systems Agency
D-Level	Depot-Level
DoD	Department of Defense
DOL	Director of Logistics
DVD	Digital Versatile Disc
eCASS	electronic CASS
ECP	Engineering Change Proposal
EI	Engineering Investigation
EO	Electro-Optical
eRAC	electronic Rapid Action Change
ESD	Engineering Support Data
FMS	Foreign Military Sales
FSR	Fleet Support Review
FST	Fleet Support Team
GATP	General Acceptance Test Procedure

GFE	Government Furnished Equipment
GFI	Government Furnished Information
GFP	Government Furnished Property
GPETE	General Purpose Electronic Test Equipment
HPDTS	High Power Device Test Set
IA	Information Assurance
IAVA	Information Assurance Vulnerability Alert
IAW	In Accordance With
ID	Interface Device
I-Level	Intermediate Level
IOC	Initial Operational Capability
IOCSR	Initial Operational Capability Supportability Review
IPT	Integrated Product Team or Integrated Program Team
IRAC	Interim Rapid Action Change
ISE	In-Service Engineering
ISSC	In-Service Support Center
JDRS	Joint Deficiency Reporting System
JEDMICS	Joint Engineering Data Management Information and Control System
LMI	Logistics Management Information
MDA	Milestone Decision Authority
MMF	Mobile Maintenance Facility
MO	Magneto-Optical
MP	Maintenance Plan
MSD	Material Support Date
MTPSI	Master Test Program Set Index
NALDA	Naval Aviation Logistics Data Analysis
NATEC	Naval Air Technical Data and Engineering Services Command
NAVICP	Naval Inventory Control Point
NGOR	NAVAIR Generic OTPS Request for Proposal
NSA	National Security Agency
OIPT	Overarching Integrated Product Team
OPSEC	Operations Security
ORD	Operational Requirements Document
OTPH	Operational Test Program Hardware
OTPI	Operational Test Program Instruction
OTPM	Operational Test Program Media
OTPS	Operational Test Program Set
PCA	Physical Configuration Audit
PCO	Procuring Contracting Officer
PDF	Portable Document Format
PDR	Preliminary Design Review
PKI	Public Key Infrastructure
PM	Program Manager
PMA	Program Manager Air
P/N	Part Number
POC	Point of Contact

PPAT	Pilot Production Acceptance Test
PQDR	Product Quality Deficiency Report
PR	Procurement Request
PRR	Production Readiness Review
PSE	Peculiar Support Equipment
PSOW	Provisioning Statement of Work
RAMEC	Rapid Action Minor Engineering Change
RFD	Request for Deviation
RF	Radio Frequency
RFI	Ready for Issue
RFP	Request for Proposal
RTCASS	Reconfigurable Transportable CASS
RVTM	Requirements Verification Traceability Matrix
SCP	Software Change Proposal
SCR	Software Change Request
SCSW	Station Control Software
SE	Support Equipment
SEMS	Support Equipment Management System
SERD	Support Equipment Requirements Data
SERMIS	Support Equipment Resources Management Information System
SETL	Support Equipment Team Lead
SME	Subject Matter Expert
SOW	Statement of Work
SPA	System Problem Analysis
SPR	System Problem Report
SRA	Shop Replaceable Assemblies
SRR	System Readiness Review
SSA	Software Support Activity
SSC	Support Software Change
STIG	Security Technical Implementation Guide
SUM	Software User's Manual
SUPR	Support Software
T00K	CASS User's Guide for TPS Developers
TD	Technical Directive
TDP	Technical Data Package
TEC	Type Equipment Code
TM	Technical Manual
TMAPS	Technical Manual Application System
TMCR	Technical Manual Contract Requirements
TMSDR	Technical Manual Source Data Record
TPDR	Technical Publication Discrepancy Report
TPI	Test Program Instructions
TPS	Test Program Set
TRR	Test Readiness Review
TWG	Technical Working Group
TWP	Temporary Workaround Procedure

ULSS	User Logistic Support Summary
UUT	Unit Under Test
VDD	Version Description Document
VMS	Virtual Memory System
WRA	Weapons Replaceable Assembly
WUC	Work Unit Code

## Enclosure 1 - UUT Data Requirements for OTPS Development

<p>1. <u>Assembly drawings of all assemblies (WRA and SRAs)</u>  Used to identify parts location.  Physical size and structure of UUT.  Used for designing holding fixtures.</p>
<p>2. <u>Parts lists</u>  Used to identify piece parts by type and manufacturer.  Used to identify UUT mating connector type and manufacturer.</p>
<p>3. <u>Interconnect diagrams for WRAs</u>  Required to determine how the WRA functions.  Used to aid in fault isolation.  Determine buss structure.</p>
<p>4. <u>Schematics for SRAs</u>  Identifies the function of the UUT.</p>
<p>5. <u>Wire lists for WRAs w/o CCA motherboards</u>  Required to determine how the WRA functions.  Used to aid in fault isolation.  Determine bus structure.  Can be eliminated if interconnecting diagram is provided.</p>
<p>6. <u>Theory of operation (may be available from Tech Pub)</u>  Provides theory of operation.  Allows functional testing.</p>
<p>7. <u>Programmable device source data (ROMs, PALs, EPROMs, FPGAs)</u>  Required to perform DATPG testing of devices.</p>
<p>8. <u>Proprietary data</u>  Any proprietary data rights need to be disclosed.  May require non disclosure agreement with OEM.</p>
<p>9. <u>Source code on OFPs and mission software</u>  Required if OFP is to be tested or reloaded after testing and repair.  Required if OFP provides Self-Test capability.</p>

<p>10. <u>Built in Test (BIT) source data</u></p> <p>Required to make full use of BIT capabilities.</p> <p>Shortens run times.</p> <p>Allows "I" level to capitalize on "O" level testing.</p>
<p>11. <u>Test Requirements Documents (TRDs)</u></p> <p>Provides all testing requirements as identified by developer.</p>
<p>12. <u>Test Specifications (WRAs only)</u></p> <p>Provides minimum tests required to ensure that the UUT is RFI.</p>
<p>13. <u>Acceptance Test Procedures (ATP)</u></p> <p>Provides minimum tests required to ensure that the UUT is RFI.</p>
<p>14. <u>Factory test procedures</u></p> <p>Allows capitalizing through reuse of existing factory test software.</p>
<p>15. <u>Environmental requirements</u></p> <p>Required, if the UUT has specific cooling requirement, liquid, forced air, etc.</p> <p>May be able to determine requirements from the WRA technical publication.</p>
<p>16. <u>Interface Control Documents (ICD)</u></p> <p>Provides how each circuit is designed to be used (design interface) in the system.</p> <p>Should also provide special timing characteristics, waveforms, and functional / logic specifications.</p>
<p>17. <u>Engineering Change Notice (ECN)/Engineering Change Proposal (ECP)</u></p> <p>Provides information on changes to the baseline or proposed changes.</p>

## Enclosure 2 - ATE Data Requirements for OTPS Development

ITEM
CASS User's Guide for TPS Developers
ATE Prime Item Development Specification
ATE Station Interface and GPI Pin-out Data
Software User's Manual for Support Software
Software User's Manual for the Station Control Software
Software User's Manual for the Intermediate Maintenance Operations Management System
Test Program Set Development Tools

### Enclosure 3 - Version Description Document Form

<b>VERSION DESCRIPTION DOCUMENT (VDD)</b>				
This VDD identifies and describes an updated version of TPS software and related data provided by FST to ASDR				
VDD Date:	Reference documents (e.g., SCR #s):			
POC Name:	email:	phone:		
Platform(s) supported (e.g., F/A-18, AV-8B):				
OTPS Nomenclature (e.g., AN/APG-73 WRA):				
Part number (P/N) (e.g., 5121110-100):				
OTPM P/N (e.g., 5121110-100-B8-10): Previous Current: :				
Revision/Version number/letter: Previous Current: :				
Date: Previous Current: :				
OTPI P/N (e.g., TI5121110-100A):				
Authorizing Technical Directive (i.e., SSC/SEC) number:				
<b>LIST OF TPSs AFFECTED</b> <span style="float: right;">(insert additional rows as necessary)</span>				
TPS P/Ns	Corresponding UUT P/Ns	New	Modified	Deleted
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VERSIONS OF CASS SUPPORT SOFTWARE USED</b>				
VECP-SUP-	CASS-PC1-	RT-DEV1-	RT-DEV2-	
Others (specify):				
<b>LIST OF SOURCE CODE MODULES/FILES AFFECTED</b> <span style="float: right;">(insert additional rows as necessary)</span>				
Name	New	Modified	Deleted	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**CHECKLIST**

	Yes	N/A		Yes	N/A
Updated MTPSI *.tpsi file included?	<input type="checkbox"/>	<input type="checkbox"/>	Copy of ref docs (e.g., SCRs) included?	<input type="checkbox"/>	<input type="checkbox"/>
All other affected source/build files included?	<input type="checkbox"/>	<input type="checkbox"/>	CASS test results included?	<input type="checkbox"/>	<input type="checkbox"/>
Files comply w/ Standard OTPS Data Directory Structure?	<input type="checkbox"/>	<input type="checkbox"/>	RTCASS test results included?	<input type="checkbox"/>	<input type="checkbox"/>
All file difference listings included?	<input type="checkbox"/>	<input type="checkbox"/>	CASS TPS executable code included?	<input type="checkbox"/>	<input type="checkbox"/>
Revision data in main TPS header(s) updated?	<input type="checkbox"/>	<input type="checkbox"/>	RTCASS TPS executable code included?	<input type="checkbox"/>	<input type="checkbox"/>

**Change description:** The TPS configuration items described by this VDD has been revised as indicated below:

**Comments:**

Method of delivery to ASDR:  CD/DVD  Directly uploaded into ASDR

## Enclosure 4 - CASS Family OTPS Development/Sustainment Tools and Equipment

Development or sustainment of an OTPS for the CASS Family of ATE requires access to a variety of documentation, hardware, and software tools.

PMA260 through the OIPT will assist PM representatives in obtaining and maintaining the tools necessary for initial FST stand-up and for sustainment of OTPSs. PMA260 will work within the CASS Family Sustainment OIPT to help obtain and support any peculiar tools not listed in Table 4 that are used to sustain CASS OTPSs. This list of known peculiar tools used to support CASS Family OTPSs will be populated and maintained with the assistance of representatives from all CASS Family Sustainment OIPT members and will be made available on the PMA260 web site.

Tools and Equipment					Description/Comments
	ATE Configuration	Ancillary	Software	Documentation	
CASS User's Guide for TPS Developers				X	aka T00K. Contains multiple volumes and appendices. Part of CASS Test Program Set Developers Hypertext Guide (THG).
CASS Station Interface and GPI Pinout Data				X	aka T00K Appendix C. Part of CASS THG.
Prime Item Development Specification for CASS				X	aka CASS B1 Spec. Part of CASS THG.
Software User's Manual (SUM) for Support Software (SUPR)				X	Part of CASS THG
Tailored Version - SUM for the Station Control Software (SCSW)				X	Part of CASS THG
Tailored Version - SUM for the Intermediate Maintenance Operations Management System (IMOM)				X	Part of CASS THG
Requirements Verification Traceability Matrix (RVTM)				X	Performance and verification requirements specification for RTCASS. aka CASS B1 Spec Appendix F. Part of CASS THG.
NAVAIR Generic OTPS RFP				X	
PMA260 CM Plan for Aviation Support Equipment				X	
ASDR Basic Users Guide				X	
ASDR CM Users Guide				X	
RTCASS Technical Manuals				X	
CASS Technical Manuals				X	
CASS TPS Advisories				X	
NAVAIR OTPS Acquisition and				X	

<b>Tools and Equipment</b>	ATE Configuration	Ancillary	Software	Documentation	<b>Description/Comments</b>
Sustainment Process document					
CASS Block I Communication, Navigation, and Interrogation (CNI) test set	X				Part number (P/N) 2048AS775-03
CASS Block I Hybrid test set	X				P/N 2048AS775-01
CASS Block I Radio Frequency (RF) test set	X				P/N 2048AS775-02
CASS Block II CNI test set	X				P/N 2054AS400-03
CASS Block II Electro-Optical (EO) test set	X				P/N 2054AS400-04
CASS Block II High Power Device Test Set (HPDTS) test set	X				P/N 2054AS400-05
CASS Block II Hybrid test set	X				P/N 2054AS400-01
CASS Block II RF test set	X				P/N 2054AS400-02
CASS Block III Hybrid test set	X				P/N 2056S800-01
CASS Block III RF test set	X				P/N 2056S800-02
CASS Reconfigurable Transportable (RT) test set	X				aka RTCASS. P/N 3841AS0101-01.
Reconfigurable Transportable High Power CASS (RTCASS HP) test set					P/N 3841AS0101-03
Air Data Test Set (ADTS)		X			ADTS405-8325-M4
Air Flow Management Set (AFM)		X			2060-AS10-01
Auxiliary Equipment Fixture		X			aka "AGCS Work surface" 2057AS050-01
Common Interface Device (CID)		X			2051AS610-01
Enhanced External Hard Drive (EEHD)		X			2056AS133-02
EO+ Cart		X			63E919617G1
EO+ Laser Safe ModKit Set		X			74D061416-1001
EO+ Optical Equipment Set		X			74D061415-1001
IDTS Shore Antenna Kit		X			26020909-101
IDTS Van Antenna Kit		X			26020943-101
Inertial Device Test Set (IDTS)		X			2056AS953-01
Mounting Ancillary Set		X			3947AS0100-01
Multiple Analog Capability (MAC)		X			D0030004-1001
Multi-Purpose Stroke/Raster Display (MPSRD) Ancillary Set		X			2055AS833-01
Power Inverter		X			2057AS310-01
Power Strip Ancillary Set		X			2055AS815-03
Printer		X			Multiple P/Ns (e.g., 2T-LA48W-AA)
RF Probe		X			2046AS926-01

<b>Tools and Equipment</b>	ATE Configuration	Ancillary	Software	Documentation	<b>Description/Comments</b>
RS-485 Manchester/HARPOON Bus Interface		X			2051AS163-06
Synchro Generator/Measurement Assembly (SGMA) Ancillary Set		X			2055AS831-01
Test Equipment Dolly		X			D0030021-1001
UUT Loads Ancillary Set (ULAS)		X			2056AS631-02
UUT Power/Ground Cable Set		X			000CT001
Video Pattern Generator (VPG) Ancillary Set		X			2055AS808-01
CASS Block I Applications Software			X		P/N CASS-1-xxx
CASS Block I Operating System Software			X		P/N CASS-2-xxx
CASS Block II and Block III Applications Software			X		P/N VECP-1-xxx
CASS Block II and Block III Operating System Software			X		P/N CASS-4-xxx
CASS Support Software (OpenVMS 6.2 compatible)			X		P/N VECP-SUP-xxx. Components: ATLAS Compiler, Test Executive Simulator, Test Program Software Development Shell, etc.
CASS Support Software (Windows compatible)			X		P/N CASS-PC1-xxx. Components: MTPSI Development Tool, CASS Tools, etc.
Direct Instrument Control Software (DICONs)		X	X		Lockheed Martin Commercial-off-the-Shelf (COTS) software. "Global" license purchased for US government-owned CASS Block I and Block II test sets. No licenses purchased for CASS Block III test sets.
MemTest		X	X		Teradyne COTS software. "Global" license purchased for US government-owned CASS Block I test sets. Seventy-five licenses purchased for CASS Block II and III test sets.
RTCASS Applications Software			X		P/N RT-APS-xxx
RTCASS Operating System Software			X		P/N RT-OPSY-xxx
RTCASS Development Tools			X		P/N RT-DEV1-xxx. Non-digital, government-owned portion of RTCASS TPS conversion tools. Components: VisualMTPSI, etc.
RTCASS COTS for L200			X		P/N RT-DEV2-xxx. Digital, licensed portion of RTCASS TPS conversion tools. Components: Teradyne TPS Converter Studio (TCS), etc.
System Problem Report (SPR) database					Tailored version of Pragma processMax software on a CASS SSA server. Used by non-Fleet sites to record and track CASS-related SPRs. Currently used for CASS and RTCASS system anomalies.
ATS Source Data Repository (ASDR)					Tailored version of Serena's Dimensions CM tool on a CASS SSA server. Populated with CASS related data.

<b>Tools and Equipment</b>	ATE Configuration	Ancillary	Software	Documentation	<b>Description/Comments</b>
CASS Implementation Plan (CIP) database					Oracle database on a PMA260 server. Stores and processes CASS ATE and OTPS related data for multiple purposes.

**Table 4 PMA260-Maintained Tools and Equipment**

## **Enclosure 5 - ATS Source Data Repository (ASDR) Overview**

The ASDR is an internet-accessible, NAVAIR enterprise centralized database used to store critical ATS-related data. PMA260 budgets for ASDR, and AIR-4.8 manages ASDR-related processes. CSE CIs within ASDR are owned and supported by NAVAIR PMA260. However, the PSE CIs within ASDR will continue to be owned and supported by the cognizant weapon system program.

ASDR provides the following functions and features:

- Provides Enterprise repository for all CASS Family data owners and users
- Standard Enterprise CM tool to support ATE/OTPS Development
- Provides a common CM tool to support In-Service Engineering (ISE) functions
- Provides repository to facilitate efforts to migrate OTPSs to newer ATE configurations
- Helps optimize ISE among all CASS Family FSTs
- Sets standard directory structures for CASS Family source data
- FSTs may use ASDR data to support non-organic CASS users

The following types of OTPS CIs cannot reside within the ASDR database itself:

- OTPS hardware components -- for obvious reasons
- OTPI Supplements -- because the ASDR server is an unclassified system
- CASS OTPM MO disks -- due to technical reasons - the electronic label on MO disks cannot be readily saved or reproduced without making a physical duplicate of the disk
- CIP
- SERDs

However, the OTPI Supplements sent to ASDR are stored in a secure location and tracked separately. Likewise, the CASS OTPM MO disks sent to ASDR are also stored and tracked separately.

### **ASDR Users**

Access to data in ASDR is controlled via user accounts. ASDR users will be assigned specific roles which will determine the degree of read, write, edit, and delete access to specific data within ASDR.

### **Accessing Data**

ASDR data is accessible via the PMA260 web site.

Access to ASDR will require a DoD Public Key Infrastructure (PKI) certificate.

Details about accessing ASDR and its data are provided in the ASDR Basic Users Guide and ASDR CM Users Guide.

## **Updating Data**

PM representatives (e.g., FSTs) can update ASDR with OTPS data using any of the following methods:

- (A) email or ship updated OTPS CIs and all relevant, supporting data to CASS SSA, who will upload it into ASDR
- (B) upload updated OTPS CIs and relevant data into a temporary storage location within ASDR
- (C) upload updated OTPS CIs and relevant data directly into ASDR

Method (C) requires a PM representative sufficiently knowledgeable about CM, in general, and the Dimensions software CM tool, in particular, to update their respective ASDR data without accidental corruption. Every PM representative with write/edit/delete access to ASDR must be adequately trained prior to directly updating data within ASDR.

However, regardless of the method used to update OTPS data within ASDR, all data delivered to or uploaded into ASDR will comply with the Standard OTPS Data Directory Structure. All source data within ASDR will be managed on a file-by-file basis to ensure traceability of all changes.

Details relative to updating data in ASDR are provided in the ASDR CM Users Guide.

## **ASDR Directory Structure**

OTPS data within ASDR must conform to the Standard CASS OTPS Data Directory Structure.

## **ASDR Help Desk**

A help desk is maintained for ASDR users to provide support as needed. Refer to the ASDR Basic Users Guide or ASDR CM Users Guide for specific POCs and operating hours.

## **ASDR Infrastructure**

- Server - ASDR is hosted on a high-end server located at NAVAIR Lakehurst, Building 678, Room 119. This system has terabytes of storage space, which can be easily increased as necessary.
- Software - The ASDR system software is a set of COTS products. The heart of the ASDR software is currently Dimensions, a software CM tool produced by Serena Software, Inc. and tailored to meet CASS requirements. All ASDR software is controlled, maintained, and upgraded on the ASDR server by the ASDR system administrators. Service patches, especially those dealing with Information Assurance Vulnerability Alerts (IAVAs), are the responsibility of the ASDR system administrators.

Symantec antivirus and firewall software is used for security. Web security is provided using SSL. PKI certificates will be used necessitating the use of a CAC card.

- Documentation - The following documents describe how to access, use, and support ASDR:
  - ASDR Basic Users Guide
  - ASDR CM Users Guide

Copies of these documents are available via the PMA260 web site.

- Data Back-up - Data stored in ASDR will be backed up nightly by the ASDR system administrator. At least weekly, the latest copy of the back-ups will be forwarded to an off-site facility to mitigate any risk of catastrophic data loss.

## Enclosure 6 - Legacy CASS OTPS Migration to New CASS OTPS Standards

