

October 5, 1995

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PROGRAM IMPLEMENTATION PLAN (PIP)

**FLIGHT SERVICE AUTOMATION SYSTEM (FSAS)
OPERATIONAL AND SUPPORTABILITY
IMPLEMENTATION SYSTEM
(OASIS)**

**CIP # A-07 (Formerly 43-01, 43-04, and 43-22)
ACQUISITION PHASE 1 (PRIOR TO KDP-2/3)**



DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

October 5, 1995

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FOREWORD

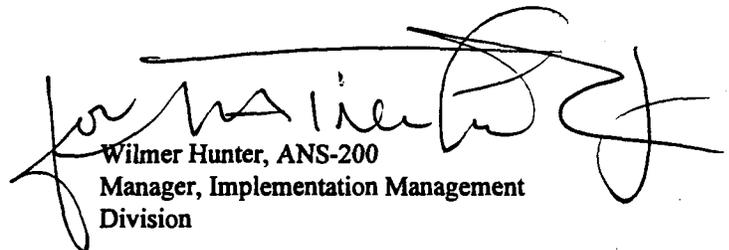
This Program Implementation Plan (PIP) is for the Flight Service Automation System (FSAS) Operational and Supportability Implementation System (OASIS). OASIS replaces the Model 1 Full Capacity (M1FC) and the Interim Graphics Display System (IGWDS) equipment with end state hardware (H/W). In addition OASIS will replace the functionality of both the Aviation Weather Processor (AWP) and Flight Service Data Processing System (FSDPS); Nominal software (S/W) changes and enhancements are also included in the program. The Direct Users Access Terminal Service (DUATS) functionality will be addressed for inclusion as the program matures. Any reference to OASIS hereafter, includes the combined stated functionality replacement and associated H/W and S/W. This PIP identifies and describes the activities and responsibilities to ensure that OASIS is integrated into the National Airspace System (NAS) and also serves as the FSAS OASIS Program Master Plan (PMP).

This is a living document that derives its value through the coordination, analysis and modification for updated versions. The review and feedback you provide is the foundation of the Transition/Implementation Information Exchange (TIE) process that occurs during each phase of the program's acquisition cycle. Results of each TIE and the status of action plans to resolve issues identified during the TIE will be published in later versions of the PIP. The purpose of the TIE is to identify and resolve program implementation issues as early in the acquisition cycle as possible. The review and input from personnel in the field are key to the success of the TIE process.

The Integrated Product Team (IPT) is committed to incorporating updates to this PIP as issues are clarified. We invite comments which may be directed to Ed Cisneros, Associate Program Manager, NAS Implementation (APMNI) for FSAS OASIS, ANS210/NISC.



Robert S. Voss, AUA-400
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DOCUMENT CHANGE NOTICE

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12. Effectively N/A		This notice informs recipients that the standard identified by the number (and revision letter) shown in block 4 has been changed. The pages changed by this DCN (being those furnished herewith) carry the same date as the DCN. The page numbers and dates listed below in the summary of changed pages, combined with non-listed pages of the original issue of the revision shown in block 4, constitute the current version of this specification.			
13. DCN No.	14. Pages changed	S*	A/D*	15. Date	
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S* = Indicates Supersedes Earlier Pages A* = Indicates Added Page D* = Indicates Deleted Page

Table of Contents

SECTION 11

GENERAL.....1

1.1 PURPOSE OF DOCUMENT1

1.2 SCOPE OF DOCUMENT1

1.3 DISTRIBUTION1

1.4 DEFINITION OF TERMS2

1.5 CANCELLATION.....2

1.7-1.19 RESERVED2

1.20 RISK ASSESSMENT OVERVIEW.....2

SECTION 24

PROGRAM OVERVIEW4

2.1 SYNOPSIS OF MISSION NEED.....4

2.1.1 OPERATIONAL NEEDS.....4

2.1.2 STRATEGIC GOALS4

2.2 FUNCTIONAL DESCRIPTION5

2.3 PROGRAM HISTORY & STATUS5

2.4 PROGRAM MILESTONES.....9

2.5 INTER-AGENCY INVOLVEMENT.....10

2.5.1 DEPARTMENT OF DEFENSE (DOD).....10

2.5.2 NATIONAL WEATHER SERVICE (NWS)10

2.5.3 U.S. CUSTOMS SERVICE.....10

2.5.4 DRUG ENFORCEMENT AGENCY (DEA)10

2.5.5 OTHER AGENCIES10

2.6 - 2.19 RESERVED10

2.20 STATUS ASSESSMENT10

SECTION 311

AIRWAY FACILITIES (AF) OPERATIONS11

3.1 SUMMARY OF MAINTENANCE OPERATION IMPACTS11

3.1.1 TRANSITORY STATE.....11

3.1.2 OPERATIONAL STATE11

3.2 AF PROCEDURAL CHANGES11

3.2.1 PREVENTIVE MAINTENANCE.....11

3.2.2 CORRECTIVE MAINTENANCE12

3.2.3 SOFTWARE MAINTENANCE.....12

3.2.4 SYSTEM OPERATIONS/MONITORING12

3.2.5 SYSTEM CERTIFICATION.....12

3.2.6 PERSONNEL CERTIFICATION12

3.3 FACILITIES AND EQUIPMENT (F&E)12

3.4 SYSTEMS MAINTENANCE13

3.5-3.19 (RESERVED).....13

3.20 STATUS ASSESSMENT13

SECTION 414

AIR TRAFFIC (AT) OPERATIONS14

4.1 SUMMARY OF AT OPERATIONAL IMPACTS14

4.1.1 TRANSITORY STATE.....14

4.1.2 OPERATIONAL STATE (OS)14

4.2 AT PROCEDURAL CHANGES.....15

4.2.1 ATC OPERATIONAL AND MANAGEMENT PROCEDURES.....15

4.2.2 FLIGHT PROCEDURES/STANDARDS.....15

4.2.3 ADMINISTRATIVE AND MANAGEMENT PROCEDURES15

4.2.4 SOFTWARE VERIFICATION PROCEDURES15

4.2.5 INTER-FACILITY PROCEDURES16

4.2.6 PERSONNEL CERTIFICATION PROCEDURES.....16

4.2.7 SYSTEM BACK-UP/CUTOVER PROCEDURES.....16

4.3 AT IMPLEMENTATION16

4.4-4.19 (RESERVED).....16

4.20 STATUS ASSESSMENT16

SECTION 517

SYSTEM CONFIGURATION AND ENGINEERING.....17

5.1 NAS LEVEL ARCHITECTURE.....17

5.1.1 NAS TARGET STATE17

5.1.2 INTER-PROGRAM INTERFACES.....17

5.1.2.1 WEATHER MESSAGE SWITCHING CENTER REPLACEMENT (WMSCR).....17

5.1.2.2 AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER (ATCSCC)17

5.1.2.3 OTHER OASIS AFSS(S)17

5.1.2.4 LAW ENFORCEMENT AGENCIES17

5.1.2.5 FOREIGN ATC SYSTEM(S).....17

5.1.2.6 MILITARY BASE OPERATION(S) (MBO).....17

5.1.2.7 U.S. CUSTOMS SERVICE.....17

5.1.2.8 VENDOR SUPPLIED DATA SOURCE(S).....17

5.1.2.9 WEATHER AND RADAR PROCESSOR (WARP).....18

5.1.2.10 INDEPENDENT TIME SOURCE18

5.1.2.11 REMOTE MAINTENANCE MONITORING SYSTEM (RMMS).....18

5.1.2.12 ENHANCED TRAFFIC MANAGEMENT SYSTEM (ETMS).....18

5.1.2.13 DIRECT USER ACCESS TERMINAL (DUAT) SERVICES(S).....18

5.1.2.14 MODEL 1 FULL CAPACITY (M1FC) SYSTEM.....18

5.2 PLATFORM ARCHITECTURE.....18

5.2.1 INTERIM PLATFORM CONFIGURATION.....18

5.2.2 TARGET STATE CONFIGURATION.....18

5.3 SUBSYSTEM LEVEL ARCHITECTURE.....18

5.3.1 HARDWARE.....18

5.3.1.1 MICRO-COMPUTER (S) /FILE SERVER (S).....18

5.3.1.2 WORKSTATION EQUIPMENT.....19

5.3.1.3 PRINTERS.....19

5.3.1.4 COMMUNICATION PATH PORT CAPACITY.....19

5.3.1.5 REAL TIME CLOCK.....19

5.3.1.6 AFSS WORKSTATION (AFSSWS).....19

5.3.1.7 CABLE AND CONNECTOR.....20

5.3.1.8 FILE SERVERS.....20

5.3.1.9 ENVIRONMENTAL CHARACTERISTICS.....20

5.3.2 SOFTWARE.....20

5.3.2.1 OASIS LOCAL AREA NETWORK.....20

5.3.3 PHYSICAL SPECIFICATION.....20

5.4-5.19 RESERVED.....21

5.20 STATUS ASSESSMENT.....21

SECTION 6.....22

PHYSICAL FACILITIES.....22

6.1 REAL ESTATE.....22

6.1.1 REAL ESTATE REQUIREMENTS.....22

6.1.2 REAL ESTATE PLANS.....22

6.2 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC).....22

6.2.1 HVAC REQUIREMENTS.....22

6.2.2 HVAC PLANS.....22

6.3 CABLES22

6.3.1 CABLE ROUTING/RAISED FLOOR REQUIREMENTS22

6.3.2 CABLE PLANS.....22

6.4 POWER23

6.4.1 POWER REQUIREMENTS.....23

6.4.1.1 POWER PANEL.....23

6.4.1.2 RACEWAYS24

6.4.1.3 WIRING24

6.4.2 POWER PLANS.....24

6.5 PHYSICAL SAFETY AND SECURITY24

6.5.1 SECURITY AND SAFETY REQUIREMENTS.....24

6.5.2 SECURITY AND SAFETY PLANS AND PROCEDURES24

6.6 ENVIRONMENT AND HAZMAT.....24

6.6.1 ENVIRONMENTAL REQUIREMENTS24

6.6.1.2 HANDLING HAZARDOUS MATERIALS24

6.6.2 ENVIRONMENTAL MONITORING PLANS AND PROCEDURES24

6.7 GROUNDING, BONDING, SHIELDING & LIGHTNING PROTECTION25

6.7.1 GROUNDING, BONDING, SHIELDING & LIGHTNING PROTECTION REQUIREMENTS.....25

6.7.2 GROUNDING, BONDING, SHIELDING & LIGHTNING PROTECTION PLANS.....25

6.8 SPACE.....25

6.8.1 SPACE REQUIREMENTS25

6.8.2 SPACE ALLOCATION PLANS.....25

6.9 CONSTRUCTION AND MODIFICATION25

6.9.1 CONSTRUCTION AND MODIFICATION REQUIREMENTS25

6.9.2 CONSTRUCTION AND MODIFICATION PLANS25

6.10 TELECOMMUNICATIONS.....25

6.10.1 TELECOMMUNICATIONS REQUIREMENTS25

6.10.2 TELECOMMUNICATION PLANS AND PROCEDURES26

6.11-6.19 RESERVED26

6.20 STATUS ASSESSMENT26

SECTION 727

FINANCIAL RESOURCES27

7.1 SUMMARY OF FUNDING PLAN27

7.2 FACILITIES AND EQUIPMENT (F&E) BUDGET27

7.2.1 FACILITIES AND EQUIPMENT (F&E) REQUIREMENTS BUDGET REQUESTS27

7.2.2 SUMMARY OF F&E FUNDING STATUS27

7.3 OPERATIONS AND MAINTENANCE (O&M) BUDGET27

7.3.2 SUMMARY OF O&M FUNDING STATUS27

7.4 RESEARCH, ENGINEERING AND DEVELOPMENT (RE&D) BUDGET27

7.4.1 RE&D BUDGET REQUIREMENTS27

7.4.2 SUMMARY OF RE&D FUNDING STATUS27

7.5 LIFE CYCLE COST ANALYSIS (LCCA)28

7.6 FINANCIAL MANAGEMENT28

7.6-7.19 (RESERVED).....28

7.20 STATUS ASSESSMENT28

SECTION 829

HUMAN RESOURCES29

8.1 HUMAN RESOURCE MANAGEMENT (HRM)29

8.1.1 IMPACT OF ACQUISITION ON HUMAN RESOURCE MANAGEMENT29

8.1.1.1 PERSONNEL SECURITY29

8.1.1.2 RELATIONS WITH LOCAL COMMUNITIES29

8.1.1.3 RELATIONS WITH AVIATION COMMUNITY29

8.1.1.4 EMPLOYEE WORK ENVIRONMENT29

8.1.1.5 EMPLOYEE JOB SATISFACTION.....29

8.1.1.6 LABOR-MANAGEMENT RELATIONS.....29

8.1.1.7 ORGANIZATIONAL STRUCTURE.....30

8.1.2 HUMAN RESOURCE IMPLEMENTATION STRATEGIES30

8.1.3 SECURITY CLEARANCES.....30

8.2 STAFFING30

8.2.1 IMPACTS OF ACQUISITION ON STAFFING.....30

8.2.1.1 OPERATIONAL WORKLOAD30

8.2.1.2 IMPLEMENTATION WORKLOAD.....30

8.2.2 STAFFING PLANS.....31

8.2.3 STAFFING SCHEDULE.....31

8.3 TRAINING31

8.3.1 TRAINING PROGRAM31

8.3.2 TRAINING SUPPORT.....32

8.3.3 PERSONNEL SKILLS.....33

8.3.4 TRAINING QUOTAS.....33

8.3.5 TRAINING SCHEDULE33

8.4-8.19 (RESERVED).....33

8.20 STATUS ASSESSMENT.....33

SECTION 934

TEST AND EVALUATION34

9.1 OVERVIEW OF TEST PROGRAM.....34

9.1.1 GOVERNMENT TEST PROGRAM34

9.1.1.1 OPERATIONAL TEST AND EVALUATION (OT&E).....34

9.1.1.2 FIELD SHAKEDOWN35

9.1.2 CONTRACTOR TEST PROGRAM35

9.1.2.1 DEVELOPMENTAL TEST AND EVALUATION (DT&E)35

9.1.2.2 FACTORY ACCEPTANCE TEST (FAT)35

9.1.2.3 PRODUCTION ACCEPTANCE TEST AND EVALUATION (PAT&E)36

9.1.2.4 SITE ACCEPTANCE TEST (SAT)36

9.2 T&E SCHEDULE36

9.3 T&E RESPONSIBILITY MATRIX37

9.3.1 GOVERNMENT TEST ORGANIZATION37

9.3.2 CONTRACTOR TEST ORGANIZATION38

9.4 T&E FIELD SUPPORT REQUIREMENTS38

9.4.1 PERSONNEL REQUIREMENTS38

9.4.2 TEST EQUIPMENT REQUIREMENTS39

9.4.3 SYSTEM ACCESS39

9.4.4 SPACE REQUIREMENTS39

9.5 T&E PROGRAM STATUS39

9.5.1 TEST RESULTS SUMMARY39

9.5.2 OUTSTANDING PROGRAM TROUBLE REPORTS (PTR)39

9.5.3 DISCREPANCY CORRECTION PROCESS39

9.6-9.19 RESERVED39

9.20 STATUS ASSESSMENT39

SECTION 1040

SYSTEM SUPPORT40

10.1 SYSTEM SUPPORT CONCEPT40

10.1.1 HARDWARE40

10.1.2 SOFTWARE40

10.2 SPECIAL SUPPORT FACILITIES40

10.2.1 MIKE MONRONEY AERONAUTICAL CENTER40

10.2.1.1 RESTORATION RESPONSE LEVEL40

10.2.1.2 FIELD LEVEL MAINTENANCE40

10.2.1.3 DEPOT LEVEL MAINTENANCE.....41

10.2.1.4 ENGINEERING SUPPORT41

10.2.2 FAA TECHNICAL CENTER41

10.2.2.1 RESTORATION RESPONSE LEVEL41

10.2.2.2 FIELD LEVEL MAINTENANCE41

10.2.2.3 DEPOT LEVEL MAINTENANCE.....41

10.2.2.4 ENGINEERING SUPPORT41

10.2.3 OTHER SPECIAL SUPPORT FACILITIES42

10.3 MATERIAL SUPPORT42

10.3.1 PROJECT MATERIAL42

10.3.2 PROVISIONING/SUPPLY SUPPORT43

10.3.3 PACKAGING, HANDLING, TRANSPORTATION, AND STORAGE.....43

10.4 TECHNICAL DOCUMENTATION43

10.4.1 HARDWARE DOCUMENTATION.....43

10.4.2 SOFTWARE DOCUMENTATION43

10.4.3 PROCEDURAL DOCUMENTATION44

10.5-10.19 RESERVED44

10.20 STATUS ASSESSMENT.....44

SECTION 1145

PROGRAM SCHEDULE INFORMATION45

11.1 NAS IMPLEMENTATION SCHEDULE45

11.2 DEPLOYMENT SCHEDULE.....45

11.3 SITE IMPLEMENTATION SCHEDULE.....47

11.4 SCHEDULE DEPENDENCIES51

11.5-11.19 (RESERVED).....51

11.20 STATUS ASSESSMENT51

SECTION 1252

ADMINISTRATION.....52

12.1 ACQUISITION PROGRAM SUMMARY.....52

12.1.1 MARKET SURVEY.....52

12.1.2 ACQUISITION STRATEGY52

12.2 CONTRACTING INFORMATION53

12.2.1 PRIME CONTRACT.....53

12.2.2 SERVICE CONTRACTS53

12.2.3 PROGRAM SUPPORT CONTRACTS.....53

12.2.4 REGIONAL CONTRACTING.....53

12.2.5 GFP/GFI/GFE OBLIGATIONS53

12.3 PROGRAM MANAGEMENT53

12.3.1 PROGRAM MANAGEMENT CHARTER.....54

12.3.1.1 RESPONSIBILITIES:54

12.3.1.1.1 INTEGRATED PRODUCT TEAM (IPT) LEADER, AUA-40054

12.3.1.1.2 DEPUTY IPT LEADER, AUA-40054

12.3.1.1.3 BUSINESS MANAGER, AUA-400.....54

12.3.1.1.4 PRODUCT TEAM LEAD, AUA-42054

12.3.1.1.5 ASSOCIATE PROGRAM MANAGER FOR CONTRACTING, ASU-350.....54

12.3.1.1.6 TECHNICAL OFFICER AND PROJECT ENGINEER, AUA-42054

12.3.1.1.7 ASSOCIATE PROGRAM MANAGER FOR OPERATIONAL REQUIREMENTS (APMR), ATR-13054

12.3.1.1.8 ASSOCIATE PROGRAM MANAGER FOR SYSTEM ENGINEERING (APMSE). ASE-130.....55

12.3.1.1.15 REGIONAL ASSOCIATE PROGRAM MANAGERS (RAPMS), AXX-42X AND AXX-51X56

12.3.1.1.16 TECHNICAL ON-SITE REPRESENTATIVES (TORS)56

12.3.1.2 PROGRAM PLANS AND REPORTS56

12.3.1.2.1 CONTRACT PLANS AND REPORTS.56

12.3.1.2.2 FAA PLANS AND REPORTS.....56

12.3.1.2.2.1 OASIS TEST AND EVALUATION MASTER PLAN (TEMP)56

12.3.1.2.2.3 OT&E/SHAKEDOWN TEST PLAN AND PROCEDURE.....56

12.3.1.2.2.4 FIELD SHAKEDOWN TEST AND EVALUATION (ST&E) TEST PLAN AND PROCEDURES....56

12.3.1.2.2.5 JAI REPORT56

12.3.1.3 GOVERNING DOCUMENTS.....56

12.3.2 PROGRAM MANAGEMENT TEAMS.....57

12.3.2.1 FSAS (OASIS) PRODUCT TEAM.....57

12.3.3 PROGRAM STATUS REPORTING57

12.3.3.1 MAJOR ACQUISITION REVIEW (MAR).....58

12.3.3.2 IPT LEADER SYSTEM-LEVEL REVIEW (IPTSL)58

12.3.3.3 PRODUCT TEAM MEETINGS58

12.3.3.4 PROGRAM CONFERENCES58

12.3.3.5 TEST SCHEDULE AND STATUS REVIEW (TSSR) MEETINGS.....58

12.3.3.6 NAILSMT MEETINGS58

12.3.3.7 TRAINING REVIEW MEETINGS.....58

12.3.3.8 REGIONAL STATUS REPORTING.....58

12.3.3.9 DEPLOYMENT READINESS REVIEW58

12.3.4 EXCEPTION MANAGEMENT58

12.4 QUALITY ASSURANCE.....59

12.4.1 PROGRAM ACCEPTANCE CRITERIA59

12.4.2 RISK MANAGEMENT59

12.5 CONFIGURATION MANAGEMENT (CM).....59

12.5.1 CM RESPONSIBILITIES59

12.5.2 CONFIGURATION CONTROL BOARD (CCB).....60

12.5.3 CM MILESTONES60

12.5.4 CONFIGURATION ITEMS.....60

12.6-12.19 (RESERVED).....60

12.20 STATUS ASSESSMENT60

SECTION 1361

IMPLEMENTATION (REQUIREMENTS)61

13.1 IMPLEMENTATION SUPPORT ORGANIZATIONS.....61

13.1.1 ASSOCIATE PROGRAM MANAGER FOR NAS IMPLEMENTATION (APMNI)61

13.1.2 IMPLEMENTATION MANAGEMENT TEAM (IMT).....61

13.1.3 REGIONAL ASSOCIATE PROGRAM MANAGER (RAPM).....62

13.1.4 TECHNICAL OFFICER'S REPRESENTATIVE (TOR).....63

13.1.5 CONTRACT SUPPORT64

13.2 SITE IMPLEMENTATION PROCESS64

13.2.1 IMPLEMENTATION PLANNING PHASE.....64

13.2.1.1 IMPLEMENTATION ACTIVITIES.....64

13.2.1.2 REQUIREMENTS.....65

13.2.2 PRE-INSTALLATION AND CHECKOUT (PRE-INCO) PHASE65

13.2.2.1 IMPLEMENTATION ACTIVITIES.....65

13.2.2.2 REQUIREMENTS.....66

13.2.3 INSTALLATION AND CHECKOUT (INCO) PHASE66

13.2.3.1 IMPLEMENTATION ACTIVITIES.....66

13.2.3.2 REQUIREMENTS.....67

13.2.4 SYSTEM INTEGRATION PHASE67

13.2.4.1 IMPLEMENTATION ACTIVITIES.....67

13.2.4.2 REQUIREMENTS.....68

13.2.5 FIELD SHAKEDOWN PHASE.....68

13.2.5.1 IMPLEMENTATION ACTIVITIES.....68

13.2.5.2 REQUIREMENTS.....69

13.2.6 DUAL OPERATION PHASE69

13.2.6.1 IMPLEMENTATION ACTIVITIES.....69

13.2.6.2 REQUIREMENTS.....69

13.2.7 EQUIPMENT REMOVAL PHASE70

13.2.7.1 IMPLEMENTATION ACTIVITIES.....70

13.2.7.2 REQUIREMENTS.....70

13.3-13.19 (RESERVED).....70

13.20 STATUS ASSESSMENT.....70

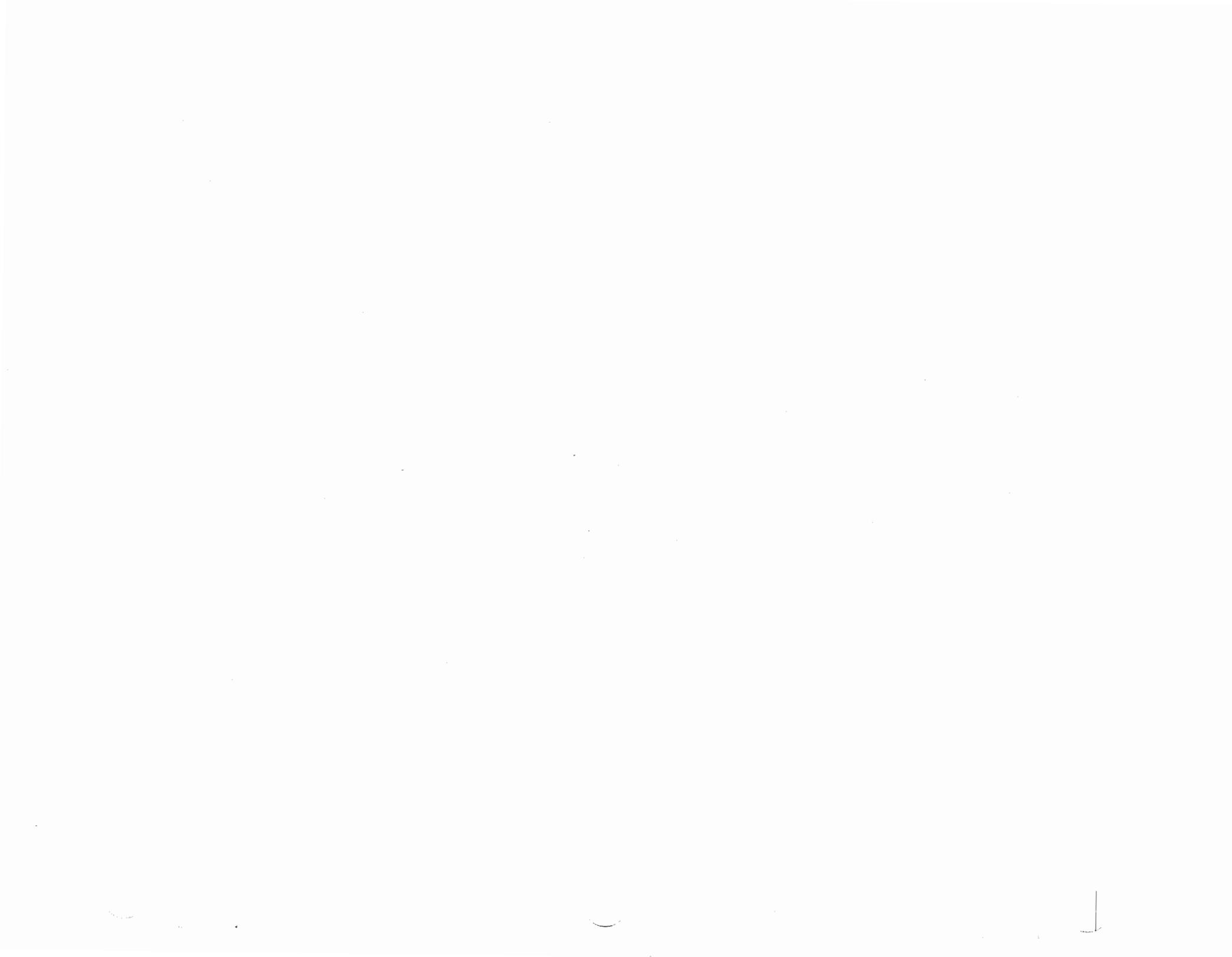
LIST OF FIGURES AND TABLES

PAGE

FIGURE 2.2-1	OASIS SYSTEM COMPONENTS AND INTERFACES	7
TABLE 2.4-1	OASIS MAJOR MILESTONES	9
TABLE 5.3.1.6-1	SPECIALIST WORKSTATIONS BY SITE	21
TABLE 5.3.3-1	OASIS PHYSICAL DIMENSIONS AND CHARACTERISTICS	24
TABLE 6.3.2-1	CABLE LENGTH LIMITATIONS	27
TABLE 9.3-1	T&E MATRIX IDENTIFIER	41
FIGURE 11-1	OASIS NAS IMPLEMENTATION SCHEDULE	49
TABLE 11.3-1	DEPLOYMENT SCHEDULE - FIRST SITE (WITH OT&E)	52
TABLE 11.3-2	DEPLOYMENT SCHEDULE - KEY SITES WITHOUT OT&E	53
TABLE 11.3-3	DEPLOYMENT SCHEDULE - OTHER OPERATIONAL SITE	54
FIGURE 12.1.2-1	OASIS DELIVERY SCHEDULE	57
TABLE 12.3.2-1	IPT MANAGEMENT TEAM	61
TABLE 12.3.2-2	OASIS PRODUCT MANAGEMENT TEAM	62
TABLE 13.1.2-1	IMPLEMENTATION MANAGEMENT TEAM	67
TABLE 13.1.3-1	REGIONAL ASSOCIATE PROGRAM MANAGERS	68
TABLE 13.1.4-1	REGIONAL TECHNICAL ON SITE REPRESENTATIVES (TOR'S)	69

APPENDICES

- APPENDIX A, GENERIC SITE IMPLEMENTATION PLAN (GSIP)
- APPENDIX B, TRANSITION INFORMATION EXCHANGE (TIE) SUMMARY REPORT
- APPENDIX C, ACRONYMS



PROGRAM IMPLEMENTATION PLAN FOR THE OPERATIONS AND SUPPORTABILITY IMPLEMENTATION SYSTEM

SECTION 1

GENERAL

1.1 Purpose of Document

This PIP provides direction and guidance for the installation, testing, and implementation of OASIS equipment, including the removal of the Model 1 Full Capacity (M1FC), and Interim Graphic Weather Display System (IGWDS) equipment from the Automated Flight Service Station (AFSS). In addition, this PIP serves as the OASIS Program Management Plan, as permitted by FAA-STD-036B. The PIP will be updated prior to KDP 4 to provide further direction and guidance for the removal of the Flight Service Data Processing System (FSDPS) and the Aviation Weather Processor (AWP).

1.2 Scope of Document

The PIP is applicable to all levels of FAA that are responsible for implementing the OASIS Program. It is an iterative document developed during Phase 1 (Concept Exploration) and is updated during each subsequent phase of acquisition. Consequently, information required for specific sections may not be available at the time a particular version is issued. These sections are annotated with the acronym "TBS" (To Be Supplied). The contents of this PIP are organized by the eleven essential elements of information as defined in FAA Order 1810.1F and documents the strategy, requirements, activities, and responsibilities necessary to support deployment and operation of OASIS in the field. This PIP also has three attachments, Appendix A, Generic Site Implementation Plan (GSIP), Appendix B, Transition/Implementation Exchange (TIE) Summary Report, and Appendix C, Acronyms. The GSIP is a generic site implementation task list that defines activities to be accomplished during each of the seven phases of implementation described in Chapter 13. The TIE Summary Report lists transition and implementation issues and summarizes the action plans and resolution of each.

1.3 Distribution

The PIP is distributed to branch level in the Office of Tower/Flight Service Station; Associate Administrator for Contracting & Quality Assurance; Office of Training and Higher Education; National Airspace System (NAS) Systems Engineering Service; Service Directors for Air Traffic Plans and Requirements, Program Management, Rules and Procedures, Service Directors for NAS Operations, Operational Support, Requirements and Life-Cycle Management, NAS Transition, and Resource Management; and Branch level in regional Airway Facilities, Air Traffic, and Logistics Divisions; the director level to the Offices of Budget and Chief Counsel, FAA Technical Center and Mike Monroney Aeronautical Center; and standard distribution to Airway Facilities General NAS Sectors; sector field offices, sector field units, sector field office units, Air Route Traffic Control Centers (ARTCC), and Automated Flight Service Stations (AFSS).

1.4 Definition of Terms

Key terms used in this document are defined below:

Term	Definition
Acquisition Phase	(from FAA Order 1810.1F) The period of time following a key decision point when specific activities are conducted to achieve acquisition objectives.
GSIP (Generic Site Implementation Plan)	a list of program implementation activities and required resources, organized by the seven phases of implementation: Planning, Pre-Inco, INCO, System Integration, Field Shakedown, Dual Operations, and Equipment Removal.
IMT (Implementation Management Team)	a team comprised of the APMNI, RAPMS, and Product Management Team members with a focus on PIP development and coordination and implementation issue tracking/resolution (TIE process management)
SIP (Site Implementation Plan)	a planning document developed by the contractor or regional personnel, based on PIP information. The SIP defines the process to be used in implementing a program within a site with a typical or representative configuration. Note that the contractor's Site Installation Plan shares the same acronym.
TIE (Transition/Implementation Exchange)	a formal process to identify, track, and resolve program implementation issues.

Acronyms are defined in Appendix C. (Ref: Implementation Process Guidelines, dtd 6/94)

1.5 Cancellation

Not applicable. This is the initial issuance of the FSAS OASIS PIP.

1.6 Authority to Change this Document

The Integrated Product Team Leader, Tower and Flight Service Stations, AUA-400, and the Manager, Implementation Management Division, ANS-200, have the joint authority to change/revise this document. Request for changes to the PIP should be directed to the Integrated Product Team Leader, Tower and Flight Service Stations, AUA-400, FAA Headquarters, 800 Independence Ave, SW, Washington, DC 20591. (Ref: FAA Order 1810.1)

1.7-1.19 Reserved

1.20 Risk Assessment Overview

The overall risk assessment of the OASIS program is considered low with regard to budget, cost, schedule, and technical development. Each of the major sections of this PIP contain a discussion of the status assessments for related issues associated with OASIS. (Ref: Risk Management Plan, dtd, 7/11/94)

This program uses an implementation issue identification and tracking process known as the Transition/Implementation Evaluation (TIE) process, described in the Implementation and Process Guidelines (IPG), and defined for OASIS program application in Paragraph 13.1 of this plan. This process provides for the formal identification of implementation issues after PIP initial release to the field. The APMNI facilitates the identification of these

October 5, 1995

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issues. The OASIS Implementation Management Team (IMT), described in Paragraph 13.1, tracks these issues through resolution. Field organizations identify implementation issues, which cannot be resolved at the regional level, through their Regional Associate Program Managers (RAPMs) to the APMNI. The issues will be placed in the TIE Summary Report in Appendix B of this Plan. (Ref: IPG, dtd June 1994)

SECTION 2

PROGRAM OVERVIEW

2.1 Synopsis of Mission Need

The OASIS mission is to replace the aging AFSS, FSDPS and AWP equipment, thereby eliminating the logistical supportability concerns, and to rectify operational deficiencies and unmet FSAS requirements. New equipment must be easily adaptable to upgrades in technology, be reliable, and cost effective.

In addition, there exists a need for incorporating the functionality identified in the GWDS Mission Need Statement (MNS) to acquire a fully integrated weather graphics system that meets operational needs of information timeliness, consistency, and accuracy, and that is tailored to facilitate the flight service specialist's operations and decision-making process.

The Air Traffic Plans and Requirements Service (ATR) along with the AML Division at the FAA Logistics Center has identified supportability issues, capabilities, and functionalities that are needed to satisfy or improve the flight service specialist's efficiency and productivity in support of flight services.

OASIS is anticipated to be a Level 1 program in accordance with FAA Order 1810.1F.
(Ref: draft FSAS Acquisition Plan, 8/14/95)

2.1.1 Operational Needs

The mission need for this program derives from the MIFC supportability concern that was identified by the AML Division at the FAA Logistics Center. Additionally, OASIS will meet all identified operational capabilities and functionalities. Originally, this program was authorized to proceed to KDP-2 in July 1992, this will satisfy all hardware supportability issues and operational needs except in the weather graphics area. Subsequently, the OASIS implementation strategy has been expanded to incorporate a weather graphics capability.

This strategy involves combining the individual Capital Investment Plan (CIP) projects for OASIS and GWDS into a single, fully-integrated procurement that will meet current needs. At the Pre-Transportation Systems Acquisition Review Council (TSARC) briefing to the FAA's Acquisition Executive, it was recommended that the scope of OASIS be expanded to include end-state hardware and functionality.

Subsequently, the scope of OASIS has been expanded to include the functionality of CIP program FSAS Computer Replacement (NEXTGEN) (CIP 43-04). In all, OASIS has been expanded to include three CIP programs; National Graphics Weather Display Systems (GWDS) (CIP 43-01), FSAS Computer Replacement (NEXTGEN) (43-04) and FSAS OASIS (OASIS) (43-22).

In conjunction with the request for KDP-2/3 approval, this plan also requests to bypass the Demonstration/Validation Phase and proceed to the full-scale development phase, since the hardware and software components for OASIS are fully mature and already proven in commercial usage. (Ref: draft FSAS Acquisition Plan, 8/14/95)

2.1.2 Strategic Goals

This plan addresses an acquisition strategy that satisfies currently unmet air traffic and airways facilities operational requirements, provides replacement of the FSAS Model 1 Full Capacity (MIFC) hardware elements, enhances current flight service capabilities, and incorporates Graphic Weather Display Systems (GWDS) and Direct User Access Terminal (DUAT) capabilities. The planned acquisition strategy will be to select the contractor through full and open competition. The acquisition will be accomplished in accordance with Federal Acquisition Regulation (FAR) subpart 6.1-Full and Open Competition upon Key Decision Point-3 (KDP-3) approval. After the KDP 4 decision for full production, the DRR process will be initiated. The authority for the award to the selected contractor

is provided by the Federal Acquisition Regulation (FAR). The successful offeror will implement OASIS at Automated Flight Service Stations (AFSS). The Commercial Off-the-Shelf (COTS) system will incorporate all Flight Service Data Processing Systems (FSDPSs) and Aviation Weather Processors (AWPs) functionality. (Ref: draft FSAS OASIS Acquisition Plan, 8/14/95)

All follow-on system functionality and, as yet undefined, enhancements will be incorporated as pre-planned product improvements (P³I). The APMNI will consult with affected RAPMs on whether to update this PIP to include P³I planning on a case-by-case basis.

2.2 Functional Description

OASIS provides for the installation, testing and commissioning of 61 operational AFSSs and 8 support systems. The support systems will be distributed as follows:

AFSS support systems:

- 2 at the Mike Monroney Aeronautical Center (AF training)
- 2 at the Mike Monroney Aeronautical Center (AT training)
- 3 at the FAA Technical Center
- 1 as GFE at the Contractor's site for P³I work.

The OASIS workstation (OASISWS) will function as the specialist interface to enter requests/retrieve data to satisfy user needs, including weather data, flight safety information, flight plan transmission, and administrative functions. OASIS functionality will include the capability to store, retrieve, display, highlight, and transfer information applying to any set of weather conditions, route of flight, or aircraft type. Weather and flight route information will be displayed simultaneously for multiple requests. The specialist will receive visual notification of flight route problems including severe weather, and other safety concerns.

OASIS will provide for display of graphic products integrated with flight plans. The graphics requirement of the OASIS specification will be based on requirements from the GWDS specification, FAA-OR-2796A, dated August 4, 1989, graphic requirements defined in the draft Weather and Radar Processor (WARP) system specification and graphics display needs as identified in the Air Traffic Weather Requirements Report, February 11, 1993.

OASIS capabilities will include automated retrieval of a complete set of required flight service information, including that relating to the pilot, the NAS, weather, airport procedures, and regulations, etc. Figure 2.2-1 depicts the current NAS architecture for flight services.. (Ref: Draft FAA-E-XXXX, OASIS Specification, dtd 8/15/94)

2.3 Program History & Status

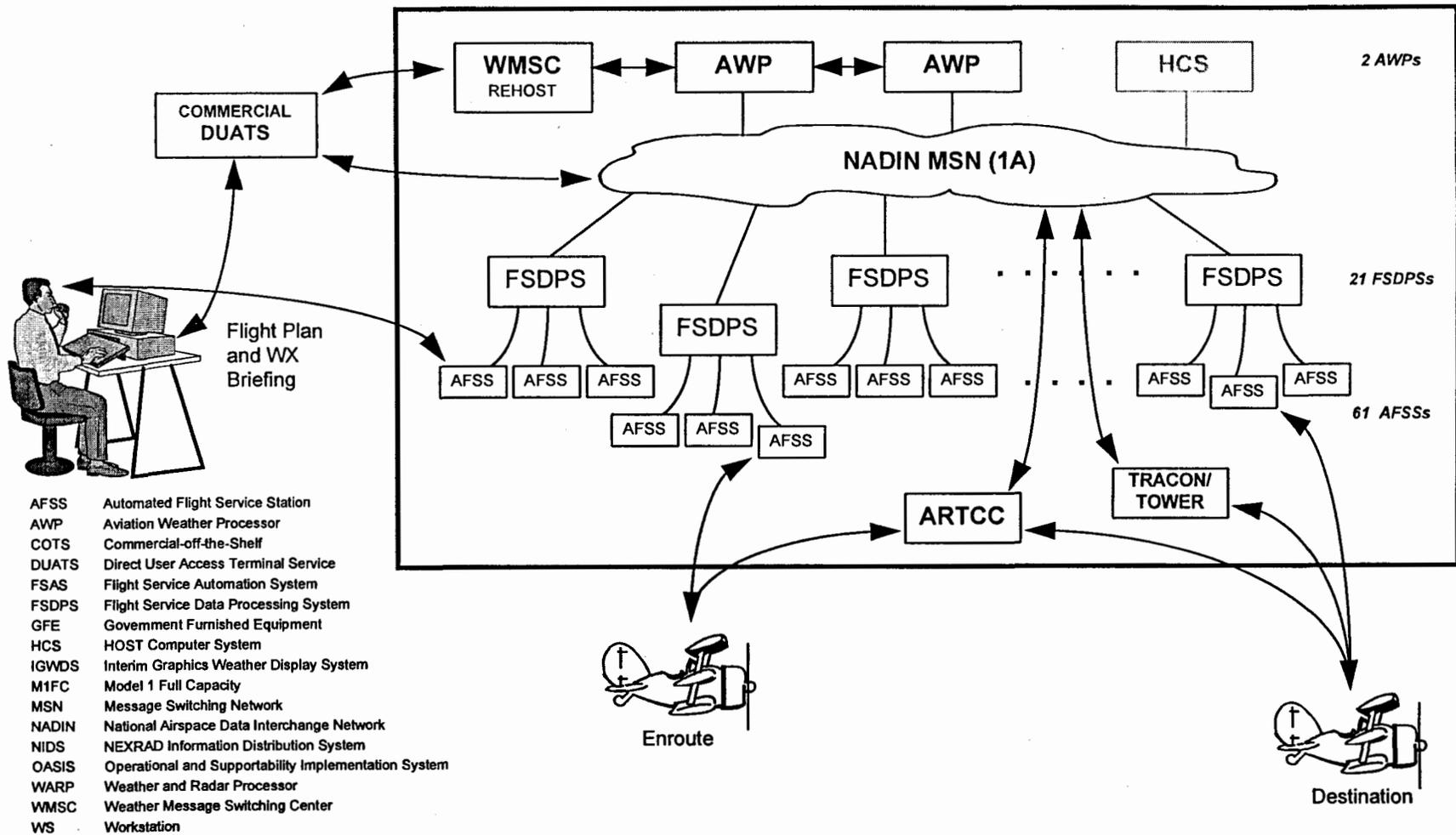
This plan describes the Federal Aviation Administration's (FAA) approach to procure the Flight Service Automation System (FSAS) Operational and Supportability Implementation System (OASIS). The existing FSAS architecture, deployed as Model 1 Full Capacity (M1FC), consists of 2 Aviation Weather Processors (AWP), 21 Flight Service Data Processing Systems (FSDPS), and 61 Automated Flight Service Stations (AFSS). Since the FSAS equipment was procured in 1981, the FAA Logistics Center (FAALC) has conducted studies which indicate that major M1FC hardware elements will no longer be supportable, starting in 1997 for AFSSs and in 1998 for AWP and FSDPSs. This is consistent with the planned 15-year hardware life cycle. Additional capabilities and functionality that are needed to satisfy or improve the flight service specialist's efficiency and productivity have been identified but cannot be implemented at this time.

The weather graphics systems (i.e. Interim Graphic Weather Display System (IGWDS)) deployed at the 61 AFSSs were acquired through regional procurements over the past 9 years: 3 in 1985, 19 in 1987, 18 in 1988, 9 in 1989, 6 in 1990, 4 in 1991 and 1 in 1993. IGWDS services are obtained by the 9 regions from 3 contractors through 17 contracts. Non-standard contract management, funding, training, maintenance, and equipment capabilities have a

direct impact on the effectiveness of the flight service specialist to meet the aviation community demand for fast, accurate, and reliable graphic weather information. The needs of the specialist and the aviation community can best be served by an acquisition plan that combines weather graphics into a single, integrated system.

OASIS and GWDS mission needs were developed during the Requirements Phase. The FAA Acquisition Review Committee (ARC) approved KDP-1 for OASIS on February 20, 1992, as part of an FSAS Computer Replacement Mission Need Statement and approved KDP-1 for a Graphics Weather Display System (GWDS) on March 30, 1992. The Transportation Systems Acquisition Review Council (TSARC) approved KDP-1 for OASIS on July 21, 1992. The current Mission Need Statement (MNS) calls for the combination of Capital Investment Plan items, 43-01, 43-04 and 43-22. (Ref: draft FSAS Acquisition Plan, 8/14/95)

Figure 2.2-1, Current NAS Architecture for Flight Services



2.4 Program Milestones

**TABLE 2.4-1.
OASIS Major Milestones**

Milestone:	Date:
Draft Operational Requirements Document	6/95
Begin Market Survey	6/95
Final Mission Need Statement	10/95
Final Operational Requirements Document	10/95
KDP 2/3	10/95
RFP Release	2/96
Contract Award	1/97
1st Site ORD	3/98
Last Site ORD	3/00

(Ref: draft FSAS Acquisition Plan, 8/14/95)

2.5 Inter-Agency Involvement

OASIS will interface with other federal agencies (ie. Customs, Department of Defense, etc.) via existing NAS x.25 interfaces. There is no requirement for those agencies to be involved in the development of OASIS (Ref: Acquisition Program Baseline, dtd 8/4/94)

2.5.1 Department of Defense (DOD)

OASIS will interface with military base operations.

2.5.2 National Weather Service (NWS)

Not Applicable

2.5.3 U.S. Customs Service

OASIS will interface with the U.S. Customs Service Treasury Enforcement Computer System.

2.5.4 Drug Enforcement Agency (DEA)

OASIS will replace the existing MIFC interface with law enforcement agencies, including DEA.

2.5.5 Other Agencies

OASIS will replace the existing MIFC interface with law enforcement agencies, including DEA.

2.6 - 2.19 Reserved

2.20 Status Assessment

The following are programmatic areas of concern related to program documentation and implementation funding:

1. Several key program documents, which are sources of information for this PIP, have not been finalized, at the time of release for this document. These documents are: the ORD, FSAS OASIS System Specification, ILSP, and TEMP. Consequently there is some risk that the information referenced from these documents may be changed by the time this document is distributed. Remarks are contained at the end of the applicable PIP Section to highlight a significant unresolved issue associated with these documents. Paragraph 5.20 discusses interface definition uncertainties associated with the ORD and system specification. Paragraph 9.20 discusses uncertainty of AOS-5XX responsibilities for Field Shakedown. Paragraph 11.20 identifies uncertainties with system support information.

SECTION 3

AIRWAY FACILITIES (AF) OPERATIONS

3.1 Summary of Maintenance Operation Impacts

3.1.1 Transitory State

During implementation, it is encouraged that regional site implementation teams will be formed to prepare Site Implementation Plans (SIP), support contractor site surveys, perform site preparation activities, support contractor site installation and checkout, integrate OASIS into to NAS, support Operational Test & Evaluation and perform field shakedown at key sites, perform evaluations that lead to the achievement of ORD and JAI/commissioning milestones. AF technicians assigned to OASIS will attend training classes at either the contractor's facility or the FAA Academy well in advance of site delivery of OASIS equipment.

An FAA prepared Site Implementation Plan (SIP) is required for each site and phase of OASIS. The regional AF Associate Program Manager (RAPM), in coordination with the AF sector manager, the facility manager, and regional Air Traffic (AT) offices, is responsible for preparing the plan. The GSIP, Appendix A contains a generic set of implementation activities that should be addressed in the SIP. The SIP should include, for each step in the implementation, provisions which allow the members of the Joint Acceptance Board (JAB) to assess the readiness of that portion of the system to be used in an operational environment.

Contractor conducted site surveys will require advance coordination with the regional offices and sites. F&E and site technicians will be expected to furnish drawings, facility layouts, explain ICSS and power cabling, and conduct site walkthroughs with visiting OASIS contractor personnel.

In preparation for contractor site installation, regional and site personnel will lead the site preparation effort that will support contractor system installation with minimum disruption to AT operations. The GSIP, Appendix A contains numerous site preparation considerations.

Only Regional F&E and site personnel will integrate the government-accepted OASIS into NAS. This will require Telco circuits between the site and the ARTCC demarc that connects to a NADIN II assigned to the site. Telco lines and NADIN assignments will be made by AOP-400 one year prior to key site delivery. AOP will provide NADIN port assignments also one year prior to key site delivery.

3.1.2 Operational State

FAA site maintenance technicians will monitor system performance locally, identify failures through the use of software and hardware maintenance features and replace the failed element, module or line replaceable unit (LRU). Failed or replaced LRU's will be returned to the depot for repair and return to service. (Ref: ILSP, dtd 3/95)

3.2 AF Procedural Changes

3.2.1 Preventive Maintenance

All preventive maintenance will be performed at regular intervals by on-site AF technicians, in accordance with applicable FAA maintenance orders. (Ref: Acting IPT lead for OASIS, 9/5/95)

3.2.2 Corrective Maintenance

The Mean-Time-to-Repair (MTTR) of OASIS, excluding the non-alphanumeric weather display capability, on a per site basis, is less than or equal to 0.5 hours. The MTTR of the non-alphanumeric weather display capability of OASIS on a per site basis, is less than or equal to six (6) hours. The Mean-Time-Between-Critical-Failure (MTBCF) of OASIS, excluding the non-alphanumeric weather display capability, on a per site basis, is no less than 2000 hours. MTBCF for the non-alphanumeric weather display capability of OASIS on a per site basis, is no less than 1194 hours. (Ref: ORD, dtd 08/17/94)

Corrective maintenance service will commence promptly after notification that equipment is inoperative, or that degradation of functions has occurred, or when through the process of performing periodic maintenance services, it is determined that failure is imminent. When the faulty LRU is located, it is removed from the equipment/subsystem and replaced with a serviceable spare. After replacement, maintenance personnel shall perform the system alignment procedures as detailed in the technical instruction book. When LRUs are replaced, they will be forwarded to the depot on an exchange and repair (E&R) basis as directed by the FAALC. (Ref: cc:mail, PIP updates, from Lou Forella to Ed Cisneros, dtd 02/28/95).

LRUs will be repaired under a FAALC contract and returned to service at the FAALC depot. (OASIS Implementation Meeting between Barbara Baltz, APML, and Ed Cisneros, APMNI, 9/5/95).

3.2.3 Software Maintenance

COTS software will be used to the maximum extent, with development effort as needed to meet specific OASIS requirements. Software designs will be modular and will provide the basic system architecture needed for the addition of future modular system enhancements. Software configuration management will be the responsibility of AOS-540.

3.2.4 System Operations/Monitoring

The system will be capable of configuring any position as an OASIS management system console (OMSC). Accomplishment of periodic and corrective reconfiguration, monitoring and diagnostic maintenance tasks will be performed from this position with minimal interruption to the operational system.

3.2.5 System Certification

Not required. (FAA Maintenance Handbook 6490.15B)

3.2.6 Personnel Certification

Not required because system certification is not required (see above).

3.3 Facilities and Equipment (F&E)

Regional F&E personnel will monitor and assist in contractor conducted site surveys, equipment installation and removal. Site surveys are expected to be conducted within a few months of contract award, beginning with FAATC, MMAC, and the key sites. Site preparation and installation/checkout activities are expected to span one month prior and one month after site delivery (see NAS Implementation schedule in Paragraph 11.1), except for key sites where additional evaluations such as field shakedown will take place.

During installation F&E personnel may be required to effect mechanical and electrical connections with interfacing FAA equipment and provide access to power, HVAC, and grounding. In addition, F&E personnel may participate in contractor-provided OASIS orientation training. MIFC equipment removal may be performed by F&E personnel if found to be in the best interest of the government (this will be a joint AF and IPT decision to be made prior to RFP release.).

3.4 Systems Maintenance

During implementation, Sector AF personnel will be expected to experience 3-4 weeks OASIS maintenance training at the either at contractor's facility or the FAA Academy. Regional and sector personnel will be expected to support contractor site survey visits. Conceivably, Site Implementation Teams may, at the option, of each region, be formed to work with the contractor's installation team and prepare the Site Implementation Plan. The OASIS maintenance concept is for the AF Technician to locally and centrally monitor system performance, to correct failures through software and hardware maintenance features, and to replace the failed element, module or line replaceable unit (LRU). Maintenance software and maintenance features shall be designed to rapidly isolate the malfunction to the smallest replaceable component level. The OASIS design will provide for an efficient system maintenance approach by making maximum use of standardization, automation and centralization.

If AF technician maintenance training is delayed, the program will exercise a contractual option to provide one year of contractor field maintenance. (Re: Implementation Meeting between, Barbara Baltz, APMI, and Ed Cisneros, APMNI, 9/12/95).

3.5-3.19 (Reserved)

3.20 Status Assessment

The risk assessment associated with AF operations is low. There will be a period at each AFSS when the OASIS equipment is installed and the M1FC/IGWDS is decommissioned and removed. The operation of the AFSS will continue during site transition. Insufficient/improper planning or inefficient execution of the Plan could disrupt on-going AFSS operations.

SECTION 4

AIR TRAFFIC (AT) OPERATIONS

4.1 Summary of AT Operational Impacts

Implementation of OASIS will be transparent to the AFSS service provided to the flying public; however implementation will have some impact on the AFSS specialist. Changes for the specialist will include modified/new keyboard input, modified/new functionality and or procedures, and changes to the physical configuration of the operating position. (Ref: Draft ORD, dtd 8/17/94)

4.1.1 Transitory State

[Note: The following discussion is based on the APMNI's best estimate of the OASIS installation strategy. The installation strategy proposed by the yet-to-be-selected contractor and approved by the OASIS Product Team 60 days after contract award may alter the the description provided below]

During implementation, AT specialists will provide input on workstation layout alternatives developed by the contractor; undergo training (regarding modified/new functionality and procedures) within three months of site delivery of equipment and during site installation; and participate in operational evaluation of the delivered equipment, on-site, within 4 to 6 weeks of equipment delivery.

During installation and checkout, at key and selected sites, AT personnel will continue to either attend on-site OASIS training or support operations, using a limited set of MIFC workstations, file servers, and associated peripherals. Workload internal to the AFSS will be reapportioned among workstations to support a two-step installation. After installation and checkout, AT personnel will load test addresses to enable NAS interface with government accepted OASIS equipment and support OASIS system integration tests, OT&E (only at the first site), Field Shakedown, and Operational Readiness Demonstration.

During installation and checkout, at most sites, AT personnel will continue to attend on-site OASIS training or operate a minimum set of in-flight and EFAS workstations. AT personnel will transfer pre-flight workload for all pre-flight workstations to other AFSSs via 1-800 access. Planned preflight workload shifts to support site implementation will be provided by the OASIS Product Team ATR, after field coordination and prior to contract award. The contract RFP will emphasize that the installation period for these sites should be short, preferably within two weeks. After installation and checkout, AT personnel will load test addresses to enable NAS interface with government accepted OASIS equipment and support OASIS system integration tests and Operational Readiness Demonstration at the site.

4.1.2 Operational State (OS)

OASIS will be used by Flight Service Specialists to perform services as defined in FAA Handbook 7110.10K, "Flight Services." OASIS will also provide for future needs of the aviation community. The services provided by Flight Service Specialists need to change because of technology improvements, pilot sophistication and anticipated reductions in budget and staffing. OASIS will meet these needs with new and improved services to the aviation community. The new, improved services will obligate the FAA to revise its operational procedures and enhance specialist training as it implements the new system.

The new system will provide more flexible services by meeting the needs of pilots according to the level of a pilot's sophistication. A pilot may use the system in much the same way they have traditionally used it by telephone and radio frequency. More sophisticated pilots will be able to have direct user access and utilize the system entirely on their own having access to a wide range of state of the art computer graphics and flight planning tools. Lastly, the pilot will be able to conduct an interactive briefing with a specialist with simultaneous voice and data over a modem. With this service, pilot needs can be served in an infinite number of ways. A pilot may be simply seeking help with the format of a flight plan or interpretation of a complex NEXRAD radar image. Through the interactive briefing functions, the entire briefing can be choreographed or predefined/recorded briefings will be customized to suit a specific pilot's needs.

Given current trends it is expected that Flight Service operational activity will be focused less on preflight activities and more on inflight activities in the coming years. This is occurring because pilots are using computers to brief themselves and expecting more sophisticated explanations and service from the Flight Service Specialist when they call the Flight Service Station. OASIS will provide a much improved tool for serving Airspace activity and aircraft situation display. (Reference: draft ORD dated 5/15/95)

4.2 AT Procedural Changes

4.2.1 ATC Operational and Management Procedures

A distributed management system will be provided to allow on-site and off-site OASIS administration. The system will provide the network administrator with the following minimum basic network functions:

1. The system will display the network's topology in the form of a graphical map;
2. An editing tool will be provided to allow grouping of network devices according to function and/or organizational boundaries;
3. The Facility Supervisor Terminal (FST) will function to reassign all terminal functions/alerts to any AFSSWS.
4. The distributed management system will allow remote access by off-site authorized personnel. (Ref: Draft OASIS Specification, FAA-E-XXXX, dtd 8/15/94)

4.2.2 Flight Procedures/Standards

OASIS will be transparent to the pilot and will not require any changes in procedures or standards regarding aircraft operation. (Ref: Mission Need Statement, dtd 11/24/93)

4.2.3 Administrative and Management Procedures

TBS. (ATR-130 to describe six months after contract award)

4.2.4 Software Verification Procedures

TBS (AOS-540, 90 days after Contract Award)

4.2.5 Inter-facility Procedures

TBS (AOS-540 at 90 days after Contract Award)

4.2.6 Personnel Certification Procedures

Not applicable because equipment is not certifiable.

4.2.7 System Back-up/Cutover Procedures

TBS 90 days after Contract Award. The following is the APMNI's view of what will be done:

OASIS implementation will be performed in a manner that is transparent to the flying public. OASIS services are performed at pre-flight workstations or in-flight and EFAS workstations. AFSSs have a sufficient number of M1FC pre-flight workstations that, for a temporary period of a few weeks, workload can be either shifted internally or transferred to other AFSSs, while installation of OASIS equipment is performed at the site. Additionally, it is assumed that all AFSSs, will be able to accept, for a temporary period of a few weeks, workload from another AFSSs where installation/ checkout of OASIS equipment is in progress. These assumptions will be confirmed during contractor-conducted site visits.

Given that these assumptions are correct then cutover could be conducted in the following manner. After OASIS workstations are delivered at the site, Regional/Sector AT managers will transfer all pre-flight workload to spare on-site workstations and/or to other AFSSs using the 800-access phone number system. At the same time, Regional/Sector AT managers will transfer all in-flight workload to spare on-site workstations with an air-to-ground communication capability. All or most non-operational M1FC equipment will then be removed and replaced with OASIS equipment. After the replacement OASIS equipment is installed and accepted by the government, the equipment would be connected to a NADIN II at the assigned ARTCC. A NADIN test address will be assigned for OASIS equipment access during evaluations (OT&E, Field Shakedown, and ORD).

Formal cutover from M1FC to OASIS will take place, after OASIS has successfully completed ORD and JAI. There will be no dual operations, in the interest of flying safety, and the actual cutover is expected to be performed within a matter of hours and at a time when there is a low operational workload.

4.3 AT Implementation

AT personnel will participate in OASIS program implementation planning, training, OT&E planning and conduct, and commissioning/JAI activities in accordance with program schedules. Each Regional AT office is represented by Regional Associate Program Manager assigned to OASIS Implementation Management Team. AT personnel will review program and site implementation plans and participate in contractor conducted site surveys, site acceptance testing and commissioning/JAI activities. AT personnel may also participate in contractor conducted OASIS familiarization training.

4.4-4.19 (Reserved)

4.20 Status Assessment

The risk assessment associated with Air Traffic operations is moderate because AT operational cutover procedures have not yet been defined. A defined concept is needed for the development of training courses. As stated in Paragraph 4.2.7, cutover procedures are planned to be available 90 days after contract award.

SECTION 5

SYSTEM CONFIGURATION AND ENGINEERING

5.1 NAS Level Architecture

5.1.1 NAS Target State

OASIS will provide the replacement and consolidation of Flight Service Automation System (FSAS) equipment and the integration of Interim Graphic Weather Display System (IGWDS) and Direct User Access Terminal Service (DUATS) functionality. (Ref: NAS-SS-1000 para 3.1.1.1.1). The target state is depicted in Figure 2.2-1.

5.1.2 Inter-Program Interfaces

5.1.2.1 Weather Message Switching Center Replacement (WMSCR)

The OASIS will interface, through NADIN II, with WMSCR for weather Alpha Numerics (A/N) and graphics data. This interface will be defined by [FAA-NAS-IR-TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.2 Air Traffic Control System Command Center (ATCSCC)

The OASIS will interface, through NADIN II via NADIN I, with ATCSCC for IFR and Defense flight plan filing. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.3 Other OASIS AFSS(s)

The OASIS will interface with other OASIS AFSS(s) for system flexibility. This interface will be defined by [TBS]. The OASIS contractor will determine how this interface is to be established. (Ref: draft OASIS ORD, 5/15/95 and an implementation meeting with John Farr, and Ross Skiles on 9/6/95)

5.1.2.4 Law Enforcement Agencies

The OASIS will interface with law enforcement agencies for sharing flight plan and law enforcement information. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.5 Foreign ATC System(s)

The OASIS will interface with foreign ATC system(s) for sharing flight plan information. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.6 Military Base Operation(s) (MBO)

The OASIS will interface with MBO to support military flight operations and to schedule special use airspace. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.7 U.S. Customs Service

The OASIS will interface with the U.S. Customs Service Treasury Enforcement Computer System (TECS) for sharing flight plan information. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.8 Vendor Supplied Data Source(s)

The OASIS may interface with vendor supplied data source(s) for [TBS]. This interface will be defined by [TBS]. The OASIS contractor will determine how this interface is to be established. (Ref: draft OASIS ORD, 5/15/95 and an implementation meeting with John Farr, and Ross Skiles on 9/6/95)

5.1.2.9 Weather and Radar Processor (WARP)

The OASIS may interface with WARP for receiving weather graphics, depending if the system becomes available and the interface is found to be cost effective. This interface will be defined by [TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.10 Independent Time Source

The OASIS will interface with a calibrated national time source for [TBS]. This interface will be defined by [TBS]. The OASIS contractor will determine how this interface is to be established. (Ref: draft OASIS ORD, 5/15/95 and an implementation meeting with John Farr, and Ross Skiles on 9/6/95)

5.1.2.11 Remote Maintenance Monitoring System (RMMS)

The OASIS will interface, through NADIN II, with the RMMS to provide an external interface (gateway) to accommodate remote maintenance, monitoring, and diagnostic functions in accordance with an FAA approved standard. This interface will be defined by [FAA-NAS-IR-TBS]. (Ref: draft OASIS ORD, 5/15/95)

5.1.2.12 Enhanced Traffic Management System (ETMS)

The OASIS will interface with the Enhanced Traffic Management System (ETMS). The OASIS contractor will determine how this interface is to be established. (Ref: draft OASIS ORD, 5/15/95 and an implementation meeting with John Farr, and Ross Skiles on 9/6/95)

5.1.2.13 Direct User Access Terminal (DUAT) Services(s)

For a transitory period during project implementation, OASIS will interface, through NADIN II, with DUAT Services(s). The transitory period will be determined by the FAA. This interface will be defined by [TBS].

5.1.2.14 Model 1 Full Capacity (M1FC) System

For a transitory period during project implementation, OASIS will interface, through NADIN II, with the M1FC system. The transitory period will be determined by the FAA. This interface will be defined by [TBS].

5.2 Platform Architecture

OASIS will function within the Airways Support Facilities. (Ref: draft FAA-E-XXXX, dtd 8/15/94 NAS-SS-1000 para 3.1.1.1.1)

5.2.1 Interim Platform Configuration

TBS by ANS-200 at next PIP update.

5.2.2 Target State Configuration

TBS by ANS-200 at next PIP update.

5.3 Subsystem Level Architecture

TBS by the Contractor at Contract Award

5.3.1 Hardware

OASIS hardware will be defined by the contractor. It is not the intent of the product team to dictate hardware selection to potential offerers. Instead, the product team is identifying functional requirements for the hardware to perform AFSS, FSDPS, AWP, and DUATS functions. (Ref: Draft FAA-E-XXXX, dtd 8/15/94)

5.3.1.1 Micro-Computer (s) /File Server (s)

OASIS micro-computer (s) / file server (s) will be based on 32 bit computer architecture, or greater design.

5.3.1.2 Workstation Equipment

Actual workstation equipment will be determined at contract award. Several candidate configurations are available. The following is provided for the purpose of providing some idea what equipment may be used:

1. One American National Standard Code for Information Interchange (ASCII) QWERTY keyboard with character codes as defined in American National Standards Institute X.34.
2. One point-and-click input device. The point-and-click input device will have adjustable tracking and clicking speed in the supplied integrated COTS software. The input devices will be adaptable to left and right hand operation.
3. Several possible workstation configurations exist. Two examples are:

Two (2) color graphic display devices. The color graphic display devices will have at least 17-inch diagonal display surface and be capable of displaying at a minimum resolution of 1024 horizontal dots by 768 vertical dots in a minimum 70 Hz non-interlaced mode. The color graphic displays devices will have the capability to utilize at least 90 percent of the full physical displays surface when viewing the total display area

or, a single 19 inch diagonal color graphic display with 1280 horizontal dots by 1024 vertical dots resolution.

5.3.1.3 Printers

Possibly three (3) operational printers, 2 maintenance, and 1 color will be provided for each AFSS. Exact quantities will be determined before contract award.

5.3.1.4 Communication Path Port Capacity

To be determined prior to RFP release and included herein at the next PIP update,

5.3.1.5 Real Time Clock

Each OASIS will have a real time clock. The output of the real time clock will be accessible by the application software; Time of day and date will be capable of adjustment by the application software.

5.3.1.6 AFSS Workstation (AFSSWS)

Each OASIS will include a specified number of AFSSWS's. See Table 5.3.1.6-1. Two of these shall be located in the designated training area and shall provide voice record and playback capability. This capability can be internal or external to OASIS, but must be accessible from the workstation. Each AFSSWS shall have the capability to enter a training mode by depressing a function key or assignment by the supervisory terminal. In the operational mode the AFSSWS will perform the functions outlined in Paragraph 2.1.1. In the training mode the AFSSWS will perform the same functions in the same manner, except it will access a separate data base on the LAN.

TABLE 5.3.1.6-1

SPECIALIST WORKSTATION BY SITE
TBS prior to RFP release and included herein in next PIP update.

5.3.1.7 Cable and Connector

All cable access will be via the rear of the system component. Cables and connectors to support interfaces to subsystems external to OASIS as well those to interconnect OASIS elements will be serviced from the rear of each subsystem.

5.3.1.8 File servers

File server(s) will be provided with the OASIS.

5.3.1.9 Environmental Characteristics

TBS. (OASIS environmental characteristics will be provided by AUA-420/Contractor, 30 days after Contract Award and will be summarized in Table 5.3.1.9-1).

Table 5.3.1.9-1
OASIS ENVIRONMENTAL CHARACTERISTICS

TBS, (AUA-420/Contractor, 30 days after Contract Award)

5.3.2 Software

The software system will be based on COTS software.

To satisfy multitasking requirements, it is anticipated that most offerors will use a windows environment, with operating systems such as Windows NT, OS/2 or UNIX. OOP may be used, as appropriate, to minimize the software development. and promote future reuse of code, during system support and enhancement. OOP has an extensive library of developed windows software that could be reused. (Ref: FAA-E-XXXX, dtd 8/15/94). COTS software packages will be used to the maximum advantage to the FAA. Software will be developed to integrate COTS software packages and to provide interfaces to systems external to OASIS. (Ref: FAA-E-XXXX, dtd 8/15/94)

5.3.2.1 OASIS Local Area Network

The purpose of the OASIS local area network is to allow equipment of differing design and manufacture to communicate; to allow for ease of reconfiguration; to reduce duplication of resources and to provide for preplanned product improvements (P³I).

5.3.3 Physical Specification

FSAS OASIS physical dimensions and characteristics when known (prior to contract award) will be listed in the following Table 5.3.3-1.

TABLE 5.3.3-1**OASIS PHYSICAL DIMENSIONS AND CHARACTERISTICS**

TBS prior contract award.

5.4-5.19 Reserved**5.20 Status Assessment**

Much of the above information is based on a draft ORD and a somewhat out-of-date system specification which do not have a complete product team consensus nor complete description of the purpose of many of the interfaces. These interfaces should be defined prior the TSARC/ARC KDP 2/3 and will be included in the next update of this PIP.

Interface Requirements Document (IRD) appendices between OASIS and its interfaces, including WMSCR, must be written by the FAA. It is presumed that the WMSCR will be operational when OASIS is implemented and that WMSCR will provide the required A/N data via NADIN II.

Hardware information (specific component size, weight, and quantities) is sparse in this program phase primarily because of the system acquisition approach to specify system performance and allow each prospective OASIS contractor to provide specific hardware/software solutions in their proposals.

The overall technical risk for OASIS is low because of the employment of the COTS approach in procuring hardware to replace the existing MIFC equipment. A low to moderate Software technical risk exists because of the need to integrate several COTS software programs.

SECTION 6

PHYSICAL FACILITIES

6.1 Real Estate

The 61 AFSS's will have sufficient space to accommodate the transition to OASIS without the need to acquire additional land or buildings. (Ref: OASIS Acquisition Plan, dtd 8/14/95)

6.1.1 Real Estate Requirements

Not Applicable

6.1.2 Real Estate Plans

Not Applicable

6.2 Heating, Ventilation, and Air Conditioning (HVAC)

6.2.1 HVAC Requirements

The additional heat generated by OASIS over that of MIFC will be approximately 34,000 BTUs/Hr. This estimate is based on data from a 1994 ASD power study of AFSSs. Data from this study was used by ANS-210/NISC, to estimate that an approximate additional 10 KVA will be required to operate OASIS as compared to that required to operate the MIFC equipment at a "typical" AFSS. Additional heat generated is estimated to be directly related to additional power required (1KVA is equivalent to 3413 BTUs/Hr).

6.2.2 HVAC Plans

TBS, if necessary (AUA-400/Contractor, 45 days after completion of site surveys). Recent AFSS HVAC studies do not indicate problems existing capacity; however, problems were found with physical implementation of existing capacity. These problems are being resolved at the regional/site level.

6.3 Cables

6.3.1 Cable Routing/Raised Floor Requirements

Where applicable, sectional raceways will have a positive grounding connection to the power panel. All raceways will be permanently secured to the subfloor with unitruss at a height of two (2) inches from the subfloor so that other equipment cables may pass beneath the raceway. Locations that have removable flooring, all cable routing will be beneath the floor after exiting the power panel. (Ref: Draft FAA-E-XXXX, dtd 8/15/94)

6.3.2 Cable Plans

Cable routing plans, including plans for Government-furnished raised cable and race ways, are included in each Contractor prepared Site Preparation Plan. Where necessary, plenum-rated cables will be used. (Ref: Draft SOW, dtd XXX)

Cable length limitations will be shown in Table 6.3.2-1 below:

TABLE 6.3.2-1
CABLE LENGTH LIMITATIONS

TBS (AUA-400/Contractor, 45 days after completion of site surveys).

6.4 Power

6.4.1 Power Requirements

OASIS will operate on the FAA-supplied power services available within the AFSS with 120 VAC +10 percent, 60 Hz +2 percent, single-phase, three-wire service, or 208 VAC, +10 percent, 60 Hz +2 percent, three-phase, four-wire service. These services will be provided from a site-available Power Conditioning System (PCS) which will be available prior to OASIS installation. Overload protection and further distribution will be provided by OASIS. OASIS power distribution will be designed to minimize the phase-to-phase load imbalance for three-phase specified in FAA-STD-020. (Ref: Draft FAA-E-XXXX, dtd 8/15/94; Draft OASIS Facility IRD, dtd 8/15/94)

6.4.1.1 Power Panel

The regions will provide and install a central power distribution panel for all contractor installed equipment. This panel will be a 225 amp, 120/280 volt, three-phase, four-wire box with 48 breaker positions providing minimum service capacity of 60 KVA. It will conform to FED-SPEC W-P-115, Type 1, Class 1, and will contain an isolated ground. This information should be documented in the Site Implementation Plan (SIP).

Primary power required for the OASIS file servers .80 kW, single phase, 3-wire, 60 Hz. Primary power required for the OASISWS is 60 Hz, single phase, three-wire cable, including ground.

Primary power for the line printers is .3 kW, 60 Hz, single phase, 20-ampere circuit, single phase, three-wire cable, including ground is required per printer. 3 are required. (Ref: draft AFE-100 Power Study Assessment, dtd 8/31/94)

6.4.1.2 Raceways

All wiring will be run in raceways or conduits.

6.4.1.3 Wiring

All OASIS equipment and wiring will be in accordance National Fire Protection Association-70.

6.4.2 Power Plans

OASIS will use commercial power and will be connected to the engine generator backup power to meet power requirements. OASIS circuitry will be designed to allow the system to function in areas with less than satisfactory commercial power. OASIS will be connected to the power conditioning system (PCS) that will be located at each AFSS. (Ref: CIP 43-03, March 1994 FSAS Power Conditioning System; Draft OASIS Facility IRD, dtd 8/15/94)

6.5 Physical Safety and Security

6.5.1 Security and Safety Requirements

TBS. These requirements were not defined at the time of PIP release. Security and safety requirements contained in the contract SOW will apply and be reflected in the next issue of this PIP.

6.5.2 Security and Safety Plans and Procedures

TBS.

6.6 Environment and HAZMAT

6.6.1 Environmental Requirements

6.6.1.1 Monitoring

TBS at next PIP update.

6.6.1.2 Handling Hazardous Materials

TBS at next PIP update.

6.6.2 Environmental Monitoring Plans and Procedures

TBS at next PIP update.

6.7 Grounding, Bonding, Shielding & Lightning Protection

6.7.1 Grounding, Bonding, Shielding & Lightning Protection Requirements

Grounding, bonding & shielding requirements will be provided in accordance with FAA-STD-020. There are no lightning protection requirements imposed on this program. The Government will furnish the earth ground at FAA installations. The contractor will furnish all other grounds. The contractor will submit a grounding plan for approval included in the Site Implementation Plan. (Ref: Draft OASIS Facility IRD, dtd 8/15/94 and Draft SOW dtd 1/95)

6.7.2 Grounding, Bonding, Shielding & Lightning Protection Plans

The OASIS common system grounding design will contain three discrete subsystems:

1. One that bonds together all cabinets and frames (multipoint);
2. One that connects all signal return wires (signal);
3. The AC power grounds (earth). (Ref: Draft FAA-E-XXXX, dtd 8/15/94)

6.8 Space

6.8.1 Space Requirements

FSAS OASIS space requirements are listed in Table 5.3.3-1 and will be defined in an OASIS to AFSS IRD. Actual equipment dimensions for OASIS will be determined after contract award. There will be a time period between OASIS equipment installation and MIFC equipment removal where AFSS floor space will have to accommodate both systems. Regional/field representatives should identify possible space constraints regarding OASIS as soon as possible after to the APMNI.

6.8.2 Space Allocation Plans

Transitory and operational space requirement plans, to include any facility constraints relative to the FSAS OASIS implementation will be identified by Regional/Site personnel in Site Implementation Plans

6.9 Construction and Modification

6.9.1 Construction and Modification Requirements

There are no plans to modify the AFSS buildings for OASIS. (Ref: Acquisition Plan, dtd 8/14/95)

6.9.2 Construction and Modification Plans

Not Applicable .

6.10 Telecommunications

6.10.1 Telecommunications Requirements

The OASIS contractor is responsible for the integration of the existing ICSS to OASIS workstations. Regions may be required to order a new telecommunication line to link OASIS and NADIN II, if the contractor convinces the program office that one is needed to support system integration tests on-site. Existing telecommunication lines, linking the FSDPS to AFSS MIFC, will continue to be required after OASIS completes ORD at each site. Existing FSDPS to AWP lines used for NADIN and WMSC data will no longer be needed after OASIS completes ORD at all sites in each present MIFC FSDPS family.

6.10.2 Telecommunication Plans and Procedures

TBS by the contractor as soon as possible, but not later than 30 days after contract award. It is uncertain, at this time, whether the selected contractor's implementation will require a NADIN 1 or a NADIN II communications link or some other scheme to link the AFSS to ARTCC host computers and weather and other mission-essential information services.

6.11-6.19 Reserved

6.20 Status Assessment

There are four areas of uncertainties that warrant attention:

1. Will there be sufficient power at all operational sites to support a low cost installation strategy? It is desirable to have the contractor to complete installation within a short time period. This would require operating a minimum number of both MIFC and OASIS equipments during a period of several days or more. A 1994 AFSS Power Sizing Study concluded that the planned UPS (at each AFSS) capacity of 62.5 kVA is adequate as long as the LINCOS (10 kVA) is not connected to the UPS. Although this study provides some level of assurance, this uncertainty will not be resolved until the contractor completes site surveys at all AFSSs.
2. Given the known HVAC cooling problems that exist in the field, will there be sufficient HVAC to handle the added heat load generated by OASIS equipment? A recent AFSS HVAC study concluded that these problems could be mitigated or resolved by improved energy management and that added cooling capacity was not required. Again, this uncertainty will not be resolved until the contractor completes site surveys at all AFSSs.
3. Will environmental monitoring reveal a need for costly remedial action, such as asbestos abatement? This uncertainty will be lessened when regions respond with their assessments in September 1995 and will be resolved when the contractor completes site surveys at all AFSSs.
4. It is recommended that TSRs be released two months prior to contract award in order to order telco lines for the key sites. The contract award date precedes the planned key site delivery dates by only six months. APMNI discussions with regional TM&Os suggest that telecommunication service orders (TSOs) should be issued from 4 months to one year in advance of need.

This section lacks a description of environmental requirements and plans that should be available for this program phase. This is not to say that the program office has not considered the possible environmental impact of OASIS implementation, because due consideration has been given by the Product Lead, Technical Officer, APMNI, and several RAPMs. The next update of the PIP will contain the required description.

SECTION 7

FINANCIAL RESOURCES

7.1 Summary of Funding Plan

The funding policy bases allocations on detailed cost estimates and formally tracks expenditures against estimates. The majority of regions, Aeronautical Center, and FAA Technical Center costs will be associated with site-preparation, facility space costs, and other logistic support, while other costs will relate to management activities. The regions, Aeronautical Center, and FAA Technical Center will follow normal budgetary procedures to develop detailed cost estimates for each site scheduled to receive OASIS equipment. These cost estimates will be prepared in accordance with Order 6011.4, Facilities and Equipment Cost Estimating Procedures and Summaries Handbook. (Ref: Mission Need Statement, dtd 11/24/93)

7.2 Facilities and Equipment (F&E) Budget

7.2.1 Facilities and Equipment (F&E) Requirements Budget Requests

The F&E budget for FSAS OASIS has been established, but is not disclosed here because that information is procurement sensitive. The budget contains regional F&E funding for site implementation work beginning in FY 98. The budget will be included in this paragraph after contract award.

7.2.2 Summary of F&E Funding Status

The F&E budget for OASIS has been established, but is not disclosed here because that information is procurement sensitive. (Ref: Acquisition Plan, dtd 8/14/95)

7.3 Operations and Maintenance (O&M) Budget

O&M funding requirements are for contract system maintenance. Consequently, the O&M funding profile is procurement sensitive and not disclosed in this public document.

7.3.2 Summary of O&M Funding Status

ARA-1 has been briefed regarding OASIS procurement. Delegation of Procurement Authority (DPA) milestone has been established and will be disclosed when this information is no longer procurement sensitive.

7.4 Research, Engineering and Development (RE&D) Budget

OASIS acquisition involves the use of COTS/NDI hardware and software. No R&D is required. (Ref: Cost Benefit Analysis for CIP 43-22, dtd 12/93)

7.4.1 RE&D Budget Requirements

Not Applicable

7.4.2 Summary of RE&D Funding Status

Not Applicable

7.5 Life Cycle Cost Analysis (LCCA)

The OASIS Life Cycle Cost (LCC) analysis is being performed and will be available just prior to KDP-2/3. The pricing methodology used a combination of parametric, historical, engineering, and catalog data. F&E costs include program management/support, systems engineering support, contractor management, software development/integration, Primary Mission Equipment (PME) hardware, system (COTS) software, freight, installation/test, initial spares, initial operations training, initial maintenance training, and data/documentation.

O&M costs for five years include consumables, recurring operations training, software maintenance, hardware maintenance, recurring spares, inventory management, recurring maintenance training, and weather graphic data-stream costs.

7.6 Financial Management

The financial management activity for the OASIS Project includes budget formation, fiscal program management, and reporting and auditing. These activities provide a base for the analysis of resource requirements, preparation of budget estimates and submissions, managing the obligation plan and assessing the cost impact of changes to the program.

The Business Manager prepares financial reports summarizing the status of subject F&E appropriations. These reports will include a tracking of actual versus planned obligations and the status of current funding.

The Business Manager serves as the focal point for financial concerns requiring restructuring of planned funds, or for identification of additional program funding requirements. Working in concert with the Program Manager, the Business Manager will formulate a plan to either distribute the existing funding or to request funding from other sources.

7.6-7.19 (Reserved)

7.20 Status Assessment

The FSAS OASIS Program appears to have identified sufficient funds for implementation. It is very uncertain whether congress will provide full funding as required for each fiscal year. Program adjustments may have to be made consistent to the level of funding provided.

Procurement of COTS hardware/software offers a low risk acquisition alternative. Some cost risk exists because of uncertainties relative to integration of several COTS software modules.

There is also some uncertainty in OASIS installation costs. These costs will be better understood during the contractor proposal evaluation process. Each contractor will be asked in the RFP to provide an installation strategy that minimizes installation costs without significantly impacting AFSS operations.

SECTION 8

HUMAN RESOURCES

8.1 Human Resource Management (HRM)

8.1.1 Impact of Acquisition on Human Resource Management

The assessment of impacts is based on current understanding of the OASIS program technical and operational requirements which may introduce temporary or permanent adjustments to facility or sector operations or may require administrative action at the facility or sector level. (Ref: Matrix Management Team Meeting, dtd 6/94)

8.1.1.1 Personnel Security

There are no potential impacts known to the OASIS Product Team. Regions and other FAA organizations are requested to promptly notify the OASIS Technical Officer and the APMNI of any personnel security concerns associated with the implementation of this program.

8.1.1.2 Relations with Local Communities

The implementation of OASIS will have no impact on local communities.

8.1.1.3 Relations with Aviation Community

Headquarters, regional and facility Air Traffic personnel will keep the aviation community apprised of the status of OASIS in accordance with existing policy and guidelines. Although the new capabilities that OASIS will provide to the public are expected to be well received, OASIS implementation will be transparent to the flying public. It is important to implement OASIS in such a way as to prevent loss of AFSS customers.

8.1.1.4 Employee Work Environment

The OASIS will provide a user friendly and more capable system to access aviation products. Consideration of human factors such as ease of operation and maintenance are part of the requirements and will receive appropriate consideration throughout development.

8.1.1.5 Employee Job Satisfaction

The introduction of state-of-the-art technology will improve the Human Comfort Index (HCI) and attendant reduction in corrective and preventative maintenance is anticipated to contribute to employee job satisfaction.

8.1.1.6 Labor-Management Relations

Normal implementation impact negotiations with bargaining units will be coordinated through the Program Director, Office of Labor and Employee Relations (AHR-25).

Bargaining unit representatives will be briefed on the OASIS Project at the national, regional, and local levels. In addition, dissemination of project status will be made available to Air Traffic and Airway Facilities personnel through existing communications media.

8.1.1.7 Organizational Structure

Elimination of the AWP's at Salt Lake City, UT and Atlanta, GA and the FSDPS at the ARTCCs may affect the structure of AF and AT organizations that operate and maintain these equipments.

8.1.2 Human Resource Implementation Strategies

Regional and facility/sector managers are advised to consider the following strategies for addressing human resource management impact identified in this section:

1. Identify facility/sector personnel for participation in OASIS implementation planning activities, identify facility/sector procedural impact, and development/revision of facility/sector procedures.
2. Provide timely information regarding OASIS technical and operational features, site implementation/installation, activities and schedules.
3. Coordinate conduct of OASIS impact and implementation briefings with regional AXX-10 Office of Labor and Employee Relations. (Ref: Matrix Management Team Meeting, dtd 6/94)

8.1.3 Security Clearances

The OASIS program does not contain special provisions for contractor security clearances. Scheduling of contractor personnel visits for site surveys, site preparation, equipment installation, and testing will be coordinated with FAA security personnel. If FAA personnel are required as escorts, coordination with FAA Operations security is required. (Ref: Matrix Management Team meeting, dtd 6/94)

8.2 Staffing

8.2.1 Impacts of Acquisition on Staffing

The implementation and operation of OASIS will not require additional AT staffing over the present staffing levels. (Ref: cc:mail from ATZ-100, Sam Connor and Mike Coffelt, 7/19/95)

AF staffing impacts are being assessed (Action AOS-540, estimated completion September 29, 1995)

The offices affected by the acquisition of OASIS have sufficient staff and/or contractor support to accomplish the mission. (Ref: ILSP, dtd 4/94, pg 12)

8.2.1.1 Operational Workload

It is not anticipated that the OASIS will affect the workload, however, we will be able to determine this after the Job Task Analysis for training and OT&E are completed. (cc:mail from ATZ-100, Sam Connor and Mike Coffelt, 7/19/95)

8.2.1.2 Implementation Workload

Facility AF/AT personnel will be required to coordinate site preparation efforts such as coordinating the Telco

line from the NADIN ports to the AFSS and coordinating the power and HVAC requirements needed for OASIS. AF/AT personnel will be required to coordinate all contractor activities before and during OASIS implementation. Each site should write a Site Implementation Plan using regional guidance. The Aeronautical Center should also prepare a Site Implementation Plan.

8.2.2 Staffing Plans

There are no plans to change the staffing with the initial introduction of OASIS. (Ref: Matrix Management Team Meeting, dtd 6/94 and cc:mail from ATZ-100, Sam Connor and Mike Coffelt, 7/19/95)

8.2.3 Staffing Schedule

There are no plans to change the staffing schedule with the introduction of OASIS. (Ref: Matrix Management Team Meeting, dtd 6/94 and cc:mail from ATZ-100, Sam Connor and Mike Coffelt, 7/19/95)

8.3 Training

OASIS training will be provided for both AF and AT personnel. AF training will be conducted at the FAATC. AT training will be conducted on site. The exact location of the AT training within the AFSS, the number of specialist that must be trained and certified to support commissioning, and the number of specialists per class will be determined TBS days after contract award. (Ref: Draft SOW, dtd 4/94)

8.3.1 Training Program

Training requirements have been developed by the Directors of Air Traffic Program Management, and Airway Facilities Resource Management for specialists, technicians, and supervisory personnel through the second level at the AFSS. Courses will be developed for operators, technicians, supervisors, network managers, administrators, and automation specialists. Contractor developed training programs will be provided in accordance with the contract as follows:

Flight Service Station (FSS) Specialist Operator Training Course.

The Contractor shall conduct FSS Specialist initial training for FAA Academy, FAATC and other personnel as directed by the FAA. The initial training program shall include approximately 144 FSS Specialists, supervisors and managers, comprised of 12 students in each of 12 classes. The initial training shall be conducted IAW the requirements stated in the SOW. The Contractor shall provide a complete set of all approved course materials to each student receiving operator training. The ratio of technical manuals to be provided is one copy of the operator's manual and user's guide per each student.

Airways Facilities (AF) Technician Hardware Maintenance Course.

The Contractor shall conduct OASIS Hardware Maintenance initial training for FAA Academy, FAATC and other personnel as directed by the FAA. The initial training program shall include approximately 144 personnel, comprised of 12 students in each of 12 classes. The initial training shall be conducted IAW the requirements stated in the SOW. The Contractor shall provide a complete set of all approved course materials to each student receiving maintenance training. The ratio of technical manuals to be provided is one copy of each maintenance manual per each student.

Automation Specialist (AUS) Course

The Contractor shall conduct Automation Specialist initial training for personnel as directed by the FAA. The initial training program shall include approximately 168 personnel, comprised of 12 students in each of 14 classes. The initial training shall be conducted IAW the requirements stated in the SOW. The Contractor shall provide a complete set of all approved course materials to each student receiving automation training. The ratio of technical manuals to be provided is one copy of each manual per each student.

Software Maintenance Specialist Course

The Contractor shall conduct initial training for personnel as directed by the FAA. The initial training program shall include approximately 144 personnel, comprised of 12 students in each of 12 classes. The initial training shall be conducted IAW the requirements stated in the SOW. The Contractor shall provide a complete set of all approved course materials to each student receiving software maintenance training. The ratio of technical manuals to be provided is one copy of each manual per each student.

OT&E and SST Courses.

The Contractor shall conduct OT&E training at the FAATC for the OASIS. The OT&E training shall include approximately 60 FAA Academy personnel, FAATC personnel, AOS-500 personnel, FSS Specialists, AF maintenance technicians, automation personnel, supervisors, and managers comprised of 20 students in each of 3 classes. The Contractor shall provide a complete set of all approved course materials to each student receiving OT&E training.

The Contractor shall conduct SST training at FAATC for the OASIS. The SST training shall include approximately 60 FAA Academy personnel, FAATC personnel, AOS-500 personnel, FSS Specialists, AF maintenance technicians, automation personnel, supervisors, and managers comprised of 20 students in each of 3 classes. The Contractor shall provide a complete set of all approved course materials to each student receiving SST training.

(Ref: Draft SOW, dtd 1/95)

8.3.2 Training Support

(To be finalized 45 days after completion of the Contractor's technical evaluation)

The training mode of OASIS will be utilized for training of AT facility staff prior to SAT. A LAN server and 3-8 AFSSWS per site must be available 4-6 weeks before SAT to facilitate training of AT site personnel. When in the training mode, the AFSSWS will function in the same manner as in the operational mode, except it will access a specific training data base located on the LAN server. There must be a capability to edit or replace these data base files by the training specialist and a method for storing multiple training data bases, so specific training situations can be created and retained. In training mode, any action performed will have no impact on the operational activities of the facility, the operational data base, or external data sources.

When in the training mode, the system must be able to simulate the functions of external sources such as NFDC (provide numbers for specific messages transmitted from the AFSSWS). A method must be provided to return to a specific point by clock time to replay. When a AFSSWS is in training mode it must be clearly identified on the AFSSWS terminal screen.

A method must be provided to capture and store specific periods (not to exceed eight hours) of weather data as it is received by the operational system and then retrieve or replay the data as received. (Ref: cc:mail from ATZ-100, Sam Connor and Mike Coffelt, 7/19/95)

8.3.3 Personnel Skills

TBS (ATZ-110 and AFZ-100, 45 days after completion of the Contractor's technical evaluation)

8.3.4 Training Quotas

TBS (ATZ-110 and AFZ-100, 45 days after completion of the Contractor's technical evaluation)

8.3.5 Training Schedule

TBS (ATZ-110 and AFZ-100, 45 days after completion of the Contractor's technical evaluation)

8.4-8.19 (Reserved)

8.20 Status Assessment

The risk associated with FAA developed training courses is low. The RFP will provide options for contractor developed training. Prior to contract award, the FAA will determine the most cost-beneficial method of providing training and proceed accordingly. Recognizing that a completion date for the Job Task Analysis mentioned in Paragraph 8.2.1.1 has not been established, the Technical Officer will negotiate that date with the appropriate AFZ office.

SECTION 9

TEST AND EVALUATION

9.1 Overview of Test Program

The OASIS test program has four (4) main objectives:

1. Verify that the system delivered by the contractor meets the requirements of the specifications.
2. Identify any problem areas that the contractor must correct before the system is accepted by the government.
3. Ensure that OASIS can be installed in the field and can operate successfully within the environment of the National Airspace System (NAS), that it fully integrates with all required NAS systems, and that the applicable NAS system-level requirements allocated to OASIS are satisfied.
4. Ensure that the OASIS system meets all operational and support requirements under field conditions before the first site installation. (Ref: TEMP 7/93)

9.1.1 Government Test Program

The OASIS program test policy will be implemented in accordance with FAA ORDER 1810.4B, which provides the approved method of test for NAS systems and subsystems. Accordingly, the Associate Program Manager for Test (APMT) has prepared an OASIS Test and Evaluation Master Plan (TEMP) delineating the test approach to be used on the OASIS subsystem. ACT-223 is the designated APMT for the OASIS program, and as such has overall coordination, review and monitor responsibility for the OASIS test program. The test program falls into two categories: government conducted; and contractor conducted. (Ref: TEMP, 7/93)

9.1.1.1 Operational Test and Evaluation (OT&E)

AOS-540 is the Test Director for the OT&E shakedown tests, with assistance from ATR, AF and Regional ATD's where applicable OT&E encompasses integration, operational, and shakedown testing. ACT-223 is the Test Director for OT&E integration and OT&E operational test, with assistance from ATR/AF where applicable.

OT&E will include system integration testing. This testing will determine if OASIS satisfies all allocated NAS system-level requirements and evaluates the impact of OASIS on other systems. AOS-540, will test the FAA Technical Center system, which emulates a typical system in the field. AOS-540 evaluates newly developed and existing operating procedures, system performance under normal and abnormal conditions, maintenance procedures, support procedures, and training. AOS-540 will establish and maintain the baseline configuration of OASIS.

OT&E will be conducted at the first OASIS installation Site, Seattle AFSS. This testing will verify system performance in the field environment.

Regions will verify system integration after the completion of contractor testing and connection to the NAS by regional F&E personnel. Completion of verification results in the attainment of the Initial Operating Capability (IOC).

9.1.1.2 Field Shakedown

The Field Shakedown tests will be conducted at each AFSS site by AF/AT personnel. Field Shakedown tests the readiness of each OASIS before it is accepted as part of the NAS. FAA regional personnel will demonstrate proficiency to maintain and operate OASIS.

The Operational Readiness Demonstration (ORD) is the culmination of the Field Shakedown activities. It defines the point at which the facility is capable of satisfactorily operating and supporting the system in accordance with all required procedures and policies and is set by the JAB. ORD is the actual activity that will demonstrate the ability of local site personnel to fully operate and maintain the OASIS implemented AFSS.

9.1.2 Contractor Test Program

The contractor is responsible for a number of test activities required to ensure that the delivered product satisfies all specified requirements.

9.1.2.1 Developmental Test and Evaluation (DT&E)

Not applicable. (this is a non-development COTS program)

9.1.2.2 Factory Acceptance Test (FAT)

In accordance with the contract SOW a FAT will be conducted at the factory site.

9.1.2.3 Production Acceptance Test and Evaluation (PAT&E)

Not applicable for this COTS-based program.

9.1.2.4 Site Acceptance Test (SAT)

SAT will be conducted at each installation. SAT will be performed after installation and checkout, and prior to Field Shakedown. SAT will be witnessed by AUA-400 COTR representatives. Formal acceptance by the FAA from the contractor, known as Contractor Acceptance Inspection (CAI), follows the successful Site Acceptance Test.

9.2 T&E Schedule

Not available. See Status Assessment, Paragraph 9.20

9.3 T&E Responsibility Matrix

**Table 9.3-1
T&E Matrix Identifier**

TEST NAME	LOCATION	RESPONSIBLE	PARTICIPANT
OT&E Operational & Integration Tests	FAATC	ACT-223	ATR, AOS, AF
OT&E Shakedown Tests	Tech Center	AOS-540	ATR, ACT
SAT	(at each site)	Contractor	ATR, AUA
OT&E	First Site	ACT-223	ATR, AOS, AF
Field Shakedown	Key Sites	AOS-540	ATR, ACT

9.3.1 Government Test Organization

The primary roles and functions of the OASIS test organization are as follows:

Organization	Primary Roles and Functions
AUA-400	The Integrated Product Team Leader (IPTL) directs and manages all FAA activities for FSAS OASIS acquisition and implementation. The IPTL is the program spokesperson inside and outside the FAA, including Congress, other government agencies, contractors, the aviation community, and the media. Approves program documentation required by FAA order such as the Test and Evaluation Master Plan and the Program Implementation Plan. Develops program and budget justification documentation, and controls program funds within approved appropriation. The IPTL may utilize contractor support (such as the Technical Assistance Contract (TAC) where needed to meet these responsibilities.
AUA-420	The OASIS project engineer manages, and accomplishes engineering activities in OASIS program directives. Approves program directives jointly with the FAA Technical Center and approves the budget to fund this testing activity. Appoints an OASIS Project Manager who provides assistance and support to the implementation of this TEMP through the review of related test plans, procedures, test data and test reports. AUA-420 may utilize contractor support (such as TAC) where needed meet these responsibilities.
ASU-430	The OASIS Associate Program Manager for Quality (APMQ) directs, , and accomplishes quality activities delineated in OASIS program directives.
ALM-500	The OASIS Associate Program Manager for Logistics (APML) directs, , and accomplishes logistics and training activities in OASIS program directives.
ACT-223	The OASIS Associate Program Manager for Test (APMT) is the focal point for testing. Ensures preparation of test plans and procedures are in accordance with FAA-STD-024a

and FAA Order 1810.4B. Responsible for all aspects of OT&E testing, including test reports. Included are preparation of test logs, the analysis of test results, and the preparation of the final test report. Conducts Test Schedule Status Review (TSSR) meetings and provides recommendations based on test results in support of the Deployment Readiness Review (DRR) Executive Committee (EXCoM) process. ACT-223 may utilize contractor support where needed to meet these responsibilities.

ATR-130	The OASIS Associate Program Manager for Requirements (APMR) provides test requirements for and reviews the OASIS TEMP, supports test plan development, reviews test plans and procedures, and provides personnel for conducting and/or monitoring the conduct of OT&E, and OT&E Shakedown tests. Is responsible for: coordinating OT&E Shakedown test requirements; providing and reviewing requirements, plans, and procedures for, and monitoring the conduct of Field Shakedown; and providing deployment recommendation based on OT&E Shakedown results in support of the DRR.
ASD-XXX	The OASIS Associate Program Manager for System Engineering (APMSE) reviews the OASIS TEMP and provides the NAS-SS-1000 System Specification requirements for inclusion in the OASIS TEMP VRTM.
AOS-540	Responsible for the development and preparation of the OASIS OT&E Shakedown Test Plan, OASIS OT&E Shakedown Test Procedures, OASIS Maintenance Handbook, and the conduct of OT&E Shakedown testing.
OASIS Contractor	Conducts factory and SAT testing. Provides test support as requested. Resolves deficiencies related to testing.
Regions	Supports activities described in the FSAS OASIS Program Implementation Plan which lead to site acceptance and field shakedown testing.
TPRC	Responsible for approving TEMPs and their revisions, and resolving TIE issues that can not be resolved at lower levels of management.
FAA Test Team	The group of FAA representatives that are designated for OASIS testing. This team may include contractor support. Details will be added in a revision to the TEMP.
OT&E Test Team	A subset group of the FAA Test Team concerned with OT&E testing. This team may include contractor support. Details will be added in a revision to the TEMP.

9.3.2 Contractor Test Organization

TBS (ACT-223 30 days after contract award)

9.4 T&E Field Support Requirements

The OASIS contract will require identification and documentation of all required support and test equipment in the Logistic Support Analysis Record (LSAR) in accordance with the DD Form 1949-3. Support and test equipment requirements will be satisfied by items currently in the Government inventory. (Ref: ILSP, dtd 3/95)

9.4.1 Personnel Requirements

At regional level, AXX-400 office will coordinate regional and site requirements. The regional associate program manager (RAPM) is expected to be a key player in supporting the project test program at each site. (Ref: TEMP, dtd 7/93)

9.4.2 Test Equipment Requirements

Site test equipment will consist of common test equipment currently in the Government inventory, such as, DVMs, load meters, network and protocol analyzers, etc. (Ref: draft ILSP, dtd 3/95)

9.4.3 System Access

TBS (AUA-400/ACT-223/AOS-540 will provide 60 days after contract award)

9.4.4 Space Requirements

TBS (AUA-400/ACT-223/AOS-540 will provide 60 days after contract award)

9.5 T&E Program Status

The APMT will hold regular Test Schedule Status Review (TSSR) meetings, at an interval appropriate for the testing load. Test schedule coordination and maintenance will be accomplished by ACT-223, and will be synchronized with the overall OASIS program schedule. (Ref: TEMP)

9.5.1 Test Results Summary

The APMT will provide the Program Manager with Quick Look Reports (QLR) following major test events, and an OASIS System Final Test Report. AOS-540 will also provide an OT&E Shakedown QLR. (Ref: TEMP, dtd 7/93)

9.5.2 Outstanding Program Trouble Reports (PTR)

TBS (ACT-223 will provide 10 days post OT&E completion)

9.5.3 Discrepancy Correction Process

AOS-540 functions as the national engineering field support group responsible for maintaining the baseline configuration of all maintenance, operational, and support software. Discrepancies will be identified as Program Trouble Reports (PTR) and forwarded to AOS-540. AOS-540, in coordination with the originating facility, will correct the discrepancy and implement the change in a follow-on software version.

9.6-9.19 Reserved

9.20 Status Assessment

Much of the information in this section is based on a TEMP that requires updating. An updated TEMP, consistent with the rescope FSAS OASIS Program and current acquisition strategy is required prior to the TSARC/ARC KDP2/3. This section will be updated when the revised TEMP becomes available.

SECTION 10

SYSTEM SUPPORT

10.1 System Support Concept

The OASIS hardware maintenance concept employs the principle of failure criticality. This means that failure combinations which could lead to loss of OASIS functionality must be corrected first. Criticality of individual elements associated with automatic reconfiguration will determine the maintenance actions. Procedures for calling out maintenance technicians are outlined in the automation specialist procedures manual, or developed locally. Software maintenance and configuration management will be the responsibility of AOS-500. (Ref: Draft SOW, dtd 4/94; ILSP, dtd 3/95)

10.1.1 Hardware

A two-level repair concept, site-level, and depot-level, will be used for OASIS, as follows:

1. Site-level maintenance consisting of replacing LRU's by AF site technician personnel. If AF technician maintenance training is delayed, the program will exercise a contractual option to provide one year of contractor field maintenance. (Re: Implementation Meeting between, Barbara Baltz, APML, and Ed Cisneros, APMNI, 9/12/95).

2. Depot level repair of LRU's will be managed by the FAA Logistic Center. The site will ship LRU's to the depot for exchange and repair (E&R) procedures. The LRUs will be repaired under an FAALC contract and will then be returned to depot stock. (OASIS Implementation Meeting between Barbara Baltz, APML, and Ed Cisneros, APMNI, 9/5/95)

10.1.2 Software

A central software maintenance concept will be used for OASIS. AOS-540 functions as the national engineering field support group responsible for maintaining the baseline configuration of all maintenance, operational, and support software. Discrepancies will be identified as Problem Trouble Reports (PTR) and forwarded to AOS-540. AOS-540, in coordination with the originating facility, will correct the discrepancy and implement the change in a follow-on software version. Paragraph 9.5.3 also addresses this issue.

10.2 Special Support Facilities

10.2.1 Mike Monroney Aeronautical Center

10.2.1.1 Restoration Response Level

The maintenance concept shall be the central driving concept for maintenance planning. FAA requirements deem it necessary to have restoration provided immediately by on site Airways Facilities personnel during the administrative week and a two hour response at other times. (Ref: Draft SOW, dtd 4/94)

10.2.1.2 Field Level Maintenance

None Required

10.2.1.3 Depot Level Maintenance

The FAALC will be the point of contact for the field to acquire repair replacement parts. Depot level support will be provided as directed by the FAA. (Ref: Draft SOW, dtd 4/94)

10.2.1.4 Engineering Support

The contractor shall provide OASIS services which include all activities necessary to upgrade the OASIS software to be consistent with the FSAS software build in operation at the time of Operational Test & Evaluation (OT&E) and any other technical services not covered elsewhere. (Ref: Draft SOW, dtd 4/94)

10.2.2 FAA Technical Center

10.2.2.1 Restoration Response Level

TBS. AOS-540 will provide related information 60 days after contract award.

10.2.2.2 Field Level Maintenance

None Required

10.2.2.3 Depot Level Maintenance

None Required

10.2.2.4 Engineering Support

The National Data Communications Systems Engineering Division, AOS-500, will provide second level engineering support for the FSAS OASIS system hardware, software and firmware. AOS-500 has established that following requirements must be met prior to deployment of the system (some allowances may be necessary for the COTS and NDI portions of the system):

1. An independent, fully functional program support facility (PSF) will be located at AOS-500. The PSF will be provided by the contractor, and will include all appropriate tools and documentation required to maintain and update the OASIS software, firmware and system documentation. The PSF will be funded through F&E by the program office, via a contract line item.
2. All of the equipment, support software and firmware documentation required for the development, maintenance, testing, analysis and debugging of all of the system functional software programs including the following:
 - a. Preliminary Design Document;
 - b. Software Design Document (SDD);
 - c. Computer Program Functional Specification (CPFS);
 - d. Software Interface Control Document (SICD);

- e. Users Manual;
 - f. Data Base Table Design Specification (DBTDS);
 - g. Software source code and listings, program editor, assembler, compiler, linkage editor and all developmental tools and all of the supporting documents utilized by the manufacturer to allow for building, modifying, updating, and execution of software programs; the items will be delivered on the magnetic media upon which they were developed;
3. Contractor developed technical instruction book will be in full compliance with FAA-D-2494B, Technical Instruction Book Manuscript: Electronic, Electrical, and Mechanical Manuscript and Production of Books.
 4. Firmware support manual in full compliance with DOD-STD 2177A, paragraph 4.6.4 and II-MCCR-80022A; a level of detail shall be provided which describes the automated downloading capabilities of the programmable devices in the OASIS.
 5. The contractor shall maintain documents in accordance with FAA Configuration Management standards and provide all documents to AOS-500 on magnetic media utilizing either 3.5" double sided/ high density (2.0 mb) microdiskettes, eight (8) millimeter data cartridges (2.3 gigabytes) or CDROM.
 6. The contractor will maintain documents on magnetic media utilizing Microsoft Word (latest version) and Interleaf version 4/5 or latest version for graphics.
 7. One year of transition engineering support, which shall be funded by the program office and which will provide contractor software maintenance support at the FAATC under the direction of AOS-500. This support shall commence at the completion of Shakedown testing.
 8. Three sets of all documents which will comprise the operational baseline, excluding the OASIS Maintenance Handbook, shall be provide by the program office to AOS-500 prior to transfer of Configuration Management responsibilities as described in FAA Order 1800.8F.
 9. Software license and proprietary data rights.
 10. H/W and S/W training is in accordance with FAA-STD-28B. The H/W training will be to the LRU/SRU level of OASIS and will allow the student, at the completion of the training, to have the capability to perform troubleshooting of each LRU to a failed SRU. The S/W training will be to the configuration item level (module).

10.2.3 Other Special Support Facilities

None Required

10.3 Material Support

10.3.1 Project Material

A complement of site spares will be issued to each site. These items will be identified by the contractor one year after contract award. Contractor depot level support (CDLS) will be included in the OASIS contract. This will require the contractor to provide both exchange and repair (E&R) and expendable items. Sites will contact the FAALC for disposition of faulty spares. (Ref: ILSP, dtd 3/95)

10.3.2 Provisioning/Supply Support

Initial provisioning requirements will be developed by the FAALC. The FAALC has the responsibility for maintaining inventory records, the master FAA catalog, and providing an interface with the Federal Cataloging System. The individual item quantity requirements are predicated on operational considerations, equipment redundancy, reliability factors derived from the approved contractor design, and the results of the logistics support analysis. Line replaceable units (LRU) and printed circuit boards (PCB) will not be repaired on-site.

The OASIS contractor will be required to identify and document all required support and test equipment in accordance with the DD Form 1949-3. This will include standard and special test equipment. Support and test equipment will be identified for site maintenance, and software support. Requirements for special support and test equipment will be justified. Support and test equipment requirements shall be satisfied by items currently in the Government inventory, whenever possible. When not possible the program office will provide items which will be funded out the F&E Budget.

10.3.3 Packaging, Handling, Transportation, and Storage

The OASIS contract will require spare parts to be preserved and packaged Level A and Level C in accordance with DOD Material Procedures for Development and Application of Packaging Requirements, MIL-STD-2073-1. Components or equipment shipped to the sites will be preserved, packaged and packed in accordance with Standard Practice for Commercial Packaging, ASTM-D-3951.

10.4 Technical Documentation

The OASIS contractor will be required to provide technical documentation in accordance with the SOW and FAA-D-2494B. Commercial off-the-shelf (COTS) documentation may be submitted if it meets the requirements of FAA-D-2494B, Appendix 1. The FAA will validate all technical documentation/book (both hardware and software) prior to approval. The contractor shall provide labor, tools, software, equipment, facilities and any other engineering, technical or administrative support necessary for the FAA to complete the validation.

10.4.1 Hardware Documentation

OASIS documentation will include, engineering drawings, COTS documentation, and contractor developed instruction books/data related to the system design. The instruction books shall be written to the level of detail on the hardware and software to provide a thorough understanding of all system functions. The instruction books shall be arranged as required by paragraph 3.6 of FAA-D-2494B.

If auxiliary equipment is commercial-off-the-shelf (COTS) equipment, commercial format documentation that meets the requirements of FAA-D-2494B, Appendix 1 is sufficient. If auxiliary equipment is contractor developed, the documentation shall conform to the requirements of FAA-D-2494B. (Ref: Draft ILSP, dtd 3/95)

10.4.2 Software Documentation

The contractor will deliver to the government documentation relating to the design, test, quality assurance, delivery, installation, and operation of each computer resource CI and CSCI. Any table showing traceability between requirements, requirements to design, or requirements to test shall be developed using a PC compatible data base utility. The data base files will be delivered to the government.

For FAA-STD-026 categories of software (other than newly developed), the government may approve existing documentation for CDRL deliveries. Approval of existing documentation will only be considered for software which has not been functionally changed and after the contractor has demonstrated that the software performs as

documented. Once these two criteria have been satisfied, approval of existing documentation will be based on the guidelines provided in FAA-STD-026.

Government will validate each technical document book prior to Government approval. The contractor shall provide labor, tools, software, equipment, facilities, and any other engineering, technical, or administrative support necessary to the Government, as may be required, during the validation of the Technical documentation.

(Ref: Draft SOW, dtd 4/94)

10.4.3 Procedural Documentation

Not Required

10.5-10.19 Reserved

10.20 Status Assessment

The only risk for extended support is the probability of a Vendor(s) changing or eliminating their product line: the assessment of this risk is low.

SECTION 11

PROGRAM SCHEDULE INFORMATION

The project schedule is the responsibility of AUA-400 and is revised bi-monthly. The installation schedules, once developed, will be contained in Section 11.2. The installation dates may vary depending upon future contract negotiations.

11.1 NAS Implementation Schedule

The OASIS NAS Implementation schedule is shown below. All "T" dates are given as months after contract award which is now scheduled for June 1996.

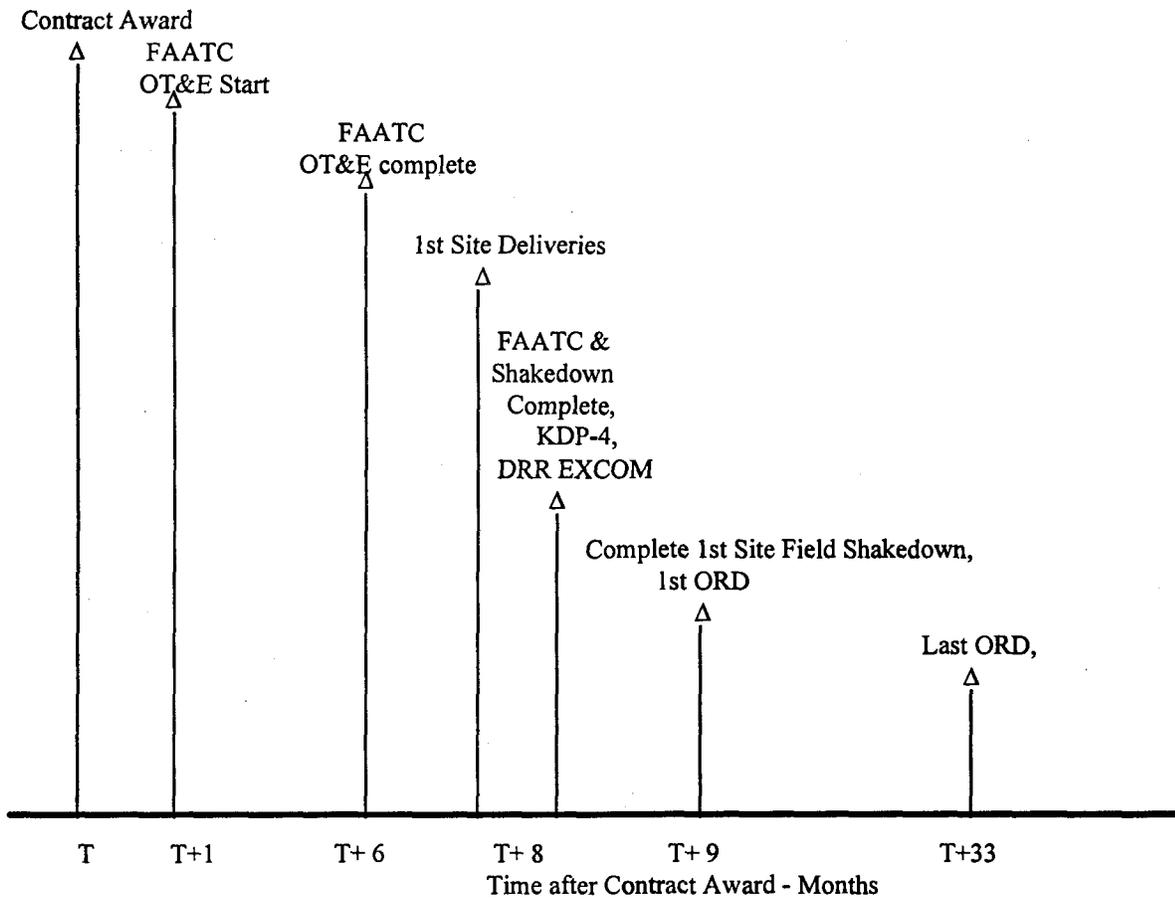


Figure 11-1 OASIS NAS Implementation Schedule

11.2 Deployment Schedule

After FAATC and MMAC deployments, the OASIS will be deployed three sites at a time, beginning with the key sites. Three FAA/contractor teams will be assigned to work with the regions to implement OASIS in the field. Deployment at the operational sites is shown in Table 11-1.

	Team 1		Team 2		Team 3	
	AFSS	Region	AFSS	Region	AFSS	Region
Month 1	Seattle	ANM	Leesburg	AEA	Macon	ASO
Month 2	McMinnville	ANM	Williamsport	AEA	Raleigh	ASO
Month 3	Great Falls	ANM	Elkins	AEA	Louisville	ASO
Month 4	Boise	ANM	Buffalo	AEA	Greenwood	ASO
Month 5	Cedar City	ANM	Islip	AEA	Jackson	ASO
Month 6	Denver	ANM	Millville	AEA	Nashville	ASO
Month 7	Casper	ANM	Altoona	AEA	Anderson	ASO
Month 8	Huron	AGL	Rancho Murieta	AWP	Gainsville	ASO
Month 9	Princeton	AGL	Riverside	AWP	St. Augustine	ASO
Month 10	Grand Forks	AGL	Oakland	AWP	Miami	ASO
Month 11	Green Bay	AGL	Honolulu	AWP	Anniston	ASO
Month 12	Kankakee	AGL	Reno	AWP	San Juan	ASO
Month 13	Lansing	AGL	Hawthorne	AWP	Bangor	AEA
Month 14	Terre Haute	AGL	San Diego	AWP	Bridgeport	AEA
Month 15	Cleveland	AGL	Prescott	AWP	Burlington	AEA
Month 16	Dayton	AGL	St. Louis	ACE	Albuquerque	ASW
Month 17	Kenai	AAL	Columbia	ACE	Fort Worth	ASW
Month 18	Fairbanks	AAL	Columbus	ACE	McAlester	ASW
Month 19	Juneau	AAL	Wichita	ACE	Jonesboro	ASW
Month 20			Fort Dodge	ACE	Conroe	ASW
Month 21					De Ridder	ASW
Month 22					San Angelo	ASW

FSAS OASIS Deployment Schedule
Table 11-1

Deployment to FAATC and MMAC will occur TBS months after contract award.

11.3 Site Implementation Schedule

The Site Implementation schedule will be provided by AUA-420/Contractor 30 days after contract award.

The following is the APMNI's estimate, based on information obtained through several site visits to AFSSs and discussions with OASIS Product Team members. Three schedules are provided. Two for a two step; another for a single step installation. A two step installation is intended for key sites, sites with the most operational workload, Honolulu, and perhaps San Juan. A modified version of a two step installation is required for the key sites because OT&E may be involved, at least for the first site.

Figure 11.3-1 Deployment Schedule - First Site (with OT&E)

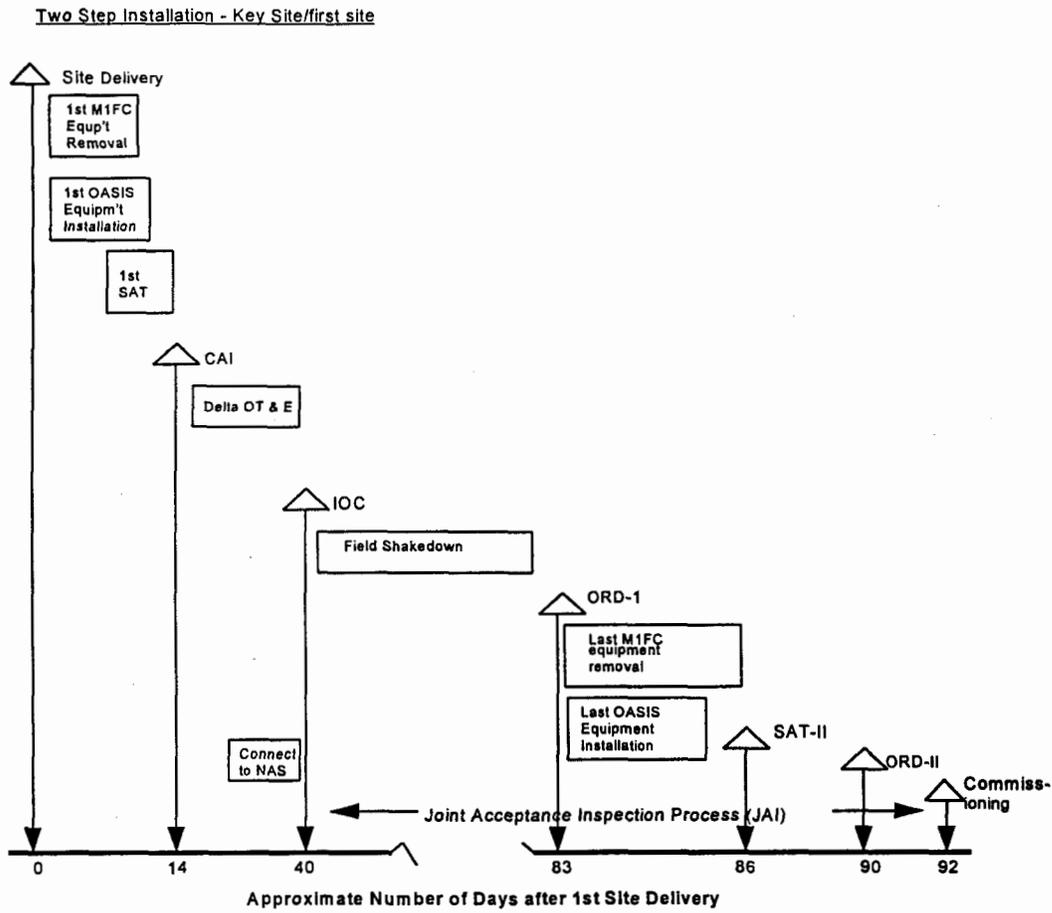


Figure 11.3-2 Deployment Schedule - Key Sites/without OT&E

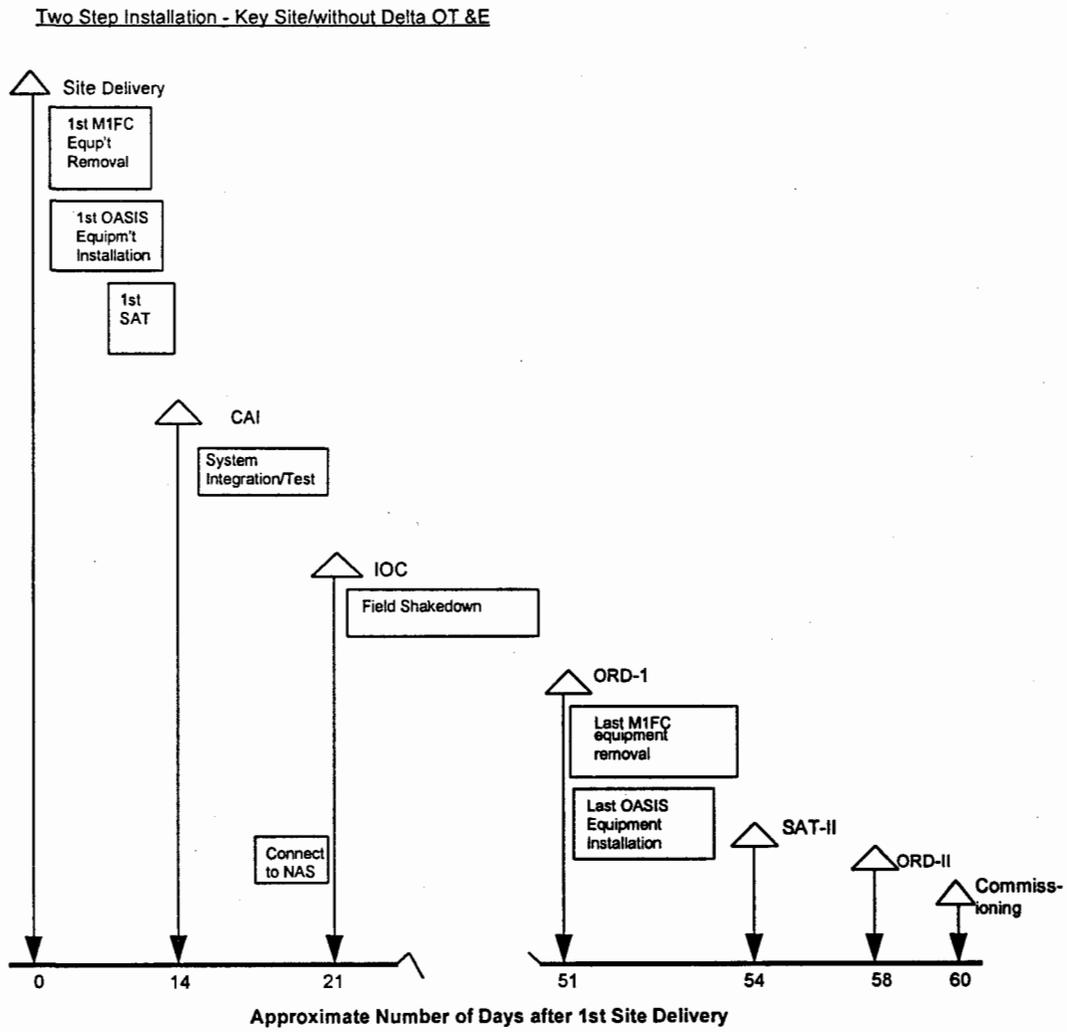
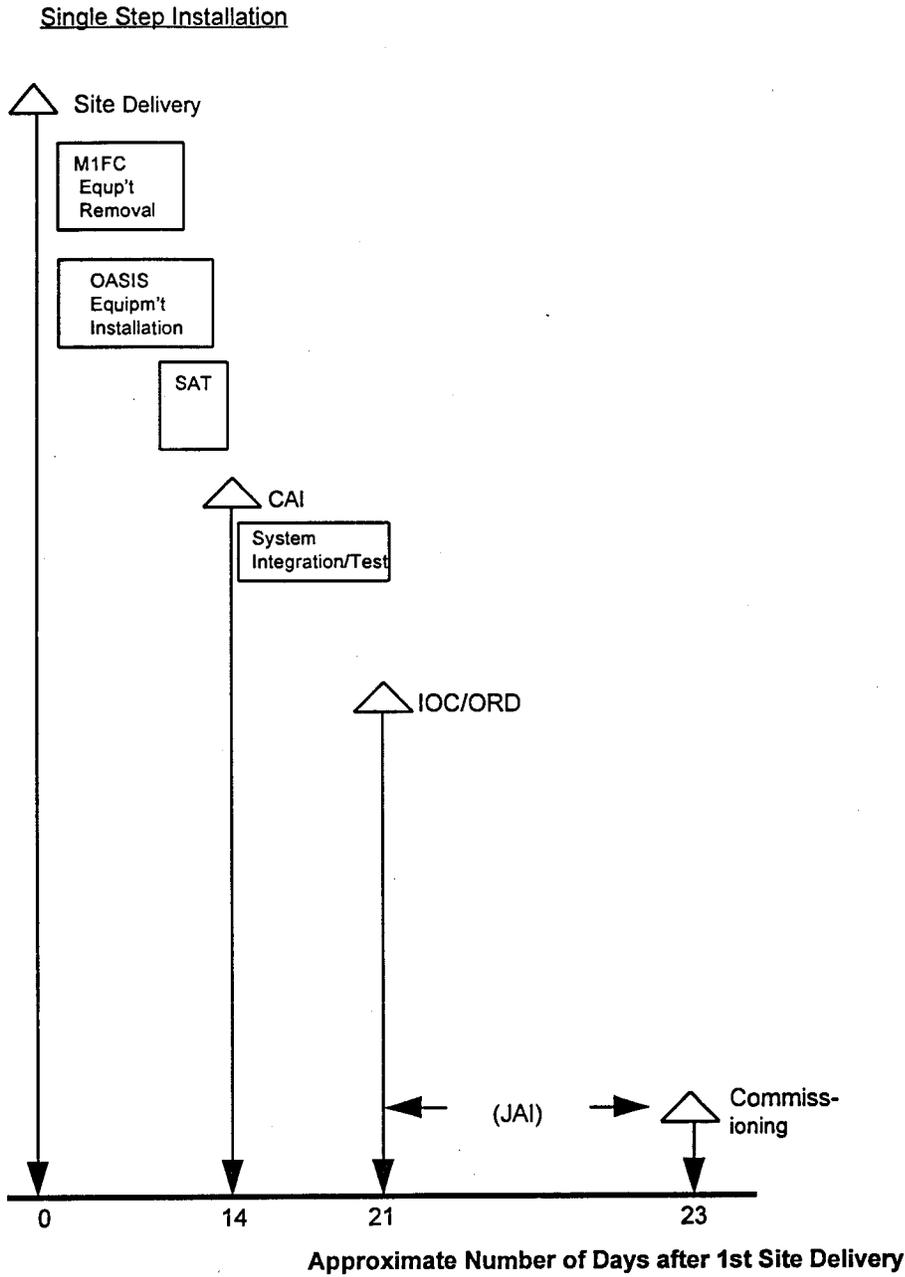


Figure 11.3-3 Deployment Schedule - Other operational Sites



11.4 Schedule Dependencies

OASIS does not depend on other NAS Program Schedules.

11.5-11.19 (Reserved)

11.20 Status Assessment

This section is based on an ILSP that has not been updated to reflect the current program acquisition strategy. Consequently some of the system support information referenced above is subject to change prior to ILSP finalization which will occur before the TSARC/ARC KDP 2/3. The Technical Officer anticipates that only minor changes will be made. There should be no changes to maintenance philosophy or responsibilities.

Initial Schedule Risk Assessment is considered to be Low Risk. However, it will be maintained on the Watch List for the life of the program. The Risk Manager will use the project milestones to review progress in risk mitigation activities and as opportunities for identifying additional risks. (Ref: Revised Draft Risk Management Plan, 10 Mar 95, Para. 4.1.1.4)

SECTION 12

ADMINISTRATION

12.1 Acquisition Program Summary

12.1.1 Market Survey

An OASIS Market survey was conducted to increase the Government's understanding of the state and maturity of COTS/NDI FSS systems available today. This, in turn, initiated a dialogue with industry regarding the reasonableness of the schedule, and of the core requirements identified in the Operational Requirements Document (ORD). Forty-six companies responded to the Commerce Business Daily announcement for this market survey. Briefings were held, followed by site visits. The OASIS Operational Capabilities Test OCT will be limited to those vendors who the Government believes capable of providing a system for test that will meet the core requirements.

The Market Survey process determined that the core requirements could be met. OASIS will be implemented as a turn-key, commissionable system. This system will represent the integration of COTS products into a viable system. Those requirements that fall outside of the core requirements, as defined in the ORD, will be implemented as pre-planned product improvements (P³I). This allows the Government the ability to develop future functional enhancements as the needs arise. (Ref: draft OASIS Acquisition Plan, 8/14/95)

12.1.2 Acquisition Strategy

OASIS is a Level 1 program in accordance with FAA Order 1810.1F.

The OASIS acquisition strategy is oriented toward streamlined procurement, efficient source selection, and rapid system deployment to meet critical and immediate field needs. The goals of the OASIS acquisition are to maximize the use of COTS/NDI hardware and software; to require an open system architecture to support evolutionary enhancements; to award a contract based upon the capability of the systems rather than paper proposals; and to deploy an operationally suitable AFSS system in the shortest possible time. A streamlined acquisition requiring an Operational Capabilities Test (OCT) of the systems of qualified bidders is being used to accomplish these goals.

The Request for Proposal (RFP) may include an Operational Capabilities Demonstration (OCD) Plan, Pre-Production Capabilities Survey (PPCS) Plan, Operational Capabilities Test (OCT) Plan, Core Requirements Review (CRR) structure, Enhancement Test and other related information. The offerors may be required to submit a limited technical proposal and a full business management proposal. Additionally, the offerors may be required to conduct an OCD at their facility to demonstrate compliance with certain core requirements identified in the OCD Plan.

An OCD evaluation team may travel to the offeror's facility to witness the OCD structured in accordance with the OCD Plan in the RFP. An initial compliance assessment may be substituted for the OCD. This initial compliance assessment would evaluate compliance of the vendor's proposed system with the RFP requirements without requiring the actual OCD. The offeror may also be required to demonstrate portability of the software to multiple hardware platforms.

The FAA will notify those vendors who successfully complete OCD (if required) and PPCS and cost proposals will be solicited. An evaluation of the software capabilities of the offerors will be made in accordance with Software Engineering Institute standards as defined in the SCEP. In addition, the FAA will conduct an evaluation of the offeror's past performance. The FAA will make a competitive range determination based on the OCD (if conducted), PPCS, SCEP, limited technical proposals, business management proposals, and cost proposals.

A selected set of vendors will be requested to provide a system for operational capabilities testing. The OCT will be conducted in accordance with the OCT plan provided in response to the RFP. The OCT will test the systems against the core requirements. The goal is to minimize the Government's risk.

An adaptation/enhancement test may be conducted to evaluate the offerors capability of modifying his system. The ability of the offerors to plan and implement t modifications will be evaluated. The ability to meet first site requirements will be evaluated during OCT. The offerors will orally address their approach to meeting each of the first site requirements not otherwise demonstrated by their system. These presentations may be video taped for evaluation purposes. Following these activities, a request for best and final offers will be made.

The benefits of this acquisition approach are to allow for evaluation of the offeror's systems and capabilities, not just the offeror's ability to prepare a written proposal; to eliminate high risk vendors; to ensure selection of an offeror capable of succeeding; and to ensure fielding of an operationally suitable system in a timely fashion.

(Ref: draft OASIS Acquisition Plan, 8/14/95)

Figure 12.1.2-1

OASIS Delivery Schedule (TBS before RFP release)

12.2 Contracting Information

Contract information will be provided by ASU-350. (Ref: draft OASIS Acquisition Plan, 8/14/95)

12.2.1 Prime Contract

Contract information will be provided by ASU-350. (Ref: draft OASIS Acquisition Plan, 8/14/95)

12.2.2 Service Contracts

A service contract, Contractor Depot Level Maintenance (CDLS) will be awarded after the production contract is awarded.

12.2.3 Program Support Contracts

The Technical Assistance Contractor is TRW.

12.2.4 Regional Contracting

Regional contracts are supported by the National Implementation Support Contractor (NISC).

12.2.5 GFP/GFI/GFE Obligations

TBS after contract award. The draft RFP will provide an early identification of possible obligations.

12.3 Program Management

This section is expanded over what is expected for a normal PIP to serve as the FSAS OASIS Program Management Plan. The Integrated Product Team Leader, Tower and Flight Service Stations, AUA-400, has first line responsibility for OASIS.

12.3.1 Program Management Charter

12.3.1.1 Responsibilities:

12.3.1.1.1 Integrated Product Team (IPT) Leader, AUA-400

The IPT Leader directs and manages all FAA activities for the acquisition and implementation of assigned FSS programs, including OASIS. The IPT Leader is responsible for the design, development, integrated logistics support, test and evaluation, full scale production, and installation of the OASIS. The IPT Leader, or his designee, serves as the FAA spokesperson for all OASIS activities within and external to FAA, including Congress, other Government agencies, contractors, the aviation community, and the media.

12.3.1.1.2 Deputy IPT Leader, AUA-400

The Deputy IPT Leader assists the IPT Leader in the direction and management of the FSAS OASIS Program and assumes full program responsibilities in the IPT Leader's absence.

12.3.1.1.3 Business Manager, AUA-400

The Business Manager for The Business Manager for Tower and Flight Service Stations is the principal advisor to the IPTL, DPM, and MMT, on business/financial management matters. The Business Manager is responsible for providing executive control and direction in all areas of financial planning, business management, budget execution, and program coordination and scheduling necessary to accomplish the implementation of OASIS.

12.3.1.1.4 Product Team Lead, AUA-420

The OASIS Product Team Lead serves as a coach to the Integrated Product Team, providing guidance and resolving issues raised among the OASIS Product Team. Leads the Product Team to the attainment of Project Objectives.

12.3.1.1.5 Associate Program Manager for Contracting, ASU-350

The APMC, ASU-350, serves as the Contracting Officer, and has sole responsibility to solicit, negotiate, award, and administer the OASIS contracts for the IPTL. The APMC ensures that no contract or change to a contract is signed unless requirements of law, executive orders, regulations, and other applicable procedures have been met. The APMC determines, in conjunction with the IPTL, the appropriate contract type, and responds to requests under the Freedom of Information Act related to contracts or solicitations.

12.3.1.1.6 Technical Officer and Project Engineer, AUA-420

The Technical Officer and APMEs serve as Contracting Officer's Technical Representatives (COTRs). In this capacity they are responsible for all technical aspects of design, production, testing delivery, and management of the installation of OASIS. These individuals ensure the quality and technical integrity of the program.

12.3.1.1.7 Associate Program Manager for Operational Requirements (APMR), ATR-130

The APMR, ATR-130, supports the Program Office by providing appropriate input up to the implementation phase to ensure that Air Traffic Service operational requirements are fully understood and satisfied. These operational requirements include air traffic training development and operational test and evaluation. The APMR will coordinate with regional Air Traffic organizations to support the IPTL, including securing support of field personnel.

12.3.1.1.8 Associate Program Manager for System Engineering (APMSE), ASE-130

The APMSE, ASE-130, defines and coordinates system issues associated with the functional, performance, and interface requirements allocated to OASIS. This includes acting as the Systems Engineering and Development (ASD) focal point for system-level requirements analysis, definition analysis and definition of alternate means of satisfying requirements, the allocation of system-level requirement to NAS subsystems, and the coordination of support provided the IPTL from the ASD organizations. The APMSE ensures that the NAS documentation accurately reflects the requirements so that program specifications are traceable. The APMSE also ensures that the mission need analysis supporting the MNS is updated before each KDP.

12.3.1.1.9 Associate Program Manager for NAS Implementation (APMNI), ANS-210

The APMNI, ANS-210, prepares and maintains the Program Implementation Plan, co-chairs the Implementation Management Team, and facilitates the identification and tracking of implementation issues. The APMNI serves as the Headquarters focal point for implementation issues.

12.3.1.1.10 Associate Program Manager for Logistics (APML), ALM-800

The APML, ALM-800, is responsible for developing the NAS Integrated Logistics Support Plan (ILSP) for the IPTL, advising the IPTL in all areas of National Airspace Integrated Logistics Support (NAILS), establishing and chairing the NAILS Management Team (NAILSMT), providing tradeoffs and life cycle costing of NAILS and ensuring coordination of NAILS activities among logistics element managers. The APML represents the various NAILS elements (maintenance, engineering field support, training, etc.) to the matrix team, and works with all NAILS element managers to develop total supportability requirements.

12.3.1.1.11 Associate Program Manager for Legal (APMGC), AGC-510

The APMGC, AGC-510, provides legal service to the IPTL, advises on legal issues, and provides inputs into contractual documents to ensure clarity and proper legal defense. The APMGC assesses legal risk and advises on the legal ramifications of alternative courses of action to accomplish OASIS program objectives. The APMGC represents the FAA on legal issues with contractors and before various judicial tribunals.

12.3.1.1.12 Associate Program Manager for Test (APMT), ACT-223

The APMT, ACT-223, is responsible for preparation of the Test and Evaluation Master Plan (TEMP) and has overall test responsibilities through first site implementation.

12.3.1.1.13 Associate Program Manager for Operational Support (APMS), ACS-540

The APMS, AOS-540, is responsible for development and coordination on those issues pertaining to hardware and software support of OASIS.

12.3.1.1.14 Quality Reliability Officer (QRO), ASU-400

A QRO will be designated by ASU-400. The QRO function is one of quality assurance at the OASIS manufacturing plant, once a contractor is selected.

12.3.1.1.15 Regional Associate Program Managers (RAPMs), AXX-42X and AXX-51X

Within each region the Airway Facilities and the Air Traffic Division Managers will designate a Regional Associate Program Manager. These two individuals will serve as the regional focal point for OASIS within their respective organizations.

12.3.1.1.16 Technical On-site Representatives (TORs)

A TOR will be appointed by each regional Airway Facilities Division Manager to coordinate with the Regional Airway Facilities APM and the OASIS contractor on all aspects of installation and testing, through commissioning.

12.3.1.2 Program Plans and Reports

12.3.1.2.1 Contract Plans and Reports.

The OASIS contractor will submit plans and reports required by the Contract Data Requirements List (CDRL).

12.3.1.2.2 FAA Plans and Reports.

The OASIS program office or designee will submit the following plans and reports.

12.3.1.2.2.1 OASIS Test and Evaluation Master Plan (TEMP)

This document will be furnished by the test director.

12.3.1.2.2.3 OT&E/Shakedown Test Plan and Procedure

These documents will be developed by AOS-540. The OT&E/Shakedown Test, Procedure document will be furnished by AOS-540 to the regional APM's.

12.3.1.2.2.4 Field Shakedown Test and Evaluation (ST&E) Test Plan and Procedures

These documents will be developed by the responsible region for each site. The procedure document may be developed from the OT&E/Shakedown Test Procedure furnished by AOS-540.

12.3.1.2.2.5 JAI Report

This document will be prepared by the JAI board.

12.3.1.3 Governing Documents

The OASIS Project is governed by the following key documents.

- a. NAS-SR-1000, NAS System Plan;
- b. NAS-DD-1000, NAS Level I Design Document;
- c. NAS-SS-1000, Volume I (Appendix III) NAS Maintenance Support Requirements;
- d. NAS-SS-1000, Volume II, Air Traffic Control Element.
- e. NAS-SS-1000, Volume V, NAS System Specification,
Functional and Performance Requirements for the NAS

- Maintenance and Operations Support Element;
- f. NAS-MD-790A, Remote Maintenance Monitoring System Interface Control Document.
- g. NAS MD 792, Operational Requirements for the Remote Maintenance Monitoring Subsystem (RMMS);
- h. NAS-MD-793, Remote Maintenance Monitoring System Functional Requirements for the Remote Monitoring Subsystem (RMS).

12.3.2 Program Management Teams

The Office of Tower/Flight Service Station, AUA-400 Integrated Product Team (IPT) is comprised of two sub-teams, the FSAS (OASIS) Product Team and the TCCC Product Team.

12.3.2.1 FSAS (OASIS) Product Team

The FSAS (OASIS) Product Team is established by the Associate Administrator for Research and Acquisition ARA-1 and is responsible for planning and accomplishment of the OASIS mission described in paragraph 2.1. The membership of the FSAS (OASIS) Product Team is shown below in Table 12.3.2-1..

**Table 12.3.2-1
FSAS (OASIS) Product Team**

PROGRAM AREA/OFFICE	INDIVIDUAL	TELEPHONE
Acting Integrated Product Team Leader, AUA-400	Robert S. Voss	(202) 376-6506
Deputy IPT Leader, AUA-400	Vacant	
Business Manager, AUA-400	Jack Walters	(202) 376-6539
Product Lead, AUA-420	Rudolph Watkins	202-376-6282
Contracting Officer, ASU-350	Pat Green	202-376-6289
Technical Officer, AUA-420	John Farr	202-376-6540
APME, AUA-420	Ed Mittelstedt	202-376-6543
APME, AUA-420	Allen L. Dames	202-376-6544
APMR, ATR-130	Ross Skiles	202-267-9170
APMSE, ASE-130	Craig Goff	202-358-5332
APMNI, ANS-210/NISC	Ed Cisneros	202-651-3025
APML, ALM-500	Peggy Ingerski	202-267-3630
APMT, ACT-223	Jim McCullough	609-485-4112

12.3.3 Program Status Reporting

To maintain effective and responsible control of overall progress, frequent reviews, conferences, and working sessions will be held between FAA management, the IPT Leader, and the Product Team, TORs, and the contractor. Participation in these conferences and working groups by contractor personnel and/or representatives of various other FAA offices is at the discretion of the IPT Leader. Routine status reporting will be required as indicated in the following subsections. (Ref: FAA-STD-036B, dtd 5/94)

12.3.3.1 Major Acquisition Review (MAR)

The IPT Leader will present current and complete information on the status of OASIS to the Administrator, key FAA managers, and representatives from the TSARC at major acquisition reviews. These MAR's will be conducted on a quarterly basis.

12.3.3.2 IPT Leader System-Level Review (IPTSL)

The Product Lead will present current status information on OASIS to AUA-1 on a monthly basis.

12.3.3.3 Product Team Meetings

The Product Leader conducts bi-weekly meetings with OASIS headquarters and regional representatives.

12.3.3.4 Program Conferences

The Product Lead will schedule conferences and/or workshops as necessary. These meetings will be attended by OASIS headquarters and regional representatives. These meetings will provide a forum to discuss and resolve program issues of special interest to the Regions and to the OASIS program in general.

12.3.3.5 Test Schedule and Status Review (TSSR) Meetings

The OASIS test director will conduct TSSR meetings for the purpose of reviewing the test schedule and test status, and to identify and resolve problems related to testing. The meetings will be held at the FAA Technical Center.

12.3.3.6 NAILSMT Meetings

The NAILSMT shall meet quarterly, or as deemed necessary by the APML to review and assess NAILS program progress. The meetings shall be held at times and places mutually agreeable to the APML and the contractor.

12.3.3.7 Training Review Meetings

These meetings will be held as required to review contractor training performance and contractor submissions (e.g., contract training plan, training materials). Meetings will be divided between the contractor's facility, Oklahoma City, OK, and Washington, DC, and will last approximately 2 days each. FAA representatives or designees will attend.

12.3.3.8 Regional Status Reporting

Regional status report regarding technical progress and cost performance will be required on a monthly basis for a period beginning 30 days after regional receipt of the initial OASIS Project Authorization through OASIS commissioning (JAI) at the last regional site. Regional status reporting of fund obligations will be required on a quarterly basis during the same period.

12.3.3.9 Deployment Readiness Review

The DRR process will be utilized to assure that all operational requirements are being met before the system becomes operational.

12.3.4 Exception Management

Implementation and transition issues will be resolved through the IPT Product Management Team and Transition Information Exchange (TIE) process. (Ref: FAA Standard 036B, dtd 5/94)

12.4 Quality Assurance

The IPT Leader has put into place numerous checks for the program's quality through extensive testing activities and program reviews documented in the SOW. (Ref: Draft PMP, dtd 7/94)

12.4.1 Program Acceptance Criteria

Reliability, Maintainability and Quality Assurance requirements have been established but are not disclosed herein because the information is Source Selection Sensitive at the time of this writing. This criteria will be included in this document after Contract Award.

The SOW has embraced all aspects of FAA 1810.4B, which describes test policy. The Contractor must pass extensive testing of the OASIS at the FAA Technical Center and at the first site. (Ref: TEMP, dtd 3/94)

12.4.2 Risk Management

The TIE Summary Report is reviewed by the OASIS Product Management Team on a bi-weekly basis to minimize risk. The IPT Leader has also employed the Procurement Readiness Review (PRR). (Ref: FAA Standard 036B, dtd 5/94)

12.5 Configuration Management (CM)

Configuration Management (CM) transfer of the system from the contractor to AUA-400 will be in accordance with the contract. Transfer of responsibilities between FAA offices during system implementation is directed by Order 1810.4A, which directs hand-off to test agencies at the FAA Technical Center Order 1320.48B establishes responsibilities for system support and baseline configuration, and Order 6030.45 directs system transfer during site shakedown and system commissioning. Prior to each hand-off, AUA-400 will notify the old and new office of primary interest (OPI) by letter, with copies to other offices whose activities are affected. (Ref: Draft SOW, dtd 4/94)

Formal hand-off of configuration management from the contractor to FAA will occur after all software modifications associated with the FSAS OASIS Planned Product Improvement (PPI) are completed. This hand off is estimated to occur after deployment of all OASIS equipment.

Transfer of custody of system equipment and system documentation from the project office to each region and then to each sector will formally occur at the conclusion of the JAI in accordance with the procedures established by Order 6030.45, Chapter 4.

12.5.1 CM Responsibilities

The contractor will establish, implement, and maintain a configuration management program in accordance with FAA-STD-021A and MIL-STD-973 as tailored by this SOW for all OASIS hardware and software developed under the contract. The contractor will specify a single authority who will serve as a focal point for all communication of configuration management (CM) related issues. The contractor will document CM responsibilities and procedures in a single, integrated Configuration Management Plan (CMP), developed in accordance with MIL-STD-973, paragraph 5.2 and Appendix A.

The contractor will establish and maintain a baseline management process to freeze the configuration identification in conjunction with the project's reviews and audits and to control changes to those baselines. This control will include hardware, software, firmware, databases, and documentation. (Ref: ILSP, dtd 3/94)

12.5.2 Configuration Control Board (CCB)

The contractor will establish a Change Control Board (CCB) and develop CCB procedures to adequately establish baselines and support baseline management. Following government approval, the contractor will maintain traceability and currency of the baselines and consistency between program documentation for hardware, software, firmware, databases, and their respective versions. The contractor will comply with the requirements of FAA-STD-021A and MIL-STD-973 in proposing and accomplishing changes to each approved specification/ baseline.

Changes to baselines shall be done in accordance with MIL-STD-973, paragraph 5.4.2.1 and Appendices C, D and F and FAA-STD-005D. National Airspace Change Proposals (NCPs) will be submitted when changes to baseline configuration identifications are proposed by the contractor/ government. Requests for Deviations/ Waivers (RDWs) will be submitted as necessary in accordance with MIL-STD-973. (Ref: ILSP, dtd 3/94)

12.5.3 CM Milestones

CM milestones are established as the allocated, functional and product baselines.

The allocated baseline will be the initially approved documentation describing the functional, interpretability, and interface characteristics of OASIS, approximately 60 days after contract award.

The functional baseline will be the initially approved document describing the functional interoperability and interface characteristics and the verification required to demonstrate specific characteristics. This verification will be accomplished upon satisfactory approval of the FCA/ PCA and OT&E.

The product baseline is the initially approved document describing all the necessary functional and physical characteristics of the Configuration Item (CI) and the selected functional and physical characteristics designated for production acceptance testing and tests necessary for support of the CI. (Ref: ILSP, dtd 3/94)

12.5.4 Configuration Items

The contractor will select configuration items in accordance with MIL-STD-973, paragraph 5.3. The configuration identification will be documented in the allocated, functional and product baselines, developed and maintained IAW MIL-STD-973, paragraph 5.3.4. (Ref: ILSP, dtd 3/94)

Further clarification of the CIs will be provided by the contractor approximately 60 days after contract award.

12.6-12.19 (Reserved)

12.20 Status Assessment

The OASIS program administration has the necessary controls and milestones for normal program development. Risk is minimal.

SECTION 13

IMPLEMENTATION (REQUIREMENTS)

13.1 Implementation Support Organizations

These organizations and their specific responsibilities are identified in the following sub-sections. (Ref: Draft PMP, dtd 7/94)

13.1.1 Associate Program Manager for NAS implementation (APMNI)

The APMNI is responsible for providing FAA Regions and field sites with accurate and current OASIS program information and for providing Headquarters focus on field-identified implementation issues. Specifically the APMNI:

- develops, coordinates, and maintains this Program Implementation Plan,
 - co-chairs the Implementation Management Team (described in paragraph 13.1.2),
 - coordinates and tracks implementation and transition issues through the Transition Information Exchange (TIE) process,
 - reviews contractor-developed implementation plans, procedures, and reports, and
 - reviews the status of program exit criteria related to implementation.
- (Ref: FAA-STD-036B, dtd 5/94, pg. 3)

13.1.2 Implementation Management Team (IMT)

The IMT is established as a subteam to the IPT. The purpose of the IMT is to effect development, coordination, and maintenance of the OASIS PIP and support resolution of program implementation and transition issues through the Transition Information Exchange (TIE) process. Headquarters representatives assigned to the IMT are identified in Table 13.1.2-1. All FSAS OASIS RAPMs are members of the IMT. (Ref: FAA-STD-036B, dtd 5/94)

**Table 13.1.2-1
Implementation Management Team**

NAME	OFFICE	POSITION	TELEPHONE
Rudy Watkins	AUA-420	Product Team Lead, Co-chairperson	202-376-6282
Ed Cisneros	ANS-210/NISC	APMNI, Co-chairperson	202-651-3025
John Farr	AUA-420	Technical Officer	202-376-6540
Peggy Ingerski	ALM-500	AF Representative	202-267-3630
Ross Skiles	ATR-130	AT Representative	202-267-9170
Dennis LaMagna	AOS-100	AOS Representative	202-267-7857
Jim McCullough	ACT-223	APMT	609-485-4112
see Table 13.1.3-1	AXX-42X	RAPMs	see Table 13.1.3-1
see Table 13.1.3-1	AXX-510	RAPMs	see Table 13.1.3-1
see Table 13.1.4-1	various site offices	TORs	see Table 13.1.4-1

13.1.3 Regional Associate Program Manager (RAPM)

The RAPMs, see Table 13.1.3-1, serve as focal points in their regions for implementation activities. As the IPTL's regional representatives, the RAPMs work closely with both the APMNI and the APME. RAPMs are designated by the regional AF and AT Division Managers, and are accountable to those division managers and the IPTL, for ensuring that OASIS is implemented in an orderly manner. The RAPM's responsibilities include:
(Ref: FAA-STD-036B, dtd 5/94)

1. Coordinate/manage regional deployment activities;
2. Provide guidance and direction to FAA site personnel;
3. Provide periodic technical reports describing deployment progress at each site to the TO/APME.
4. Coordinate with AT regional and site representatives per established regional policy, for test activities which would interfere with ATC operations;
5. Notify the IPTL of JAI readiness and conduct integration of the OASIS into the NAS and ensuring that the AF sector manager, or appropriate representative, is present;
6. Review and approve the FAA Site Implementation Plan.

**TABLE 13.1.3-1
REGIONAL ASSOCIATE PROGRAM MANAGERS**

REGION	INDIVIDUAL	TELEPHONE
AAL-420	Jerry Jensen	(907) 271-3840
AAL-511	Torri Clark	(907) 271-2765
AEA-421	Nayla Fouad	(718) 553-1176
AEA-510	Joe Figliuolo	(718) 553-1223
ACE-424	Tuyen Kieu	(816) 426-5676
ACE-512	Tom Klocek	(816) 426-3400
AGL-421	Joe Szanati	(708) 294-7591
AGL-510	Ron Shultz	(708) 294-7560
ANE-421	Ed Davis	(617) 273-7351
ANE-510	Tom Killion	(617) 238-7516
ANW-422	Orvie Jensen	(206) 227-2345
ANM-510	Dan Moilanen	(206) 227-2514
ASO-42X	Paul Smith	(404) 305-6289
ASO-510	Ken Berkey	(404) 305 5542
ASW-422	Lynn Welton	(817) 222-4225
ASW-511D	Edward Martinez	(817)-222-5517
AWP-422	John Shea	(310) 297-1079
AWP-510	Jack Maloney	(310) 297-1617
AMP-1A	Evan Swenson	(405) 954-4316

13.1.4 Technical Officer's Representative (TOR)

The TOR, is designated for each site by the appropriate AF division manager and is appointed by the Technical Officer. This position serves as the interface among the contractor, AF sector personnel, the RAPM and the TO/APME. A listing of the TORs is contained in Table 13.1.4-1. The TOR's responsibilities include, but are not limited to, the following:

1. Coordinates site access for the contractor;
2. Provides input to logistics planning activities as they relate to site requirements;
3. Assists contractor during site surveys;
4. Provides assistance in the form of direction and guidance to the contractor to efficiently accomplish site preparation, installation, testing, and evaluation for the OASIS;
5. Witnesses the site preparation, installation, and testing;
6. Participates in shakedown testing and integration of the system;

7. Complete 4500-1, Project Materiel Shipping/Receiving Report, for acceptance of OASIS;
8. Assists in system field testing in accordance with the requirements of the test plans for OASIS;
9. Participates in the JAI;
10. Maintains installation logs and submits installation status reports, based on log entries, to the Technical Officer.

TABLE 13.1.4-1
REGIONAL TECHNICAL ON SITE REPRESENTATIVES
(TORs)

TBS (three months after contract award)

13.1.5 Contract Support

Contractor technical support is provided by TRW to the OASIS Product Lead, AUA-420. The TRW contact is Vaughn Yates, (202) 554-6428.

13.2 Site Implementation Process

The following sub-sections describe the FSAS OASIS implementation requirements and activities associated with each site implementation phase and identifies the transitory requirements needed to accomplish implementation activities. Seven phases of site implementation are described in the following subparagraphs.

13.2.1 Implementation Planning Phase

Implementation planning for FSAS OASIS is initiated by the development of the PIP which identifies all essential elements of implementation information and addresses all applicable phases of implementation: Implementation Planning, Pre-INCO, INCO, System Integration, Field Shakedown, Dual Operations, and Equipment Removal. The implementation planning phase overlaps other implementation phases in that it spans from the initial PIP development through a final PIP update after DRR EXCOM.

Spanning the time prior to equipment installation and extending into the integration and testing of new systems, there are ongoing program implementation planning activities. These activities include, but are not limited to such activities as:

1. review and comment on the initial PIP and each of its updates
2. participation in TIEs and resolution of local and regional implementation discrepancies and issues
3. review and comment on program CDRLs
4. attendance/participation in program reviews, design reviews and other activities which may require the insight and experience of personnel from the field.

13.2.1.1 Implementation Activities

The region and facility will assist the Program Office in determining the best schedule for implementing OASIS. The RAPM will review and approve the FAA produced Site Implementation Plans (SIP). The APMNI will review and approve the contractor prepared SIPs. The RAPMs will ensure that all site preparatory actions have been completed prior to the delivery of OASIS. (Ref: FAA-STD-036B, dtd 5/94)

13.2.1.2 Requirements

The following is required to be accomplished during this phase:

1. PIP with two updates: one 45 days after Contract Award; and one 30 days after DRR EXCOM.
2. Establishment of the IMT upon PIP approval.
3. Establishment of a First Site Implementation Team after KDP 2/3.
4. Establishment of Site Installation Teams during the Pre-INCO Implementation Phase.
5. Contract SOW requiring the contractor to:
 - a. recommend installation strategies for government evaluation.
 - b. conduct site surveys.
 - c. work with regional and sector personnel in determining optimum equipment layouts for each site.
 - d. provide site implementation plans (SIPs). The contractor will prepare individual SIPs that cover those activities needed to implement OASISWSs. The SIP will include interfaces with other national FAA programs, FAA Headquarters requirements, site implementation sequencing, system management capability at contractor facilities, system-level quality assurance and cutover activities, and installation of system management equipment at designated sites.
6. M1FC equipment disposal plan (ALM-800 responsibility)

The following sub-sections address the individual activities required to implement OASIS. Additional dialogue and analysis is required to determine the number of AFSSs that will concurrently participate in SAT, first-site testing, and ORD within a specific FSDPS family configuration. The results of these activities will be made available in the future updates to this PIP. (Ref: Draft SOW, dtd 4/94)

13.2.2 Pre-Installation and Checkout (Pre-INCO) Phase

This phase begins with the conduct of the program site survey and concludes with delivery of program equipment at the site. During this period, all site preparation tasks necessary for installation of equipment are performed.

13.2.2.1 Implementation Activities

The regions must provide the COTR with a local contact (TOR) at each site, who will coordinate the contractor's local activities and physical access. The contractor will provide AUA-420 with any clearance information required for the contractor's installation, survey, and verification team members at least 15 days prior to arrival at the site. AUA-420 will forward the information to the site security officer, who will approve site access clearance prior to the start of the scheduled survey, verification, or installation and will issue any required identification badges to the team members upon arrival. This access requirement includes local electrical subcontractors employed by the contractor to install electrical cables. The facility will provide parking space for contractor vehicles during the survey installation, checkout, and acceptance testing of the OASIS.

Specific Pre-INCO activities are listed in the GSIP which includes the following:

1. Product Team decides upon installation strategy among alternatives offered by contractor.

2. Region/sites participate on site implementation teams.
3. Regional offices order any required TELCO lines at least 6 months prior to installation.
4. Regions/sites support contractor-conducted site survey visits.
5. Regional/site AF and AT training on OASIS.
6. Regions/sites review contractor prepared site installation plans, including facility layouts.
7. Regions/sites ensure Site Preparations are complete as specified in the FAA/Contractors Site Installation Plans.

13.2.2.2 Requirements

The following is required to be accomplished during this phase:

1. Complete site surveys at the 61 AFSSs, FAATC, and the FAA Academy sites.
2. The power required at each AFSS must be determined and provided for the OASIS upon installation; concomitant HVAC must be shown to be available or must be provided.
3. Determine installation strategy.
4. Approve site implementation plans prepared by the contractor.
5. Regional AF personnel and most AT are trained on OASIS.
6. Determine existence of environmental issues; develop remedial plans if necessary.
7. Fire suppression briefings, if necessary.
8. Achieve agreement between contractor and site management on noise and dust pollution control.
9. Achieve agreement between contractor and site management on facility layout.
10. Secure building permits, if necessary.
11. Install TELCO circuits to support the OASIS implementation phase. These temporary TELCO lines requirements have been inserted in the 1995 draft version of the "Fuchsia" book as directed by AOP-400, ltr, dtd 8/17/94.
12. Develop a plan to track installation activities.

13.2.3 Installation and Checkout (INCO) Phase

This phase addresses the implementation activities at the site, beginning after delivery of equipment to the site and prior to successful completion of Contractor Acceptance Inspection (CAI).

13.2.3.1 Implementation Activities

The contractor is responsible for shipping all equipment and material from the factory to all sites, as well as off-loading, moving and positioning equipment in accordance with the FAA approved Site Installation Plans. The

contractor is also responsible for all other installation aspects of the entire automation system, including installation and checkout, system integration, and the Site Acceptance Test at each site.

Specific installation plans will be provided by the contractor and approved by the government. The following is the APMNI's estimate.

OASIS installation will be performed in a manner that is transparent to the flying public. OASIS services are either performed at workstations that require air-to-ground communications or in-flight and EFAS workstations. It is assumed that all AFSSs have a sufficient number of M1FC pre-flight workstations that, for a temporary period of a few weeks, workload can be either shifted internally or transferred to other AFSSs, while installation of OASIS equipment is performed at the site. Additionally, it is assumed that all AFSSs will be able to accept, for a temporary period of a few weeks, workload from other AFSSs where installation/checkout of M1FC equipment is in progress. These assumptions will be confirmed during contractor-conducted site visits.

Given that these assumptions are correct then cutover could be conducted in the following manner. After OASIS workstations are delivered at the site, Regional/Sector AT managers will transfer all pre-flight workload to spare on-site workstations and/or to other AFSSs using the 800-access phone number system. At the same time, Regional/Sector AT managers will transfer all in-flight workload to spare on-site workstations with an air-to-ground communication capability. All or most non-operational M1FC equipment will then be removed and replaced with OASIS equipment. The TOR would coordinate the contractor's activities.

13.2.3.2 Requirements

The requirements for INCO include the following:

1. Installation of OASIS equipment at each site.
2. Material Safety Data Sheet prepared by the contractor.
3. Completion of any required environmental remedial activities required prior to government acceptance of the equipment from the contractor.
4. Successful completion of CAI and approved partial JAI.

13.2.4 System Integration Phase

This phase includes the implementation activities at the site when new equipment is connected to the operation system and tests are conducted to verify performance of interfaces. This phase extends from CAI through FAA Sector Maintenance declaration of the Initial Operating Capability (IOC).

13.2.4.1 Implementation Activities

Specific installation plans will be provided by the contractor and approved by the government. The following is the APMNI's estimate:

After successful completion of site acceptance testing and the system has been formally accepted from the contractor by the FAA (Contract Acceptance Inspection, CAI) at the first site, ACT-223 will perform an Operational Test and Evaluation. At other key sites, system integration and verification will also be performed by ACT-223. At all other sites, OASIS equipment would be connected to a NADIN II or

NADIN 1 at the assigned ARTCC by regional F&E and AT personnel. A NADIN test address will be assigned for OASIS equipment access during evaluations (OT&E, Field Shakedown, and ORD).

13.2.4.2 Requirements

The Region's Site Implementation Plan (SIP) should include provisions which allow the JAB to evaluate and document the suitability and overall readiness of that portion to the system. The SIP will include detailed procedures indicating the manner in which OASIS equipment will be relocated from the temporary installation to the permanent positions once site testing and operational training have been completed. Implementation activities are guided by Order 6030.45A, para 405, Joint Acceptance Inspection (JAI). The final JAI and final documentation shall be accomplished as soon as possible after the transition has been completed. (Ref: Draft SOW, dtd 4/94)

Further requirements will be defined and documented 60 days after the contract award.

13.2.5 Field Shakedown Phase

The Field Shakedown Phase at each AFSS will start with the Initial Operating Capability (IOC) decision that determines if OASIS installation and testing have been completed and meet defined requirements and will extend to the completion of an Operational Readiness Demonstration (ORD).

13.2.5.1 Implementation Activities

The Field Shakedown testing, will be directed by AOS-540 and conducted by the individual Site Coordinators and designated FAA facility personnel. . (This requirement will be validated by AOS-100 prior to RFP release)

Field Shakedown testing is separate and distinct from OT&E and occurs at each OASIS installation.

For pre-flight workstations at key sites and selected operational sites:

1. The AFSS incoming telephone briefing capability will continue to be reassigned from M1FC workstations being replaced to those workstations which will remain during the first installation of OASIS. The M1FC positions removed from the operating consoles will still be in a temporary location.
2. The newly configured OASISWSs shall operate for a period of 72 hours without failure to complete the Operational Readiness Demonstration (ORD). Once ORD has been achieved, the installed set of OASIS equipment will be "commissioned" and begin to accept the full operational workload of the AFSS. (This requirement will be validated by AOS-100 prior to RFP release)
3. The remaining M1FC positions will be removed and place in a temporary location and the second installation and checkout of OASIS equipment will take place. The second installation has been connected to the NAS and it shall operate for a period of 72 hours without failure to complete the second Operational Readiness Demonstration (ORD). Once this ORD has been achieved, the second installation of OASIS equipment will be "commissioned." (This requirement will be validated by AOS-100 prior to RFP release)
4. OASIS will continue to operate for an additional period of 14 days to ensure that a stabilized system has been achieved. M1FC will be retained in the temporary positions during this period. (This requirement will be validated by AOS-100 prior to RFP release)

For pre-flight workstations at all other sites:

1. The AFSS incoming telephone briefing capability will continue to be reassigned to another AFSS(s). The MIFC positions removed from the operating consoles will still be in a temporary location.
2. The newly configured OASISWSs shall operate for a period of 72 hours without failure to complete the Operational Readiness Demonstration (ORD). Once ORD has been achieved, the installed set of OASIS equipment will be "commissioned" and begin to accept the full operational workload of the AFSS. **(This requirement will be validated by AOS-100 prior to RFP release)**

For inflight workstations at all sites:

The inflight MIFC positions will continue to be operational until cutover to the replacement OASIS workstations in the Dual Operations Phase. These replacement OASIS workstations shall have successfully completed site acceptance test (SAT) and a 72 hour field shakedown configured as a pre-flight workstation. **(This requirement will be validated by AOS-100 prior to RFP release)**

13.2.5.2 Requirements

The following is required to be accomplished during this phase:

- 1 TBD consecutive days of successful OASIS operation by regional/site AF and AT personnel. **(This requirement will be validated by AOS-100 prior to RFP release)**
- 2 A possible 72 hour shakedown period (ORD) demonstrating successful OASIS operation will be required at all other operational sites. **(This requirement will be validated by AOS-100 prior to RFP release)**

13.2.6 Dual Operation Phase

Once OASIS site implementation has achieved the ORD milestone the equipment will be cutover to "operational" status. The timeframe for this phase is very short (well within one 8-hr work shift)

13.2.6.1 Implementation Activities

Regional AF and AT will ensure necessary notifications to the flying public and affected offices have been delivered.

Regional AF and AT will connect the OASIS workstations with the either NADIN II or NADIN I. The OASIS workstations will be assigned an operational address.

13.2.6.2 Requirements

Formal cutover from MIFC to OASIS will take place, after OASIS has successfully completed ORD. There may be no dual operations per se, in the interest of flying safety, and the actual cutover is expected to be performed within a matter of hours and at a time when there is a low operational workload. **(this requirement will be validated by the AT representative to the OASIS product team prior to RFP release.)**

Both the Model 1 full capacity and OASIS will require power at the same time during Dual Operations for a period of up to 2 weeks. The power required during this time may be in excess of that available at some AFSSs. Site surveys should identify those sites.

13.2.7 Equipment Removal Phase

This phase follows completion of the JAI milestone and extends until all replaced equipment, implementation support and test equipment is removed and the facility is refurbished or restored. Included in this phase are all activities necessary to resolve outstanding program trouble reports (PTRs), outstanding DRR checklist items and JAI items.

13.2.7.1 Implementation Activities

Regional AF will remove and dispose of all of the M1FC equipment. Disposal will be in accordance with a plan provided to the contractor by the APML.

Responsible offices will complete actions to close out outstanding PTRs and DRR checklist items.

13.2.7.2 Requirements

The Regions are be responsible to remove M1FC equipment and package the equipment for disposal. (Ref: Draft SOW, dtd 7/94) M1FC equipment will be removed from all sites 14 days after site ORD.

Outstanding PTRs and DRR checklist items will be closed.

13.3-13.19 (Reserved)

13.20 Status Assessment

One of the unresolved questions at this time concerns the availability of sufficient power from the power conditioning system (PCS) to support both OASIS and M1FC. In the event that there is insufficient power, either M1FC or OASIS will be placed on the commercial power bus, predicated on which is determined to be the operational system. This issue and others related to the power (HVAC) will be addressed as the program matures but not later than 30 days after completion of site surveys.

One of the major implementation issues is the determination of an installation strategy for the OASIS program implementation. One possible strategy (two step installation) is presented in this PIP but is arguable because the strategy would require one added contractor site visit, over what was budgeted, to a perhaps as many as half of the operational sites. The added benefits of a two step installation is that it would allow installation to be performed within available facility power (should that be a problem) and it would minimize the impact of installation to AT operations and the customers of AFSSs. This is a tradeoff which requires a program decision before Contract Award.

Although this plan states in Paragraph 13.7.2 that the Regions will be responsible for M1FC equipment removal and Disposal, this responsibility has not been coordinated with the Regions. This PIP will serve to effect this coordination by identifying this responsibility assignment as a TIE issue in Appendix B.

Appendix A

GENERIC SITE IMPLEMENTATION PLAN (GSIP)

No.	Sub No.	Planning Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1.		Plan National Implementation	13.	ANS-200							
2.		Form Regional/Site Implementation Teams	13.	AXX-42X/AXX-5XX							
3.		Plan Regional/Site Implementation	13.	AXX-42X/AXX-5XX							
	1	Determine the Site Coordinator and time availability	8.2.1.1	AXX-42X (RAPMs)							
	2	Determine FAA personnel available to make connection of Contractor provided OASIS cabling to the FAA power and telecommunications connection points	8.2.1	AXX-42X							
	3	Determine time of facility access for Contractor	11.2	AXX-42X							
	4	Determine if Contractor would be permitted to work beyond the normal facility personnel duty day	11.2	AXX-42X							
	5	Determine if Contractor requires special access permission or badges and, if so, list them	8.1.3	AXX-42X							
	6	Determine approximate time window for security or access permits	8.1.3	AXX-42X							

7	Ensure the facility has identified administrative telephones that can be used by the Contractor during OASIS installation	13.2.2	AXX-42X							
8	Determine floorspace required for OASIS implementation is available at the site.	6.8.2	AXX-42X							
9	Determine which telecommunication circuits would be utilized by OASIS	6.10.1	AXX-42X							
10	Determine if the identified demarc has sufficient capacity to accommodate additional circuit connections	6.10.1	AXX-42X							
11	Determine the approximate distance from the identified demarc to the preferred location for the OASIS LAN file Server	6.3.1	AXX-42X							
12	Determine if space is available for the AFSS workstation during dual operations	6.8.1	AXX-42X							
13	Identify any known hazmat areas, problems that would be affected in the area of the OASIS installation	6.6.1	AXX-42X							
14	Determine if any asbestos areas will be affected by OASIS installation	6.6.1	AXX-42X							
15	Assess if the installation of the OASIS could pose any potential OSHA hazard such as radiation or obstruction hazard	6.6.1	AXX-42X							
16	Identify any known potential hazards to cabling	6.5.1	AXX-42X							

October 5, 1995

P7900.01

17	Identify any studies that are known to be required for OASIS installation to proceed (i.e. frequency assignment or interference, electromagnetic interference, power harmonics, etc.)	6.10.2	AXX-42X							
18	Identify any unusual construction requirements/codes or aesthetic compliance requirements	6.9.1	AXX-42X							
19	Determine if the OASIS Installation will affect any existing MOA's or LOA's	2.5	AXX-42X							
20	Assess if new wall or ceiling penetrations are required	6.9.2	AXX-42X							
21	Determine if spare wire pairs are available in existing cables for use by OASIS	6.3.1	AXX-42X							
22	Determine if there is room in existing cable runs for additional signal or power cables	6.3.1	AXX-42X							
23	Identify FAA site personnel to receive OASIS orientation training by the Contractor	10.10.1	AXX-42X							
24	Determine location and slot availability for OASIS training courses	10.10.2	AXX-42X							
25	Determine systems to be removed and coordinated with the appropriate program office	13.2.2	AXX-42X							

No.	Pre-INCO Phase Description	PIP Para. Reference	Responsible Org.	Sched	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1	Support Contractor Site Survey	13.	AXX-42X							
2	Determine if the Contractor has provided a list of personnel, accompanying social security numbers, types of work to be performed and hours to be worked each day to the FAA	8.1.3	AXX-42X							
3	Determine if the Contractor has provided the FAA with a copy of the Site Implementation Plan.	13.2.2	AXX-42X							
4	Ensure that the FAA has provided a list of in-house contacts with phone numbers to the OASIS Contractor.	8.2.1.2	AXX-42X							
5	Ensure that a OASIS equipment delivery schedule has been agreed upon between the FAA and the Contractor	11.2	AXX-42X							
6	Ensure that AFSS/Region personnel are notified of equipment delivery plans	8.2.1.2	AXX-42X							
7	Determine if the Contractor has made provisions to dispose of packing material	13.2.2	AXX-42X							
8	Ensure there are copies of AFSS facility documents available to the Contractor during the Contractor site survey such as floor plans, site plans, electrical wiring plans, telecommunications wiring plans structural plans, etc.	13.2.2	AXX-42X							
9	Determine if space is available for LAN file Server	6.8.2	AXX-42X							

October 5, 1995

P7900.01

10	Determine if the Contractor has provided site specific designs for load spreaders, seismic mounting and bracing. If so, has the FAA Site Coordinator approved the designs	6.9.2	AXX-42X							
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No.	Pre-INCO Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
11	Examine if the FAA Site Coordinator has conducted or scheduled fire suppression system deactivation briefings. If not, ensure they are scheduled	6.5.2	AXX-42X							
12	Ensure that the FAA site Coordinator has scheduled an on site safety briefing to the OASIS Contractor	6.5.2	AXX-42X							
13	Ensure that the Contractor will be briefed on providing adequate protection of raised floors, hallways and elevators, etc.	6.3.2	AXX-42X							
14	Ensure the Contractor and the FAA site Coordinator have agreed upon noise abatement and dust pollution control prior to the OASIS installation	6.5.2	AXX-42X							
15	Determine the name of city, township or county required for building permits (if needed)	6.9.2	AXX-42X							
16	Ensure the FAA has identified convenience outlets to the Contractor for electrical tools and equipment	6.4.2	AXX-42X							
17	Ensure that the FAA has plans to verify grounding and bonding connections prior to circuit activation to verify that they meet FAA requirements	6.7.2	AXX-42X							

October 5, 1995

P7900.01

18	Determine the Contractor's unloading requirements to include special ramps, cranes/hoist, fork lifts and dollies and if the Contractor plans to bring them	13.2.2	AXX-42X							
19	Determine Contractor's parking requirements to include number and size vehicles	13.2.2	AXX-42X							
20	Determine the Contractor's dock load requirements	13.2.2	AXX-42X							
21	Develop a plan to track Installation activities	13.2.2	AXX-42X							

No.	Sub No.	INCO Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1		Support Installation	13.	AXX-420 & AXX-5XX							
	1	Monitor the installation of the OASIS equipment by the Contractor	13.2.3	AXX-42X							
	2	Identify the FAA designated Demarcs to the Contractor to which the OASIS channels will be connected	13.2.3	AXX-42X							
	3		13.2.3	AXX-42X							
	4	Provide access to the Contractor for the required power ground and signal ground buses	13.2.3	AXX-42X							
	5	Make site documentation available to the Contractor to include site drawings and building blueprints	3.3.3	AXX-42X							
	6	Provide the Contractor access to government telephones to perform on-site activities related to the OASIS installation	3.3.3	AXX-42X							
	7	Inform the Contractor of site access and security requirements	6.6.1	AXX-42X							
	8	Identify the floor space available to the Contractor for Dual operations and final configuration	3.3.2	AXX-42X							
	9	Identify location of AC power circuit breakers to the installation Contractor	3.3.2	AXX-42X							

October 5, 1995

P7900.01

	10	Inform the Contractor of FAA points of contact and telephone numbers	3.3.2	AXX-42X							
	11	Show the Contractor the path for power wiring, signal cables between the OASIS and the Master Demarc System, and the single/multi-points ground paths	13.2.3	AXX-42X							
	12	Determine if the Contractor has delivered a Material Safety Data Sheet to the FAA Site Coordinator identifying hazardous material to be used during installation	6.5.2	AXX-42X							
2		Support CAI, Perform Partial JAI		AXX-42X & AXX-5XX							

No.	System Integration Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1	Connect OASIS Equipment to NAS	13.	AXX-42X							
2	Perform System Checks to verify NAS integration	13.	AXX-42X & AXX-5XX							
3	Declare IOC		AXX-42X & AXX-5XX							

October 5, 1995

P7900.01

No.	Field Shakedown Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1	Conduct Field Shakedown Testing with facility site personnel	9.1.1.	AXX-42X							
2	Report results at the Field Shakedown Testing to the OASIS Product Team through the RAPM	9.1.1	AXX-42X							
3	Participate as required in the Operational Readiness Demonstration for OASIS at each facility	3.3.6.& 13.2.6	AXX-42X							
4	Participate in the Joint Acceptance Inspection of the AF and AT operations personnel	3.3.6 & 13.2.6	AXX-42X/AXX-5XX							

No.	Dual Operations Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1	Participate in the Contractor provided cutover plan as necessary to ensure smooth transition to the OASIS operation	13.2.6	AXX-42X							
2	Provide feedback on OASIS System performance to the Site Coordinator who should provide feedback through the RAPM to the OASIS Program Office	13.2.6	AXX-42X							

October 5, 1995

P7900.01

No.	Equipment Removal Phase Description	PIP Para. Reference	Responsible Org.	Sched .	Labor Cat.	Associated Time Estimate	Cost Est.	Other Resource Needs	Total Activity Costs	Comments
1	Clean-up and dispose of shipping crates, packing materials and other material after OASIS installation	13.2.7	AXX-42X							
2	Remove MIFC/AFSS equipment that is no longer a requirement for OASIS operations	13.2.7	AXX-42X							

Appendix B

TRANSITION INFORMATION EXCHANGE (TIE) SUMMARY REPORT

The TIE summary report lists the current transition and implementations issues. The report is current with the date of approved of the PIP and is reported on a weekly bases. The next iteration of the PIP will contain a current version of the TIE summary report.

Issue #	Issue	Action	Actionee(s)	Due by
1	AF has not accepted the responsibility to remove and dispose of MIFC equipment	Region have the opportunity to comment on this responsibility through the TIE issue process. No comment means Regional acceptance.	RAPMs	11/17/95

Appendix C**ACRONYMS**

A/C	Air Conditioning
AAP	Program Manager for Advanced Automation
ABU	Office of Budget
AC	Alternating Current
ACE	Federal Aviation Administration Central Region
ACN	Engineering, Test, and Evaluation Service (ACT)
ACO	Administrative Contracting Officer
ACS	Assistant Administrator for Civil Aviation Security
ACT	FAA Technical Center
AEA	Federal Aviation Administration Eastern Region
AF	Airway Facilities
AFSFO	Airway Facilities Sector Field Office
AFSO	Airway Facilities Sector Office
AFSS	Automated Flight Service Station
AGC	Office of the Chief Counsel
AGL	Federal Aviation Administration Great Lakes Region
AHT	Office of Training and Higher Education
ALR	Office of Labor and Employee Relations
AMA	Federal Aviation Administration Training Academy
AMC	Mike Monroney Aeronautical Center
ANA	Program Director for Automation
ANE	Federal Aviation Administration New England Region
ANM	Federal Aviation Administration Northwest-Mountain Region
ANR	Program Director for Surveillance
ANS	NAS Transition and Implementation Service
AOS	Operational Support Service
APM	Associate Program Manager
APMA	Associate Program Manager for the FAA Academy
APMC	Associate Program Manager for Contracting
APMCE	Associate Program Manager for the Central Region
APMD	Associate Program Manager for the Logistics Center
APME	Associate Program Manager for Engineering
APMEA	Associate Program Manager for the Eastern Region
APMGC	Associate Program Manager for General Counsel
APMGL	Associate Program Manager for the Great Lakes Region
APML	Associate Program Manager for Logistics

APMNE	Associate Program Manager for the New England Region
APMNI	Associate Program Manager for NAS Implementation
APMNM	Associate Program Manager for the NW Mountain Region
APMOS	Associate Program Manager for Operational Support
APMP	Associate Program Manager for ATC Procedures
APMQ	Associate Program Manager for Quality
APMR	Associate Program Manager for ATC Requirements
APMSE	Associate Program Manager for Systems Engineering
APMSM	Associate Program Manager for Systems Maintenance
APMSO	Associate Program Manager for the Southern Region
APMSW	Associate Program Manager for the Southwest Region
APMT	Associate Program Manager for Testing
APMWP	Associate Program Manager for the Western Pacific Region
ARTCC	Air Route Traffic Control Center
ARTCC	Air Route Traffic Control Center
ASE	NAS System Engineering Service
ASO	Federal Aviation Administration Southern Region
Assy	Assembly
ASU	Associate Administrator for Contracting and Quality Assurance
ASW	Federal Aviation Administration Southwest Region
AT	Air Traffic
ATC	Air Traffic Control
ATCS	Air Traffic Control Specialist
ATCT	Airport Traffic Control Tower
ATM	Office of Air Traffic System Management
ATP	Air Traffic Rules and Procedures Service
ATR	Air Traffic Plans and Requirements Service
ATZ	Office of Air Traffic Program Management
AWOS	Automatic Weather Observing System
AWP	Federal Aviation Administration Western-Pacific Region
AWP	Aviation Weather Processor
bps	Bits per Second
CAI	Contractor Acceptance Inspection
CCB	Configuration Control Board
CCD	Configuration Control Decision
CDRL	Contract Data Requirements List
CIP	Capital Investment Plan
COTR	Contracts Officer's Technical Representative
CPCI	Computer Program Configured Item
CPU	Central Processor Unit
CSER	Contractor Site Engineering Report
CY	Calendar Year
Demarc	short for "demarcation"
DID	Data Item Description
DQT	Design Qualification Testing

DRR	Deployment Readiness Review
DT&E	Development, Test and Evaluation
DUAT	Direct User Access Terminal
F&E	Facilities and Equipment
FAA	Federal Aviation Administration
FAALC	Federal Aviation Administration Logistic Center
FAR	Federal Acquisition Regulations
FRB	Facilities Review Board
FSAS	Flight Service Automation System
FSDPS	Flight Service Data Processing System
FT&E	Field Test and Evaluation
GFE	Government Furnished Equipment
GFM	Government-Furnished Material
GNAS	General National Airspace System
GSIP	Generic Site Implementation Plan
GUI	Graphics User Interface
HLDL	High Level Data Link
ICD	Interface Control Document
ILS	Integrated Logistics Support
ILSP	Integrated Logistics Support Plan
IMT	Implementation Management Team
IOC	Initial Operational Capability
IPR	Installation Planning Report
IPTL	Integrated Product Team Leader
JAB	Joint Acceptance Board
JAB	Joint Acceptance Board
KDP	Key Decision Point
KW	Kilowatts
LABS	Leased A B Service
LOA	Letter of Agreement
LRU	Line Replaceable Unit
M1FC	Model 1 Full Capacity
MODEM	Modulator Demodulator Unit
MPS	Maintenance Processor Subsystem
MSA	Major System Acquisition
MTBF	Mean-Time-Between-Failures
MTTR	Mean-Time-to-Repair
N/A	Not Applicable
NADIN	National Airspace Data Interchange Network
NAIS	National Airspace Integrated Logistics Support
NAISMT	National Airspace Integrated Logistics Support Management Team
NAS	National Airspace System
NICS	National Inter-facility Communications Service

NOTAM	Notice To Airmen
NTP	Notice-to-Proceed
NWS	National Weather Service
OASIS	Operational and Supportability Implementation System Program
OMS	OASIS Management System
ORD	Operational Readiness Demonstration
OSI	Operational System Interface
OT&E	Operational Test and Evaluation
PAT&E	Production Acceptance Test and Evaluation
PCS	Power Conditioning System
PDP	Power Distribution Panel
Phase 1	OASIS hardware/software providing FSAS AFSSWS supportability
Phase 2	OASIS software providing operational capability enhancement
Phase 3	OASIS - new user requirements
PIP	Project Implementation Plan
PM	Program Manager
PRE-INCO	Pre-Installation and Checkout
PS	Power Supply
PSRB	Project Status Review Board
QA	Quality Assurance
QRO	Quality and Reliability Officer
QRO	Quality/Reliability Officer
R&D	Research and Development
RAM	Random Access Memory
RAPM	Regional Associate Program Manager
RCIU	Remote Control Interface Unit
RCL	Remote Communications Link
RMA	Reliability, Maintainability, and Availability
RMM	Remote Maintenance Monitor
RMMS	Remote Maintenance Monitoring System
RMS	Remote Maintenance System
RPMS	Regional Project Management System
RSM	Remote System Monitoring
SARC	System Acquisition Review Committee
SEB	Source Evaluation Board
SEI	System Engineering and Integration
SER	Site Engineering Report
SIP	Site Implementation Plan
SOW	Statement of Work
SPR	Site Preparation Report
T&E	Test and Evaluation
TAC	Technical Assistance Contract(or)
TBD	To Be Determined
TBS	To Be Supplied
TELCO	Telephone Company

TELCOM	Telephone Communications
TIE	Transition Information Exchange
TIM	Transition Information Management
TM&O	Telecommunications Maintenance & Operations
TO	Technical Officer
TOR	Technical Officer's Representative (On-site)
TSC	Transportation Systems Center
TSC	Transportation Systems Center
UPS	Uninterruptible Power Source
WMSC(R)	Weather Message Switching Center (Replacement)
Wx	Weather
TSARC	Transportation Systems Acquisition Review Council



