1.0 - Introduction and Scope

This Master Test and Evaluation Plan (MTEP) provides a summary of the overall testing activities by AT&T, the prime contractor, for the Underwater Segment (UWS) of the first Fixed Distributed System - Deployable hereafter called FDS-D(1). This testing includes the span from initial Development Model Testing (DMT) through Demonstration. Section 1.0 contains an overview of the FDS-D(1) along with contractor organization and top-level testing program activities. Section 2.0 describes the Requirements Verification Traceability Matrix (matrix is found in Appendix E) which traces the requirements of the B1 Specification Addendum and FDS UWS specification to the test events in which they are verified. Section 3.0 contains a summary of FDS development testing activities to date and Section 4.0 covers descriptions of development tests specific to the FDS-D(1) equipment. Section 5.0 addresses operational testing. The resources for the testing activities are referenced in Section 6 of this MTEP. Section 7.0 covers the management of the test program. Appendix A is a glossary of abbreviations and acronyms. The schedules of planned testing activities are shown in Appendix B. Reference documents applicable to this MTEP are listed in Appendix C. Formats for Test Plans and Test Reports are found in Appendix D. The Requirements Verification Traceability Matrix is located in Appendix E.

This FDS-D(1) UWS MTEP complements the FDS-D(1) System MTEP (Item 1 in Appendix C). The FDS-D(1) System MTEP contains matrices of A Level requirements to be verified. Those matrices are not repeated in this document.

This MTEP provides verification for requirements of B-1 level and B-1 D Addendum level specifications. This MTEP will be updated as required.

Figure 1-1 shows how this MTEP and verification matrix (Appendix E) relate to higher level documents.

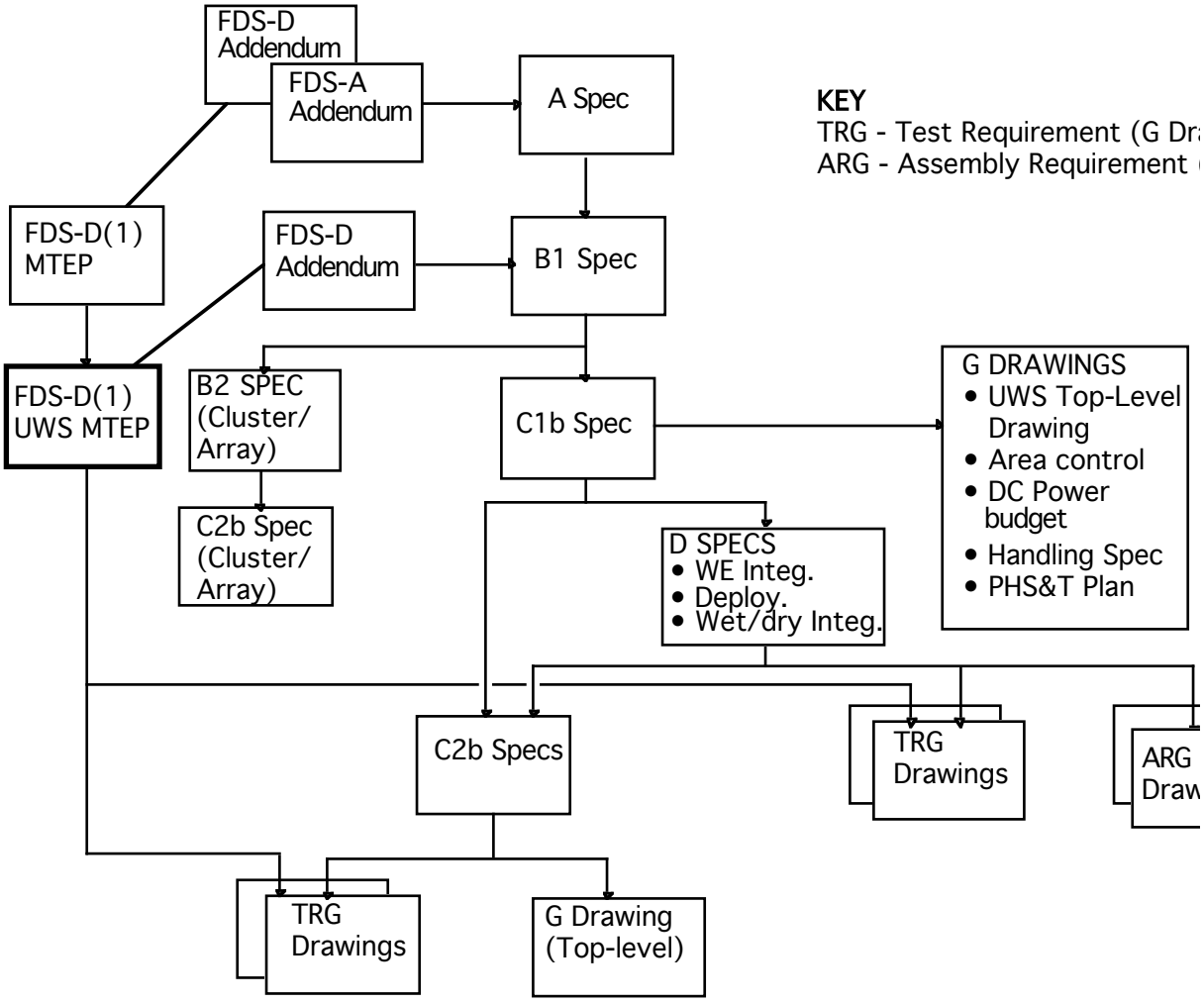


Figure 1-1. *Flow Down of Testing Requirements*

1.1 - FDS-D(1) Overview

FDS-D(1) is a low-frequency acoustic indications and warnings tactical prosecution system consisting of an Underwater Segment (UWS) and a Shore Processing Segment (SPS). FDS-D(1) shall be used to demonstrate acoustic surveillance in constricted waters or shallow-water choke points and shall support non-acoustic surveillance. The FDS-D(1) is a system based on the FDS concept but FDS-D(1) can be rapidly deployed from a ship and monitored using ship-borne or shore signal processing equipment.

1.1.1 - UWS Functions

The FDS-D(1) UWS consists of the Wet End (WE), Shore Terminus (ST), and Tactical Termination (TT) subsystems which provide the following functions:

a. Acoustic sensing
b. Data transmission to a processing station
c. Data distribution
d. System Support

1.1.2 - UWS Subsystems

The WE is composed of a Field Subsystem, Trunk Subsystem and G3 Ground Subsystem as follows:

a. Field Subsystem consists of:
   - Sea Ground (SG)
   - Clusters
   - Trunk Cable, Deep Water Trunk (DWT)
   - Underwater Connector Assembly (UCA)
b. Trunk Subsystem consists of:
   - Trunk Cable (DWT)
   - CCJs
   - Repeaters
c. G3 Ground Subsystem consists of:
   - DPS Anodic Shore Ground (DASG) [GFE]
   - Shore Ground cable

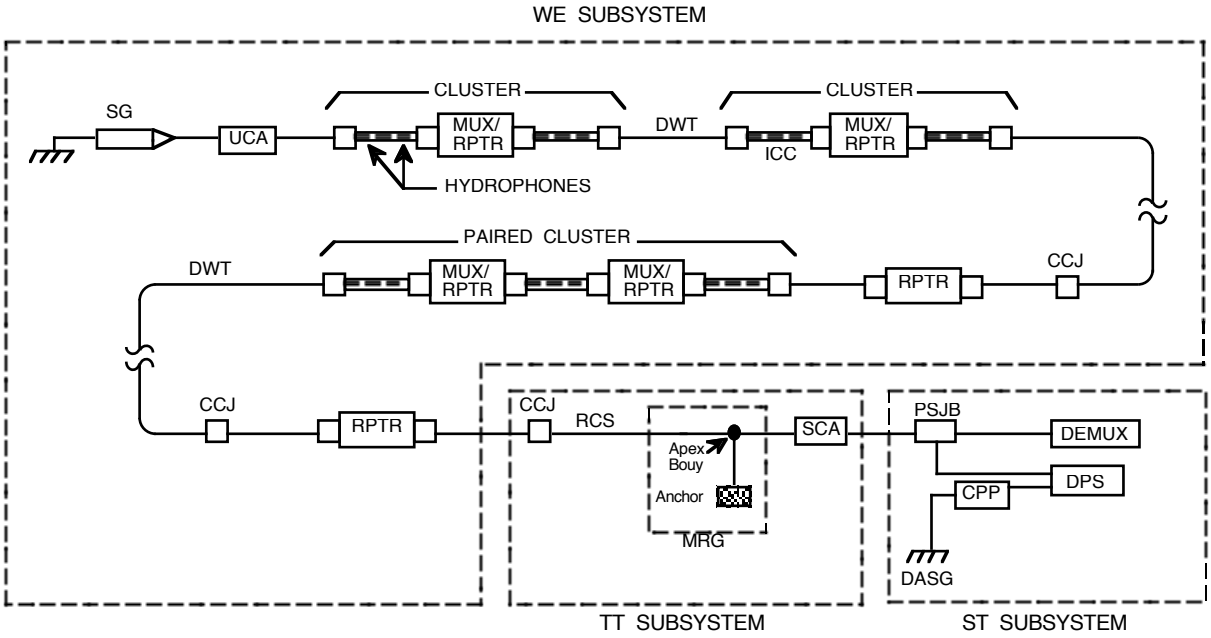
The ST subsystem is composed of:

a. Demultiplexer (DEMUX)
b. FDS-D(1) High Voltage Power Supply (DPS)
c. Power Signal Junction Box (PSJB)
d. Current Protection Panel (CPP)

The Tactical Termination subsystem (TT) is composed of:

a. Riser Cable System (RCS) including Light Armor Trunk (LAT)
b. Shipboard Connector Assembly (SCA)
c. Mooring with Apex Buoy (MRG) [GFE]
d. Processing station (e.g. termination ship) [GFE]

The physical configuration of the UWS components is shown in Figure 1-2. "Paired Clusters" is the designation for adjacent clusters that have less than 1000 feet of cable between them. The processing station is the termination ship for the envisioned installation of FDS-D(1) which is shown in Figure 1-3 as the demonstration configuration. The installation platform ship will deploy the WE subsystem and the RCS, MRG, and SCA of the TT, while the Termination Ship will provide the termination point for the moored RCS.



DWT	DEEP WATER TRUNK	MUX/RPTR	MULTIPLEXER / REPEATER
RCS	RISER CABLE SYSTEM (LAT)	RPTR	REPEATER
ICC	INTERCONNECT CABLE	DEMUX	DEMULTIPLEXER
CCJ	CABLE-TO-CABLE JUNCTION	PSJB	POWER / SIGNAL JUNCTION BOX
CPP	CURRENT PROTECTION PANEL	DPS	FDS-D POWER SUPPLY
SG	SEA GROUND	DASG	DPS ANODIC SHORE GROUND
TT	TACTICAL TERMINATION	MRG	MOORING
WE	WET END	SCA	SHIPBOARD CONNECTOR ASSEMBLY
ST	SHORE TERMINUS	UCA	UNDERWATER CONNECTOR ASSEMBLY

Figure 1-2. *Physical configuration of FDS-D(1) UWS components*

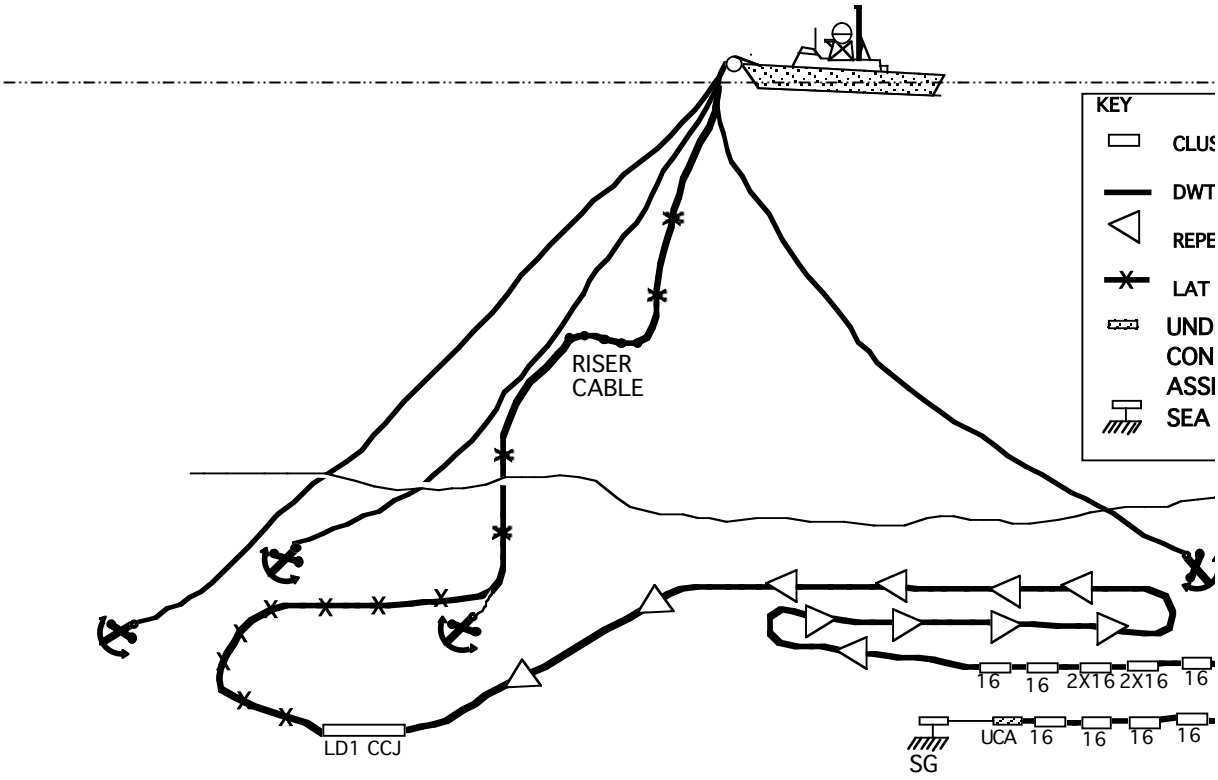


Figure 1-3. *FDS-D (1) Demonstration configuration*

1.1.3 - FDS-D(1) specific components

The FDS-D(1) software and much of the hardware is identical to that of FDS-UWS. New items developed by AT&T specifically for the FDS-D(1) system include:

- Riser Cable System (RCS)
- Underwater Connector Assembly (UCA)*
- Shipboard Connector Assembly (SCA)*
- FDS-D High Voltage Power Supply (DPS)

* Known generically as *wet mateable connectors*

1.1.4 - System components

A list of the Hardware Configuration Items (HWCIs) and the Computer Software Configuration Items (CSCIs) and their development status is shown in Table 1-1. See Table 3.0-1 for details of test status of existing FDS UWS equipment

Table 1-1. *FDS-D(1) Demonstration configuration items and other equipment*

Configuration Item Name	**Abbreviation**	**Quantity**	**Development Status**	**Source**
Sea Ground	SG	1	FDS UWS	AT&T
Deep Water Trunk Cable	DWT Cable	525 nautical miles	FDS UWS	AT&T
Light Armor Trunk Cable	LAT Cable	4 nautical miles	FDS UWS	AT&T
Cable/Cable Junction	CCJ	1	FDS UWS	AT&T
Repeater	RPTR	11	FDS UWS	AT&T
16 Element Cluster	CL	8	FDS UWS	AT&T
2x16 Element Clusters	CL	4	FDS UWS	AT&T
Power Signal Junction Box	PSJB	1	FDS UWS	AT&T
Current Protection Panel	CPP	1	FDS UWS	AT&T
FDS-D(1) Power Supply	DPS	1	New	AT&T
Demultiplexer	DEMUX	1	FDS UWS	AT&T
Underwater Connector Assembly	UCA	1	New	AT&T
Shipboard Connector Assembly	SCA	1	New	AT&T
D Anodic Sea Ground	DASG	1	New	PMW-184
Riser Cable System	RCS	1	New	AT&T
Mooring	MRG	1	New	PMW-184
Stand-By System	SBS	1	New	PMW-184
Deployment Ship	D-Ship	1	New	PMW-184
Termination Ship	T-Ship	1	New	PMW-184
DEMUX Function Controller Software	DFCS	1 Set	FDS UWS	AT&T
Special Purpose Test Equipment		1 Set	FDS UWS	AT&T
System Test Set	STS	1	FDS UWS	AT&T
System Transmission Test Set	STTS	1	FDS UWS	AT&T
Auxiliary Cabinet	-	1	FDS UWS	AT&T

1.2 - FDS-D(1) R&D program organization

FDS-D(1) testing activities at AT&T are under the direction of a System Test and Evaluation (T&E) Manager who reports to the System Engineering Manager for FDS-D(1). The AT&T System T&E manager interfaces with the Joint Test Group. See Figure 1-4 below.

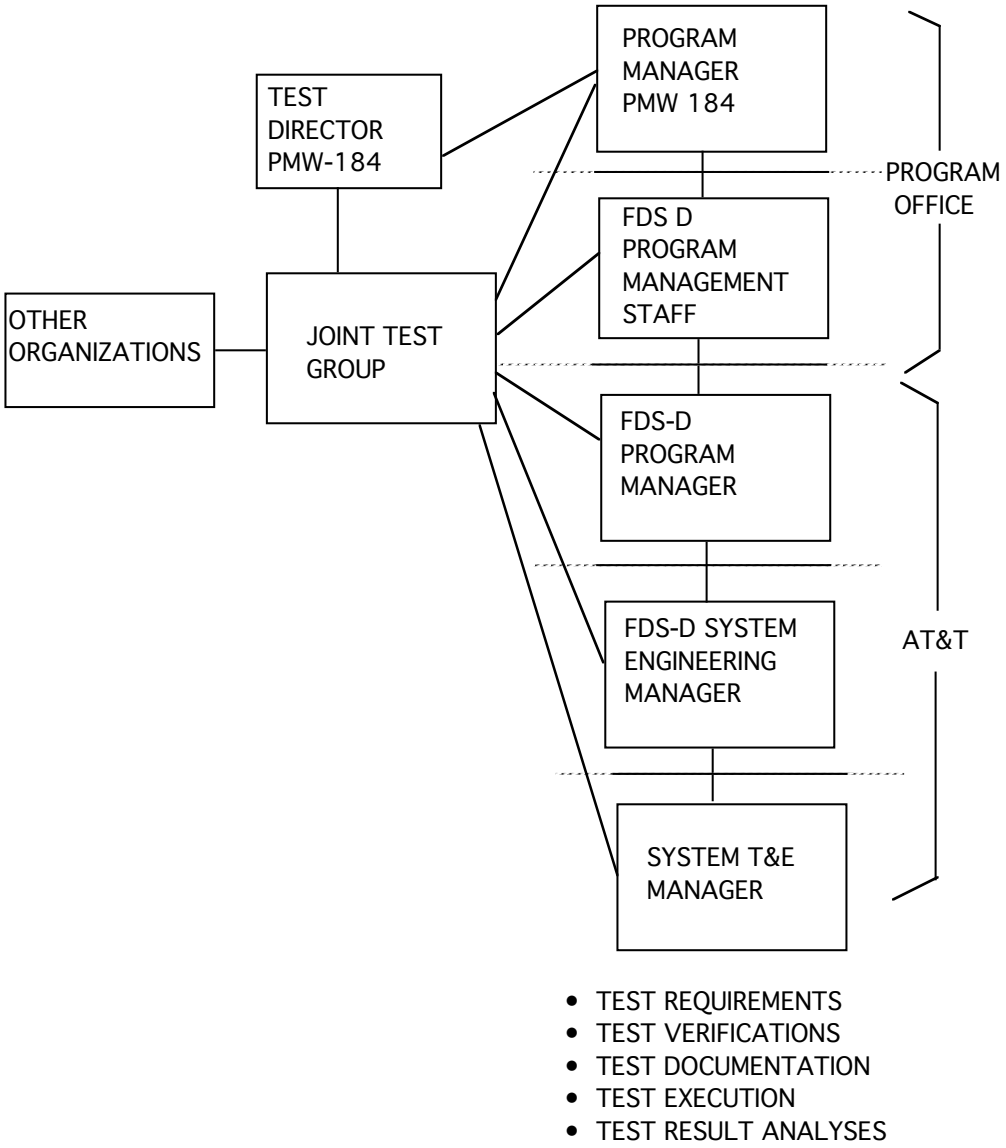


Figure 1-4. *Testing Hierarchy*

1.3 - Test program

The FDS-D(1) Type A Specification Addendum is the top level FDS-D(1) requirements document that establishes the performance characteristics and functional requirements for the

system. FDS-D(1) differs from FDS in that the Underwater Segment (UWS) includes a different arrangement of cables and anchoring methods and includes four new development items: the riser cable system, an underwater connector assembly, a shipboard connector assembly, and a new shore terminus high-voltage power supply.

The four new development items will undergo individual testing prior to integration of the entire FDS-D(1) system. The aggregate performance of the integrated system shall meet the B level Specification requirements for FDS-D(1).

The FDS-D(1) specific hardware will undergo a wide range of testing: environmental, mechanical, electrical, reliability, maintainability, deployment and performance.

1.3.1 - Joint test group

An FDS Joint Test Group (JTG) has been established by the Program Office (see the FDS MTEP Technical Document 2295, Appendix C for the JTG charter and organization.) The JTG will provide input, direction, and overall coordination for the testing of FDS-D(1) requirements. This includes test planning, test conduct, and test results analysis through the contract, configuration control and test approval processes. JTG guidance on FDS-D(1) testing is described in Section 7.2 of this document.

1.3.2 - Test planning guide

This MTEP is the overall AT&T test planning guide for the developmental and operational testing activities planned for FDS-D(1) and its interfaces. It also addresses contractor support for other system level tests.

Some of these tests are performed during the development phase while others occur during the operational phase. The development tests on existing FDS hardware and those planned for FDS-D(1) will be described in detail in Sections 3.0 and 4.0 respectively of this MTEP. AT&T support of operational tests is covered in section 5.0.

Figure 1-5 shows the flow of AT&T testing activities planned for the FDS-D(1) program.

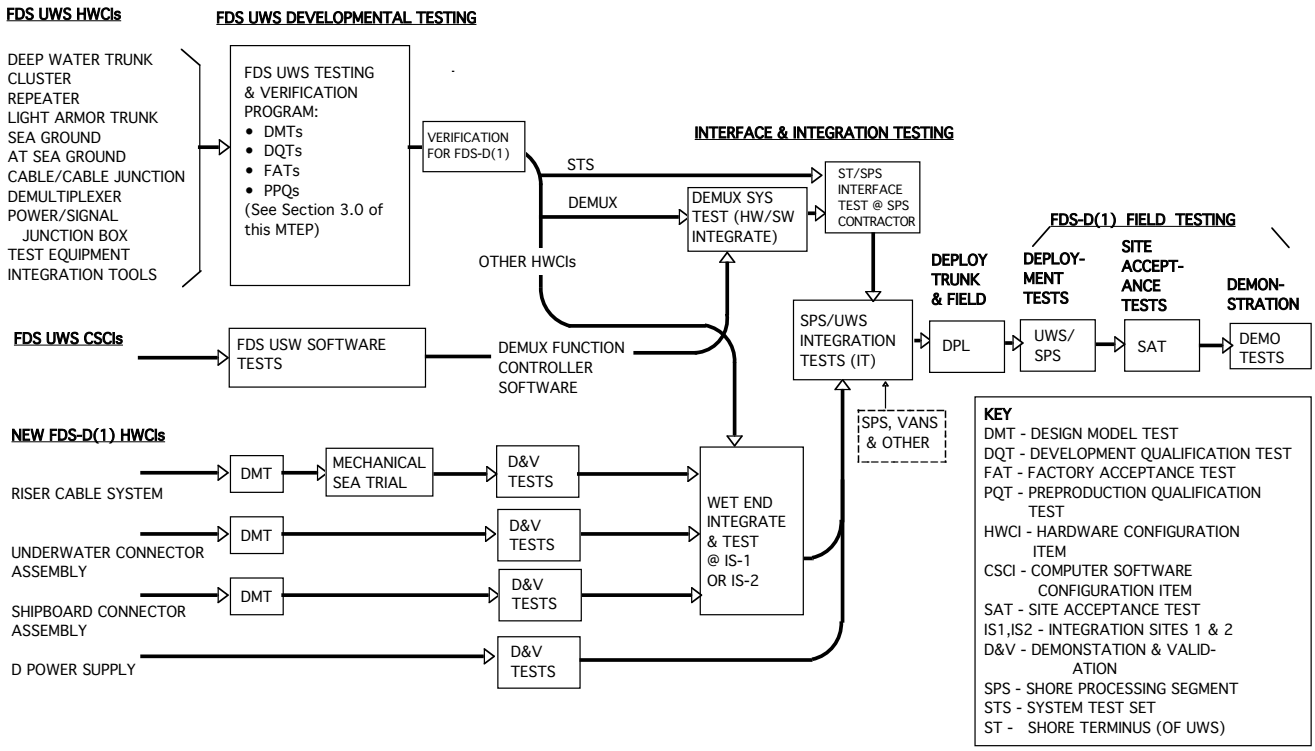


Figure 1-5. *Testing Flow*

1.3.3 - Test flow

Starting in the upper left hand part of the diagram, the existing FDS UWS Hardware Configuration Items (HWCIs) which are to be used without modification on the FDS-D(1) program, have all been tested per the complete battery of FDS UWS tests. In addition, they will be verified for the FDS-D(1) application. Under these blocks the flow of the FDS UWS software path is shown. This software package will also be used unmodified for the FDS-D(1) application. The software and DEMUX will be integrated and tested at the DEMUX System Test block. This DEMUX with integrated, checked-out software and a System Test Set (STS) will be sent to the to the Shore Processing System (SPS) Contractor for UWS/SPS Interface Tests (UWS/SPS IFT).

1.3.3.1 - New development item testing

Concurrently, (referring to the lower left-hand portion of the diagram) the four new HWCIs will undergo Demonstration and Validation (D&V) testing. In addition to the D&V testing, the Riser Cable System will undergo tests during the Mechanical Sea Trial.

1.3.3.2 - Integration testing
Once the new HWCI testing is complete, the wet end units from FDS UWS development and three of the four new HWCIs will be integrated during the Wet End Integration Test at one of the Integration Sites (IS-1 or IS-2).

1.3.3.3 - ST equipment testing
Following Wet End Integration testing, the FDS-D(1) Shore Terminus equipment will be integrated with the SPS to form a functional system. This system will be tested during the UWS/SPS Integration Test (IT). A STTS will be used to simulate the data from the Wet End subsystem.

1.3.3.4 - Deployment
The next operation will be the deployment of the trunk and field followed by the interconnection of the wet end to the Shore Terminus (ST) via the RCS. Once installed, the Deployment Tests (Site Checkout) will next be conducted on the Wet End through the DEMUX output.

1.3.3.5 - Acceptance & demonstration
The next major activity will be the Site Acceptance Test (SAT) conducted on the entire system. A Hydrophone Localization exercise will be conducted following the SAT.

Following site acceptance, the FDS-D(1) Demonstration Tests (DEMO) will begin. This demonstration will include an optional test of the Active Bistatic Real-time Processing System.

More detailed descriptions of these tests are found in Section 4.0 of this document.

Table 1-2 is a listing of the major subsystem/system level tests. Testing schedules are found in Appendix B.

Table 1-2. *Major test summary*

Test	SOW Ref.	Participants#	Location	Equipment
FDS-D(1) Mechanical Sea Trial (MST)*	3.20.2.4	AT&T, NCEL, PMW-181, PMW-184, NRaD	At Sea	RCS, MRG, SBS, T-Ship, D-Ship
Demonstration & Validation Tests (D&V)	3.20.1.4.8	AT&T support by PMW-184, NRaD	AT&T Whip, Greensboro	All New CIs
UWS/SPS Interface Tests (UWS/SPS IFT)	3.20.2.2	IBM support by AT&T, PMW-184, NRaD	SPS Contractor (IBM) Facility	DEMUX, STTS, SPS
UWS/SPS Integration Test (IT)	3.20.2.3	IBM support by AT&T, NCEL, NRaD, PMW-184	Integration Facility	DEMUX, STTS, DPS, SPS
FDS-D(1) Site Activation as shown below:	3.20.2.5			
FDS-D(1) UWS Deployment Test Site (Checkout)	3.20.2.5.2	PMW-184-2 support by PMW-181, NRaD, NCEL, AT&T, IBM	At Site	WE, DPS, STTS (shipboard)
Site Acceptance test (SAT) Hydrophone Localization	3.20.2.5.2 3.20.2.5.3	IBM support by AT&T, NCEL, NRaD, PMW-181, PMW-184	At Site	Entire FDS-D(1) System
Demonstration Test (DEMO) Bistatic Active (Optional)	3.20.3	PMW-184-2 support by PMW-181, PMW-182, NRaD, NCEL, AT&T, IBM	At Site	Entire FDS-D(1) System + Technical Demonstration Equipment (TDE)

* Previously Known as Tactical Termination Sea Trial
# First listed organization has primary responsibility, others provide support

2.0 - Requirements verification

Central to verifying the FDS-D(1) requirements is the Requirements Verification Traceability Matrix (RVTM). This matrix allocates all of the FDS-D(1) B1 specification requirements to the appropriate level and item. A verification baseline will be established with the RVTM. This RVTM clearly communicates verification needs to individuals involved. It organizes verification events/requirements for auditing and establishes a history. The RVTM is attached as Appendix E to this MTEP. The columns of the matrix are defined at the beginning of the appendix.

2.1 - Testing background

At the time of writing this MTEP many of the FDS-D(1) components and subassemblies have already been tested under the FDS UWS program. These items are tested per test plans tailored to each unit and the results are provided in the associated test reports. A summary of the test status is found in Section 3.0 of this document.

2.2 - Performance

2.2.1 - Performance/acceptance criteria

2.2.1.1 - Performance criteria

Performance criteria are based upon specification requirements. The equipment must meet the requirements of the development specifications, i.e., the B1 level specification. The individual configuration items must meet the requirements of the C2 level specifications.

2.2.1.2 - Acceptance criteria

Acceptance criteria, as stated in test plans, are based on documented requirements. This includes such documentation as test and evaluation reports from design model tests, development qualification tests, and interface tests. Also included are sea trial reports, product pedigrees (factory acceptance tests, integration tests and site acceptance tests).

2.3 - FDS-D(1) External interface verification

The primary interfaces between FDS-D(1) UWS and the rest of FDS-D(1) will be verified during the interface and integration tests.

2.3.1 - DEMUX and SPS to SAI

Both the demultiplexer and the power supply provide fault status to the Station Alarm Interface (SAI). This interface will be verified during the Integration Test.

2.3.2 - DEMUX to SPS

The demulitplexer interfaces to the SPS via dedicated Digital Data Interface (DDI) ports. This interface will be verified during the Interface Test.

2.3.3 - Technical demonstration equipment

Technical Demonstration Equipment consisting of active processing hardware and hydrophone localization hardware will interface to the demultiplexer via a Digital Data Interface port. This interface will be verified during the Integration Test.

3.0 - FDS developmental testing

The FDS UWS and FDS-D(1) testing by the prime contractor, AT&T, includes the following types of tests:

- Development Model Tests (DMTs)
  - Provides early confidence in preliminary designs i.e. breadboard and brassboard testing
  - Confirms design basis (similarity, analysis, theory)
  - Aids in determining limitations and capabilities

- Design Qualification Tests (DQTs)
  - Verification that the design meets design requirements

- Sea Trials
  - Development, Design Qualification & Pre-production Qualification Tests performed using at-sea conditions
  - Deployment verification

- Factory Acceptance Tests (FATs)
  - Verification that the product performs within acceptable limits specified in FAT plans
  - Performed on each and every unit
  - May be in process

- Integration Tests (ITs)
  - Verification that integrated subsystems perform within acceptable limits as shown in IT test plans
  - Completion of Factory Acceptance Testing

- Interface Testing
  - Verification that the external interfaces are compatible
  - Verification that interface requirements are met

- Wet/Dry Integration Tests
  - Verification that the internal interfaces are compatible
  - Verification that internal interface requirements are met

3.1 - FDS UWS testing status

This section summarizes the testing status of the FDS UWS items which are to be used unmodified in the FDS-D(1) program. The testing status to date on FDS items which form a part of FDS-D(1) is shown in Table 3-1.

Table 3-1. *Summary of FDS UWS testing*

Name	**Testing Status**
Deep Water Trunk Cable	Complete
Light Armor Trunk Cable	Complete
Cluster	Partial
Repeater	Partial
Sea Ground	Complete
Cable/Cable Junction	Partial
Demultiplexer	Complete
Demux Function	Complete
Controller Software	Complete
Power Signal Junction Box	Complete
System Test Set	Complete

4.0 - FDS-D(1) developmental testing

The new Configuration Items developed specifically for FDS-D(1) to be tested include: the Riser Cable System (RCS), the Underwater Connector Assembly (UCA), the Shipboard Connector Assembly (SCA), and the FDS-D(1) high voltage Power Supply (DPS).

4.1 - Riser Cable System (RCS) testing

The RCS provides the transmission and power paths between the deployed wet end field to the processing equipment on the Termination Ship (T-Ship). Many of the RCS requirements will be verified by either simulation or inspection before it goes through testing during the Mechanical Sea Trial (MST). (See Appendix E for detailed verification data.)

4.2 - UCA and SCA testing

The wet mateable connectors are electro-optical connectors which may be mated and unmated at pressure under water. There are two applications of this connector used on FDS-D(1); the Underwater Connector Assembly (UCA) and the Shipboard Connector Assembly (SCA). The UCA is a cable-to-cable in-line connector assembly used at the sea-ward end of the most sea-ward cluster (see section 1.1). The SCA is a cable-to-cable in-line connector assembly used to connect riser cable to the terminus equipment on the platform. (See Appendix E for detailed verification data.)

4.3 - FDS-D(1) Power Supply (DPS)

The FDS-D(1) Power Supply consists of a specially configured two-cabinet arrangement. This unit will be tested standalone prior to being integrated with the remainder of the FDS-D(1). (See Appendix E for detailed verification data.)

6.0 - Test & evaluation resource summary

Sections 3.1 through 3.4.11.5 of the FDS-D(1) System MTEP (Ref. 1) contain summaries of the subsystem, system and DEMO testing activities including overview, description, organization, resources and logistics. Rather than duplicate this information, Table 6-1 provides a cross reference to the resources defined in the higher level FDS-D(1) System MTEP by paragraph number.

Table 6-1. *Cross references to FDS-D(1) System MTEP*

Test	Overview	Description	Organization	Resources	Logistics
UWS Testing	3.1.1				
MST	3.1.1.1	3.1.1.2	3.1.1.3	3.1.1.4	3.1.1.5
FAT	3.1.2.1	3.1.2.2	3.1.2.3	3.1.2.4	3.1.2.5
SPS Testing	3.2.1				
IFT	3.2.1.1	3.2.1.2	3.2.1.3	4.2.1.4	3.2.1.5
SFAT	(IBM)				
Int. Testing	3.3.1				
IT	3.3.1.1	3.3.1.2	3.3.1.3	3.3.1.4	3.3.1.5
Field Tests	3.4.1	3.4.2	3.4.3	3.4.4	3.4.5
Deploy	3.4.9.1	3.4.9.2	3.4.9.3	3.4.9.4	3.4.9.5
SAT	3.4.10.1	3.4.10.2	3.4.10.3	3.4.10.4	3.4.10.5
DEMO	3.4.11.1	3.4.11.2	3.4.11.3	3.4.11.4	3.4.11.5

7.0 - Test administration

The Naval Command, Control and Oceans Surveillance Center (NCCOSC), Research, Development, Test and Evaluation (RDT&E) Division (NRaD) is the FDS-D(1) Test Agent and Software Support Agency for shore processing. PMW-184-2, is the System Integrator (SI). The Naval Civil Engineering Laboratory (NCEL) is the lead organization for van procurement, MRG, T-Ship, and cable survivability issues.

7.1 - System integrator

The System Integrator (PMW-184-2) supports the integration, test and evaluation program.

7.2 - FDS Joint Test Group (JTG)(Ref. 2)

The Joint Test Group (JTG) coordinates the overall FDS Test and Evaluation Program. Included within that program is the FDS-D(1) Test and Evaluation Program. The JTG monitors test planning, test progress, test results and assesses the adequacy of the test and evaluation programs delineated in the various testing documents.

7.3 - AT&T FDS-D(1) test personnel

7.3.1 - AT&T FDS-D(1) test director

AT&T has appointed a Test Director located at the Whippany, NJ AT&T facility. He is responsible for the overall AT&T testing and integration activities. He ensures that the testing documentation is produced, that tests are conducted per the testing schedule, and test results and reports are disseminated on time. He allocates requisite resources for all testing activities.

7.3.2 - AT&T test engineers

The lead engineers responsible for the major test documents and test execution for various AT&T testing activities have been assigned from the FDS design groups at the four AT&T locations: Whippany, NJ; Guilford Center, NC; and Eagle and Falcon manufacturing locations in Greensboro, NC.

Appendix A - Acronyms & Abbreviations

CCJ	Cable-to-Cable Junction
CI	Configuration Item
CL	Cluster
CMI	Control Monitor Interfaces
CSCI	Computer Software Configuration Item
D & V	Demonstration and Validation
DASG	DPS Anodic Shore Ground
DC	Direct Current
DDI	Digital Data Interface
DEMO	Demonstration testing
DEMUX	Demultiplexer
DFCS	DEMUX Function Controller Software
DQT	Design Qualification Test
DPS	FDS-D(1) Power Supply
DWT	Deep Water Trunk
EDM	Engineering Development Model
FAT	Factory Acceptance Test
FCA	Functional Configuration Audit
FDS	Fixed Distributed System
FDS-D(1)	Fixed Distributed System - Deployable, Number one
FQT	Formal Qualification Test
GFE	Government Furnished Equipment
HWCI	Hardware Configuration Item
IFT	Interface Testing
IT	Integration Testing
JTG	Joint Test Group
MRG	Mooring
MST	Mechanical Sea Trial
MTEP	Master Test & Evaluation Plan
NRaD	Naval Command, Control & Ocean Surveillance Center, RDT&E Division

NCEL Naval Civil Engineering Laboratory

Appendix A - Acronyms & Abbreviations (cont.)

PCA	Physical Configuration Audit
PIDS	Prime Item Development Specification (B1 Spec.)
RCS	Riser Cable System
SAT	Site Acceptance Test
SBS	Standby System
SCA	Shipboard Connector Assembly
SFAT	SSIPS Factory Acceptance Test
SG	Sea Ground
SI	System Integrator
SPAWAR	Space & Naval Warfare Systems command
SPS	Shore Processing Segment
SSIPS	Shore Signal Information Processing Segment
SSA	Software Support Agency
STS	System Test Set
STTS	System Transmission Test Set
TDE	Technical Demo Equipment
T&E	Test & Evaluation
TT	Tactical Termination
UCA	Underwater Connector Assembly
WE	Wet End

Appendix B - Schedules

Top level schedule of FDS-D(1) subsystem, segment and system level testing events can be found in the top level Fixed Distributed System Deployable (FDS-D(1)) Master Test And Evaluation Plan (MTEP), Reference #1 in Appendix C.

Appendix C - Reference Documents

Ref. #	Title
1	Fixed Distributed System Deployable (FDS-D(1)) Master Test And Evaluation Plan (MTEP), Document 54188-Y-404SX-01, 7 October 1992 (S)
2	Fixed Distributed System (FDS) Master Test And Evaluation Plan (MTEP), Document 2294, November 1992 (S)
3	FDS-D(1) Type A, System Specification Addendum - Document # N00039-FDS-112, Rev. 0 , 5 December 1991, (S/NOFORN)
4	FDS Type A , System Specification - Document # N00039-FDS-100, Rev. 3, 31 August 1991, (S/NOFORN)
5	Prime Item Development Specification (PIDS) Addendum for FDS-D(1) - Document # G854365, Rev. - , 21 July 1993
6	Test And Evaluation Management Guide, Defense Systems Management College, Fort Belvoir, VA, March 1988
7	Department of Defense Directive 5000.1, Defense Acquisition, Part 8 "Test And Evaluation", 23 February 1991
8	Department of Defense Manual 5000.2-m, Defense Acquisition Management Documentation and Reports Part 7 "Test And Evaluation Master Plan" February 1991
9	Fixed Distributed System (D) Underwater Segment, Full Scale Development, Statement Of Work, Rev. P, 30 March 1993, PMW 184

Appendix D - Test Document Formats

Formats for the FDS-D(1) test plans and test reports are shown below.

Outline for Test Plan

Title Page / Cover Sheet
Table of Contents
List of Figures
List of Tables
1. Test Timetable
2. Reference List
3. Introduction
4. Test Article Description
5. Test Environment
6. Alternate Plans
n. Test Title
    n.1 Test Purpose
    n.2 Required Equipment
    n.3 Test Setup
    n.4 Test Procedure
    n.4.1 Step 1
    n.4.2 Step 2
    n.5 Data Analysis
    n.6 Data Display
    n.7 Acceptance Criteria

Outline for Test Report

Title Page / Cover Sheet
Table of Contents
List of Figures
List of Tables
1. Reference List
2. Abstract
n. Test Title
    n.1 Test Dates
    n.2 Test Article Identification
    n.3 Required Equipment
    n.4 Deviations from Plan
    n.5 Data (Include accuracy)
    n.6 Data Analysis

n.7 Results

Appendix E - Requirements Verification Traceability Matrix

The RVTM is divided up into four sub-matrices as follows:

- FDS-D(1) Power Supply
- Underwater Connector Assembly
- Shipboard Connector Assembly
- Riser Cable System

All of the matrices are organized similarly as follows:

Column #	Title	Information
1	Item	Name of Configuration Item or Test
2	Spec. Type	Requirement Spec. Level
3	Spec. Paragraph	Paragraph Reference Number of the Source Document
4	Title	Brief Statement of the Requirement
5	Level	Level of Requirement Verification
6	Method	Method of Requirement Verification
7	MST	Test Event - Mechanical Sea Trial
8	D & V	Test Event - Demonstration and Validation
9	IF	Test Event - Interface Test
10	IT	Test Event - Integration Test
11	DP	Test Event - Deployment Test
12	DEMO	Test Event - FDS-D(1) Demonstration
13	C-Spec Mapping	Mapping of B-spec requirement to corresponding requirement in C-Spec.

The abbreviations listed below are used to describe the method of test in the matrix.

A	Analysis
D	Demonstration
I	Inspection
SIM	Similarity
T	Test

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Fixed Distributed System - Deployable
FDS-D(1)
Underwater Segment (UWS)

Master Test and Evaluation Plan (MTEP)

Contract No. N00039-90-C-0017
Data Item - GOOK

Prepared for:
Space and Naval Warfare Systems Command
Department of the Navy
Washington, DC 20363-5100

Prepared by:
AT&T Bell Laboratories
67 Whippany Road, Whippany, New Jersey 07981

APPROVALS

Authenticated By	Approved By
Date	Date

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DOCUMENT CHANGE RECORD PAGE

Rev.	Date	Pages	Authorization	Description
-	8/5/93	all	CO UWS 3196F	Initial Release

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TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES