ORDER

1100.134A

MAINTENANCE OF NATIONAL AIRSPACE SYSTEM AUTOMATION SUBSYSTEMS

June 27, 1973

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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Initiated By: AAT-520 and
AAF-300

RECORD OF CHANGES

DIRECTIVE NO.

CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL USE	CHANGE TO BASIC	SUPPLEMENTS			OPTIONAL USE

FAA Form 1320-5 (5-68) SUPERSEDES PREVIOUS EDITION

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FOREWORD

1. PURPOSE. This Order describes the procedures for centralized maintenance and engineering support of the various National Airspace System (NAS) automation subsystems within the purview of the Air Traffic Service (AAT), the Airway Facilities Service (AAF), the Systems Research and Development Service (ARD) and the respective en route and terminal facilities. It also highlights the inter/intra-service responsibilities and relationships of AAT, AAF and ARD as they pertain to NAS computer subsystem maintenance. Major changes in this revision are:

   a. Reformatting into long Order form.

   b. Addition of a chapter to incorporate the use of Hardware Discrepancy Reports, and describe their preparation and processing.

   c. Addition of a chapter to describe system tape bring-up procedures.

   d. Changing words to show the NASPO functions transferred to the Systems Research and Development Service.

   e. Expanding the scope of the Order to include certain NAS automation hardware subsystems.

2. DISTRIBUTION. This order is distributed to AAT, AAF and ARD to branch level in Washington and regional headquarters; Aviation Facilities and Air Traffic Systems Divisions in the National Aviation Facilities Experimental Center (NAFEC); branch level at the FAA Academy; and to all Air Traffic and Airway Facilities field offices and facilities.

3. ACTION. Centralized maintenance support of the NAS automation subsystems shall be performed in accordance with this Order. The computer programs and hardware elements specified in Chapter 5 are excluded from this Order. The procedures and responsibilities contained in this Order apply to all AAT, AAF and ARD personnel. This Order has been coordinated with the Director, ARD.

4. CANCELLATION. This Order cancels Order 1100.134 dated March 17, 1972.

5. ORDERING FORMS.

   a. FAA Form 1800.15, "Case File Transmittal/Evaluation (Inter/Intra-Region)," FSN 0052-817-6000, unit of issue: sheet.

   b. FAA Form 1800-16, "Case File Evaluation" (for facsimile transmission), FSN 0052-817-7000, unit of issue: sheet.

c. FAA Form 1800-17, "Case File Comments," FSN 0052-817-8000, unit of issue: sheet.

d. FAA Form 6100-1, "Program Technical Report," FSN 0052-822-7000, unit of issue: sheet.

e. FAA Form 6030-3, "Hardware Discrepancy Report," FSN 0052-826-9000, unit of issue: sheet.

William M. Flener

WILLIAM M. FLENER
Deputy Associate Administrator for Operations

TABLE OF CONTENTS

		Page No.
CHAPTER 1.	WORKING RELATIONSHIPS AND RESPONSIBILITIES.	1
1.	General.	1
2.	Common Responsibilities.	1
3.	National Data Systems Branch (AAT-540).	2
4.	Automation Engineering Support Branch (AAF-360).	2
5.	Data Systems Staff	2
6.	Airway Facility Sector Staff.	3
7.	Area Support Facility Data Systems Staff.	3
8.	ARTS Satellite Data Systems Staff.	4
9.-10.	Reserved.	4
CHAPTER 2.	PROGRAM TECHNICAL REPORT.	5
11.	Reporting Program Troubles/Improvements.	5
12.	PTR Generation.	5
13.	PTR Priority Assignment.	5
14.	Program Modifications.	6
15.	NFSG Procedures.	7
16.	Program Modification Testing.	8
17.-20.	Reserved.	8
CHAPTER 3.	PROCESSING FACILITY ORIGINATED CASE FILES.	11
21.	Facility Coordination of Case Files.	11
22.	Responsibilities.	11
23.-30.	Reserved.	13
CHAPTER 4.	NAS CHANGE PROPOSALS (NCPs) AND CONFIGURATION CONTROL DECISIONS (CCDs)	21
31.	General.	21
32.	Development Plan.	21
33.	Documentation.	21
34.	Testing Procedures.	21
35.	Modification Distribution.	22
36.	Hardware Changes.	22
37.	Development and Distribution of Hardware Modifications.	22
38.-40.	Reserved.	22
CHAPTER 5.	EXCLUSIONS.	25
41.	Software.	25
42.	Hardware.	25
43.	Environmental Subsystems.	25
44.-50.	Reserved.	25

		Page No.
CHAPTER 6.	PROCEDURES FOR DELIVERY AND IMPLEMENTATION OF SYSTEM TAPE UPDATES.	27
51.	Responsibilities.	27
52.	Description of Events.	27
53.-60.	Reserved.	31
CHAPTER 7.	HARDWARE DISCREPANCY REPORT (HDR).	33
61.	Reporting Hardware Troubles.	33
62.	HDR Handling by AAF-360.	33
63.	HDR Generation.	33
64.-70.	Reserved.	33
APPENDIX 1.	GLOSSARY.	36

CHAPTER 1. WORKING RELATIONSHIPS AND RESPONSIBILITIES

1. GENERAL. Changes to NAS computer subsystems will continue throughout the life of the system. The responsibility for maintenance of these subsystems is the responsibility of ARD, AAF or AAT for the subsystems under their jurisdiction.

   AAT-540, ARD-140, and AAF-360 have been established at NAFEC to provide centralized computer program development and subsystem maintenance and modification development. Case Files, NAS Change Proposals, Program Trouble Reports and Hardware Discrepancy Reports will be processed and routed as outlined in the chapters to this Order. The complexity of this task requires complete cooperation and coordination at all levels within these services.

2. COMMON RESPONSIBILITIES. ARD is responsible for the development and maintenance of NAS computer subsystems prior to the time they are transitioned to the operating services. As NAS computer subsystems are transitioned to the operating services, the maintenance of these subsystems becomes the responsibility of the designated service. Outlined below are specific responsibilities as they pertain to subsystems that fall within the service's jurisdiction.

   The National Data Systems Branch (AAT-540) and the Automation Engineering Support Branch (AAF-360) are responsible for the design, production, integration, checkout and coordination of computer programs, for centralized computer program maintenance and for documentation as specified in Order 1100.121A. They will act as the central controlling point at NAFEC for all technical matters related to maintaining the NAS computer subsystems. In addition, they shall:

   a. Receive, resolve and distribute corrections to identified program troubles.

   b. Develop, test and distribute program modifications necessary to enable implementation of Configuration Control Decisions (CCDs).

   c. Review computer program specifications and other automation related documents to ensure they reflect existing AAT and AAF requirements.

   d. Provide support services as requested or directed in the solution of specific problems in computer programs.

   e. Request the required computer time to support their activities.

   f. Approve and incorporate program improvements into computer program subsystems.

g. Act as the sole agent for distribution of changes to computer program subsystems.

3. NATIONAL DATA SYSTEMS BRANCH (AAT-540). In addition to the common responsibilities set forth in 2 above, AAT-540 shall:

a. Develop and distribute the prestored scheduled flight plan tapes for computer-equipped terminal facilities.

b. Modify and distribute an updated flight plan tape and a listing of the flights contained on the tape to each ARTS-III facility monthly at least four days prior to the effective schedule change. All ARTS-III facilities shall be supplied with prestored scheduled flight plan tapes until the facility is interfaced with its associated ARTCC. Tape distribution will continue, if required, at a reduced rate after the facility is successfully interfaced with its associated ARTCC.

c. Provide Area Support Facilities (ASFs) with a site adaptation tape at the Initial Operating Capability (IOC) of each ARTS-III facility under the ASFs jurisdiction. Thereafter, the ASF will be responsible for maintenance of site adaptation tapes.

4. AUTOMATION ENGINEERING SUPPORT BRANCH (AAF-360). In addition to the common responsibilities set forth in 2 above, AAF-360 is responsible for the design, development, fabrication, documentation and checkout of NAS automation hardware modifications. They will act as the central point at NAFEC responsible for providing engineering support to field facilities utilizing the NAS automation hardware. Under direction of AAF-300 they shall:

a. Receive, verify and develop equipment modifications to resolve identified hardware troubles.

b. Develop and test hardware modifications necessary to enable implementation of CCDs.

c. As requested, review NAS automation hardware specifications to ensure they reflect existing AAF requirements.

d. Provide field support resources as required or directed in the solution of specific problems in NAS automation systems.

5. DATA SYSTEMS STAFF (TERMINAL AND EN ROUTE). The responsibilities listed below are in specific reference to this Order. This Staff at each site is responsible for:

a. Support to control personnel during system operation.

b. Collection and testing of adaptation data.

c. Development and testing of approved local computer program changes.

d. Identifying, evaluating and reporting program problems associated with the operational system as described in Chapter 2.

e. Testing and installation of CCDs distributed on a national basis in "patch" form.

f. Conducting testing and evaluation of all operational system tapes prior to their being placed in service.

g. Providing programming support as requested to the Airway Facilities Sector Staff in their maintenance of the en route and terminal functional and diagnostic programs.

h. Insuring that impact upon systems in facilities adjacent to the recipient of a new NAS package is known and that affected facilities are notified of the impending change/affect.

6. AIRWAY FACILITY SECTOR STAFF. In addition to those functions specified in agency Order 1100.121A and agency Order 1100.127 the Airway Facility Sector Staff shall:

a. Maintain and update as required the site data for those functional and maintenance computer programs under their jurisdiction.

b. Identify and report problems in the software or hardware subsystems by use of the Program Trouble Report or Hardware Discrepancy Report in accordance with Chapters 2 or 7, as appropriate.

c. Provide technical support as requested to the Air Traffic Data Systems Staff in their maintenance of the en route and terminal operational programs.

d. Participate in joint AAT/AAF baseline testing of new operational system tapes as required.

e. Conduct testing and evaluation of all functional tapes prior to their being placed into operational use.

7. AREA SUPPORT FACILITY DATA SYSTEMS STAFF (TERMINAL). In addition to the responsibilities listed in Paragraph 5, the Data Systems Staffs at these facilities shall:

a. Maintain and update as required either on tape or cards the site data for the ARTS facilities under their jurisdiction.

b. Incorporate this site data with new program tapes released by AAT-540.

c. If available memory permits, verify the load capability of new program tapes prior to distribution.

d. Distribute required program tapes to the appropriate facilities within 30 days of receipt of a new program tape or a request for a new assembly.

e. Distribute required program tapes as soon as practicable after IOC to sites which reach IOC between scheduled program tape deliveries.

f. Provide program and adaptation listings to satellite facilities as required by ATS and AFS.

g. Provide, on a time-permitting basis, those services not available at satellite facilities because of hardware limitations.

8. ARTS SATELLITE DATA SYSTEMS STAFF (TERMINAL). In addition to the responsibilities listed in Paragraph 5, the Staff at these sites shall:

a. Forward to their designated ASF all changes to their site adaptation, in standard format, at least two weeks prior to the scheduled release of a new program tape by AAT-540.

b. Report any discrepancies or problems with adaptation portion of their operational program tape to their ASF.

9. - 10. RESERVED.

CHAPTER 2. PROGRAM TECHNICAL REPORT (PTR).

11. REPORTING PROGRAM TROUBLES/IMPROVEMENTS. The PTR (FAA Form 6100-1) is the document to be used for the reporting of program troubles (PTs) and program improvements (PIs). Detailed instructions for completing this form are on the reverse side of the form. In addition to its primary use as a reporting document, the form is used to record the action taken to correct the problem. The PTR shall not be used to describe requested or approved changes to the Computer Program Functional Specifications (CPFS) or other baselined documents.

12. PTR GENERATION. When a program trouble is suspected or a program improvement is to be suggested, a PTR shall be generated for joint review by Air Traffic and Airway Facilities personnel at the facility. For a program trouble the review should eliminate misinterpretations, identify adaptation deficiencies and duplicate PTRs. For a program improvement, it should eliminate unjustifiable suggested improvements. In any event, PTRs shall not be forwarded to the National Field Support Group (NFSG) without facility review and approval.

    a. If the facility review determines the proposed PTR is an adaptation error, of omission or commission, it is invalid and shall not be forwarded to the NFSG.

    b. The facility should examine the national Program Maintenance Status Report (PMSR) to determine if the proposed PTR is a duplicate of a previously reported problem. If the proposed PTR is a duplicate, it should be held at the facility awaiting the forthcoming correction, unless it is of a higher priority than the PTR listed in the PMSR. In this case, the new PTR should be sent to the NFSG with all significant documentation and a comment indicating it is a higher priority.

    c. If the review indicates a valid PTR not previously identified, a PTR number will be assigned. The PTR should be examined for correctness and completeness with emphasis placed on the information provided under "Description of Problem." The description of the problem should include specification references and the originator's opinion as to how the specific area of the specification has been violated. The PTR should then be forwarded to the NFSG along with the program correction, if developed, and all significant documentation.

13. PTR PRIORITY ASSIGNMENT. As a PTR is identified, it is assigned a priority by the facility. This priority reflects one of the following categories:

    a. Emergency PTR - one which prevents a site from continuing automation activities with the current system tape.

b. High Priority PTR - one which can be procedurally handled, but has an adverse effect on the system.

c. Low Priority PTR - All PTRs other than a and b above will be considered low priority.

14. PROGRAM MODIFICATIONS.

a. If a facility cannot continue operations or implement a new system tape because of unresolved emergency program troubles or a series of high priority troubles resulting in an unmanageable situation, it will revert to the previous usable tape.

b. A facility may modify programs immediately to resolve emergency priority program troubles. Notification of such action shall be forwarded to the NFSG within one working day.

c. Implementation of patches to resolve high priority program troubles shall be according to subparagraph b, except that notification of such action shall be forwarded to the NFSG within five working days.

d. Modifications developed for low priority program troubles shall not be installed by the facility until approval is received from NFSG.

e. The facility shall not use a patch more than 30 days without NFSG approval.

f. Inclusion of the modification in the PMSR as a verified correction or dissemination of the patch by other means, i.e., teletypewriter as a verified correction by the NFSG, shall constitute approval.

g. All PTRs shall be forwarded to the NFSG within one working day. The corrections (patches) for these PTRs shall be sent to the NFSG as soon as developed and tested. The NFSG will be the final authority to review the PTRs, determine the approved correction to the problem in case of duplication, and distribute these corrections in source or patch form as necessary. If the NFSG rejects a PTR, then the facility/facilities shall remove the patch and follow the procedures outlined in Chapter 3 for making a change to the program. Verified modifications released in patch form shall be installed by all appropriate facilities (i.e., en route or tower) using the system tape for which the patch is designed. Installation of these patches shall be accomplished within ten working days of receipt or as directed by the documentation accompanying the patch.

h. Modification Release - PT modifications released by NFSG will normally be for emergency and high priority PTRs only. Modifications in patch form for low priority PTRs will be developed and issued on a workload permitting basis. Verified modifications released shall be installed by all appropriate facilities (i.e.,

en route or tower) using the system tape the patch is designed for. Installation of these patches shall be accomplished within ten working days of receipt - except if directed otherwise - by the documentation accompanying the patch.

i. Program Patch Release Procedure - Any program patch released to the field during the interim between scheduled system tape release shall be accompanied by sufficient documentation to permit the site to test the patch. This documentation shall include, but is not limited to, the following:

(1) A copy of the PTR which generated the patch if not contained in the PMSR.

(2) A description of any unique or unusual adaptation practices associated with the problem.

(3) Sufficient remarks within the patch coding to facilitate site analysis of the logic used.

j. If a site develops a patch for a previously reported and unresolved PT in the PMSR, the patch shall be forwarded to the NFSG with documentation referencing the PTR and stating the extent of testing that has been completed. A new PTR number shall not be generated.

15. NFSG PROCEDURES. When the NFSG receives a PTR, it will be reviewed to insure it is a valid PTR (i.e., the program not performing in accordance with current baseline documents or a proposed change that would improve the design or code of a program which would not result in a change to any baseline document).

Every valid PTR received by the NFSG will be described in a national Program Maintenance Status Report (PMSR), along with its number, priority and other comments. The national PMSR shall be produced and maintained by the NFSG and distributed in conjunction with a system tape release. Change pages will be issued as required.

a. If the PTR is determined to be a duplicate of a PTR already in existence, this information and the number of the previous PTR will be noted on the PTR and the original copy returned to the originator. If it is of a higher priority than the original, the PTR of higher priority will supersede and the one of lower priority will become a duplicate. If a verified solution to the problem exists, it should be distributed to all appropriate facilities immediately.

b. If the NFSG determines the PTR to be an adaptation problem, it will be returned to the originator with an explanation of how to resolve the problem.

c. If the NFSG determines that the PTR does not contain enough information, the originating organization will be contacted to acquire the necessary data to allow resolution of the problem. If the necessary data cannot be obtained, the PTR will be closed as incomplete.

d. If the PTR has been verified as valid, it will be included in the national PMSR and action taken to resolve the problem.

e. If the PTR is determined to be invalid (i.e., the program is operating in accordance with current baseline documents) it will be closed and returned to the originator and the patch, if being used, shall be removed.

f. PTR Carry Over Processing - the NFSG will assure that all PTRs reported on the previous tape are tested and entered in the appropriate section of the PMSR for the next tape.

g. If the PTR is a program improvement, the NFSG shall evaluate it and notify the originator of the results of this evaluation. If it is determined to be an improvement, AAT-540/AAF-360/ARD-140 shall incorporate the change in the system on a resource permitting basis and in source form only.

16. PROGRAM MODIFICATION TESTING. Under certain circumstances, a problem may occur at a facility and a patch be developed by AAT-540/AAF-360/ARD-140 but the patch cannot be tested at NAFEC. On these occasions, the NFSG will send the patch to the facility that generated the PTR for testing. The facility will report the result of this testing to the NFSG. This procedure will apply to both patch and source modifications.

17. - 20. RESERVED.

FIGURE 1. PROGRAM TECHNICAL REPORT

PLEASE TYPE	PROGRAM TECHNICAL REPORT	☐ DUPLICATE PTR EXISTS

TYPE OF REPORT ☐ TROUBLE ☐ IMPROVEMENT

TYPE OF FACILITY ☐ ENROUTE ☐ TERMINAL

ORGANIZATION ☐ AF ☐ AT

PTR NUMBER	1	2	3	4	5	7	8	9	10	11	◀ ARTS ONLY	SUSPECTED SUBPROGRAM	14	15	16	17	18	19	20

SECTION	MODEL	VERSION	SYSTEM TAPE ID	23	24	25	26	27	28	29	PRIORITY

REFERENCE(S)

ATTACHMENT(S)

DESCRIPTION OF PROBLEM

ORIGINATOR'S SIGNATURE

ACTION TAKEN BY CENTRAL PROGRAMMING

CENTRAL PROGRAMMING USE ONLY	DATE	INITIALS	FACILITY USE ONLY	DATE	INITIALS
PTR RECEIVED			PTR RECEIVED FROM CENTRAL PROGRAMMING		
PTR DISTRIBUTED TO SITES			PATCH AVAILABLE FOR USE		
PATCH WAS AVAILABLE TO TEST GROUP			PATCH VERIFIED		
PATCH VERIFIED BY TEST GROUP			PATCH USED OPERATIONALLY		
PATCH DISTRIBUTED			PATCH NUMBER		
INDICATES SOURCE CODE IS DEVELOPED AND WILL BE ON THE INDICATED SOURCE TAPE			SEE REVERSE SIDE FOR INSTRUCTIONS		

FAA Form 6100-1 (12-71)

FIGURE 1. REVERSE SIDE OF PROGRAM TECHNICAL REPORT

INSTRUCTIONS FOR COMPLETING FAA FORM 6100-1

TROUBLE – If PTR describes an out of spec condition.

IMPROVEMENT – If PTR describes an improvement and does not change specifications.

ENROUTE – TERMINAL – Check one.

AF – AT – Check the service of the PTR originator.

PTR NO. – Box 1 & 2 – Contain month.
Box 3 & 4 – Contain day of month.
Box 5 – Contains last digit of year.
Box 7, 8 & 9 – Each site shall number their PTRs sequentially starting at 001 at the beginning of each calendar year. If more than 999 numbers are required Box 7 will contain an alphabetical character. Box 10 & 11 – Identifies the originating facility.

SUSPECTED SUBPROGRAM – The name (contraction) of the subprogram that is believed to cause the problem.

SECTION – Assigned by central programming to indicate the section of the Program Maintenance Status Report (PMSR) where this PTR is documented.

MODEL – Model number of the operational computer program the PTR is written against.

VERSION – Version number of the model.

SYSTEM TAPE ID – That the PTR was initially identified on:
Box 23 – A – Arts
C – CCC
D – CDC
E – DCC
Box 24 – A – Operational Programs
D – Diagnostic Programs
M – Maintenance Programs
N – Support Programs
Box 25, 26 & 27 – Sequential Number (3rd digit may optionall be used as a descriptor)
Box 28 – Facility Adaptation Update Level.
Box 29 – Facility Patch Update Level.

PRI – Enter one of the following:
E – Emergency is a problem that prevents a site from continuing automation activities on this system tape.
H – High priority is a problem that can be procedurally handled but has an adverse affect on the system.
L – All others.

REFERENCES – Indicate the document(s) and paragraph that define(s) how the program should respond.

ATTACHMENTS – Indicate what type and number of attachments.

DESCRIPTION OF PROBLEM – State:
(a) The problem in detail.
(b) The expected results.
(c) The actual results.
(d) The system configuration (if pertinent).
(e) The adaptation if unique to the problem.
(f) Patches that may be a factor.
(g) Route: If a factor (use UDS if possible).
(h) Is problem transit or duplicatable?
(i) Any other facts considered to be pertinent.
(j) The suggested patch if one is available.
(k) The suggested source changes (if developed).

ACTION TAKEN – The action taken to resolve the problem or close the PTR.

CHAPTER 3. PROCESSING FACILITY ORIGINATED CASE FILES.

21. FACILITY COORDINATION OF CASE FILES.

a. Case Files shall be submitted on FAA Form 1800-2 and prepared in accordance with agency Order 1800.8. Urgent case files shall be submitted only when the problem identified involves the safety of air traffic or personnel.

b. Prior to submitting the case file to the region for further processing the signatures of the facility chief and the sector manager or their designated representatives are required indicating whether they concur or nonconcur with the case file. If they both nonconcur, the case file shall be withdrawn. The facility chief and sector manager shall mutually agree on a central agent(s) who shall be responsible for assignment of the case file numbers and for facility status accounting of case files, NCPs and CCDs. This agent(s) shall also be responsible for forwarding the case file to the region.

c. Interfacility coordination shall be performed as directed by the region.

22. RESPONSIBILITIES.

a. Regional (Air Traffic/Airway Facilities) Automation Branches /Staffs shall determine whether a case file originating within their region is local or national in scope. After regional determination has been made, the following procedures apply:

(1) Local in Scope. When it is determined a case file is local in scope, i.e., unique to one facility, the region may authorize the facility to implement this case file. No changes resulting from local case files will be implemented until approval is received from the region. Notification and an information copy shall be forwarded to AAT-500 and/or AAF-300, as appropriate, and all other regions within one working day. Local in scope, however, does not apply to NAS automation hardware modifications. Authorization for modifications to hardware shall be in accordance with agency Order 6032.1.

(2) National in Scope.

(a) The regional (Air Traffic/Airway Facilities) Automation Branches/Staffs will coordinate all national in scope case files originating within their region with all the other regional Automation Branches. An information copy should be forwarded to AAT-500 or AAF-300 at this time.

Use FAA Form 1800.15, "Case File Transmittal/Evaluation." Coordination within the regions shall include all pertinent Air Traffic divisions, Airway Facilities divisions and other organizational elements that may be involved. Each region's evaluation may be transmitted to the originating region by using FAA Form 1800.15, "Case File Transmittal/Evaluation" or FAA Form 1800.16, "Case File Evaluations" for facsimile transmissions. (Figures 3 and 5).

(b) The regional (Air Traffic/Airway Facilities) Automation Branch/Staff will compile all comments on the case file and decide either to withdraw it or forward it to AAT-500 or AAF-300 for processing. If it is withdrawn, the originating facility, other regions and AAT-500 or AAF-300 will be notified for status accountability purposes. When a case file is submitted to AAT-500 or AAF-300 for processing, FAA Form 1800.17, "Case File Comments," shall be prepared. (Figure 4).

(c) The regional (Air Traffic/Airway Facilities) Automation Branch/Staff shall mutually agree on an agent(s) to maintain case file records and forward them for national processing to the organization (AAT-500 or AAF-300) of the originator of the case file. The original case file form indicating concurrence or nonconcurrence by both regional Branches shall be included in the transmittal. If both branches nonconcur, the case file should be withdrawn.

b. The ATC Automation Division (AAT-500) is responsible for processing all case files originated by Air Traffic personnel and shall:

(1) Review locally approved case files. If AAT agrees that the case file is local in scope, a copy will be forwarded to AAF-40 for system accountability.

(2) Advise the region if the Air Traffic Service determines that the locally approved case file is national in scope or if the AAT nonconcurs in the case file. The facility shall remove the modification if it is being used.

(3) Perform the necessary coordination on the case file within the Air Traffic Service and the Airway Facilities Service. After the AAT case file coordination is completed, AAT-500 will advise all regional AAT Automation Branches using AT Form 1800.1 "Case File Action and Implementation Directions," of the decisions. (Figure 6).

(4) Submit the case file to AAF-40 for NCP processing if the ATS concurs in the proposed change.
NOTE: For a general flow of the case file review cycle see Figure 2.

c. The AFS Radar/Automation Division (AAF-300) is responsible for processing all case files originated by AAF personnel and shall:

(1) Review locally approved case files. If AAF agrees that the case file is local in scope, a copy will be forwarded to AAF-40 for system accountability.

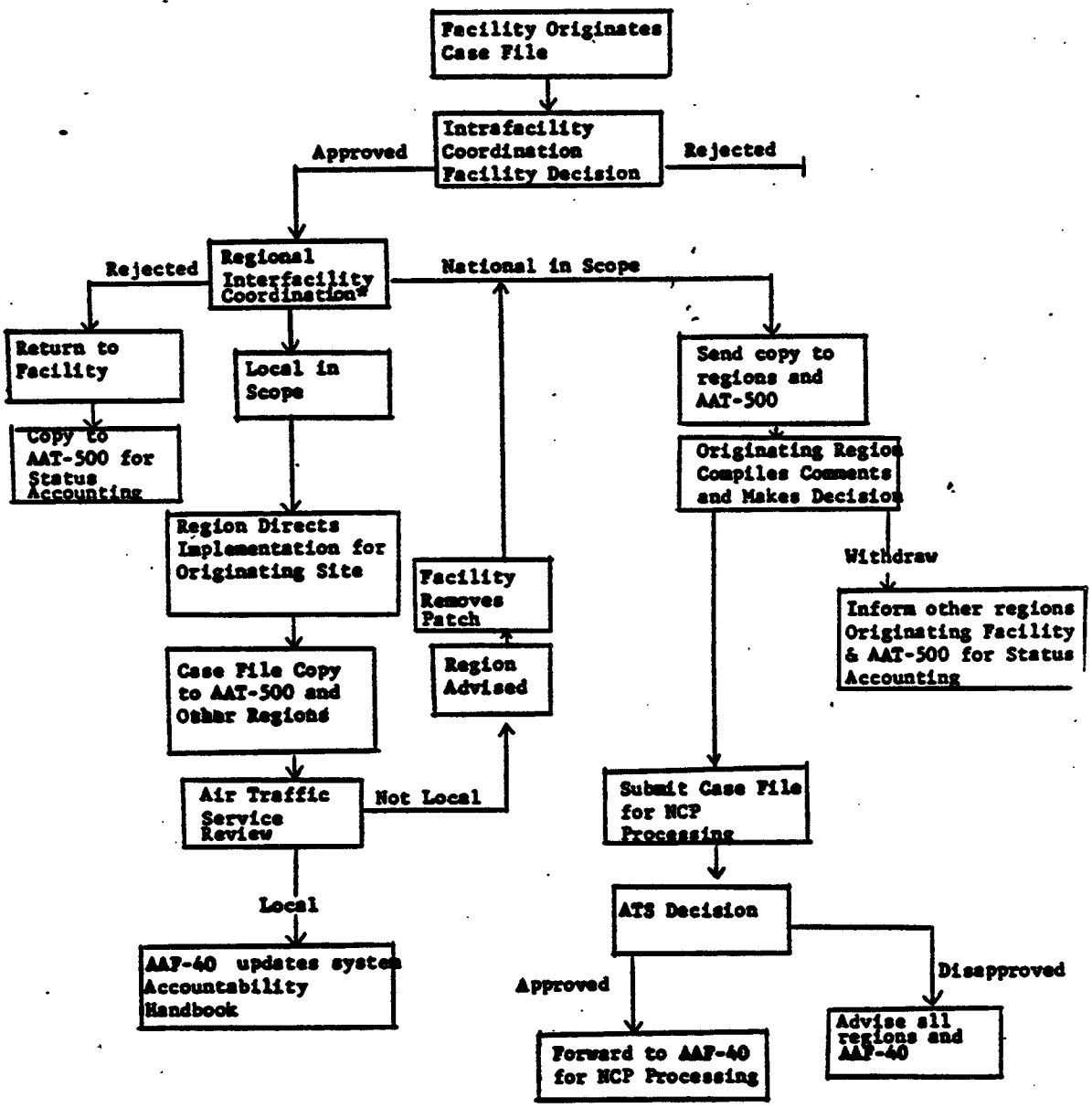
(2) Advise the region if the Airway Facilities Service determines that the locally approved case file is national in scope or if the AAF nonconcurs in the case file. The facility shall remove the modification if it is being used.

(3) Perform the necessary coordination on the case file within the Airway Facilities Service and Air Traffic Service. After the AAF case file coordination is completed, AAF-300 will advise all regional AAF Automation Divisions using AT Form 1800.1, "Case File Action and Implementation Directions," of the AAF decisions.. (Figure 6).

(4) Submit the case file to AAF-40 for NCP processing if the AAF concurs in the proposed change.
NOTE: For a general flow of the case file review cycle see Figure 2.

23. - 30. RESERVED.

FIGURE 2. CASE FILE REVIEW CYCLE



*Method to be determined by the individual region (i.e., may be accomplished by the originating facility or the region).

This diagram shows the Air Traffic processing of case files. The Airway Facilities Service processing is exactly the same except the flow is through their regional Airway Facilities Division and AAF-300.

FIGURE 3. CASE FILE TRANSMITTAL/EVALUATION

CASE FILE Transmittal/Evaluation (Inter/Intra-Region)	DATE	DUE DATE	CASE FILE NO.

To: ("R" denotes required evaluators)

"X"	"R"	"X"	"R"	"X"	"R"
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐

From: (Signature, typed and signed)

Routing Symbol:

INSTRUCTIONS: This case file is forwarded for evaluation prior to regional processing. Required evaluators, indicated by an "R", are to complete and return this form to the addressee listed above by the indicated due date; other addressees are invited to do so at their option.

EVALUATION

Complete and return to forwarding official by DUE DATE shown. This form may be adapted for facsimile transmission by cutting at arrows and superimposing over FAA Form 1800-16.

TO: (Routing Symbol)	FROM: (Routing Symbol)	Signature of Evaluator (Typed and signed)	Date

EVALUATION	☐ Concur	☐ Nonconcur	☐ Not Considered National
RECOMMENDED IMPLEMENTATION	☐ Mandatory Patch	☐ Mandatory Next Source Tape	☐ First Convenient Source Tape

Comments

FAA Form 1800-15 (8-71)

FIGURE 4. CASE FILE COMMENTS

CASE FILE COMMENTS	CASE FILE NO.

TO		AT-500	FROM: *(Routing Symbol)*	Signature *(Typed and Signed)*	Date

INTER-REGIONAL EVALUATION

Inter-regional coordination of the subject case file has resulted in the following evaluation and implementation information.

1. EVALUATOR	2. EVALUATION			3. RECOMMENDED IMPLEMENTATION			4. COMMENTS	
Evaluating Office	Concur	Non-Concur	Not Considered National	Mandatory Patch	Mandatory Next Source Tape	Next Convenient Source Tape	None	See Comment Number

DATA PERTINENT TO IMPLEMENTATION

5. FACILITY DEVELOPMENT	6. STORAGE REQUIREMENT		7. EST. COMPLETION OF DEVELOPMENT
☐ Can be accomplished by: _____ *(Site)* ☐ Cannot be accomplished	Decimal Words	Additional S.E.'s.	Date

Comments *(Continue on reverse, if necessary)*

FAA Form 1800-17 (9-71) GPO 917-332

FIGURE 5. CASE FILE EVALUATION

TO: *(Routing Symbol)*	FROM: *(Routing Symbol/Organization)*	CASE FILE EVALUATION (For facsimile transmission)
		Use FAA Form 1800-15 for routine transmission

Case File No.	Signature of CCB Evaluator *(Typed and Signed)*	Date
EVALUATION	☐ Concur ☐ Nonconcur ☐ Not considered National	
RECOMMENDED IMPLEMENTATION	☐ Mandatory Patch ☐ Mandatory Next Source Tape ☐ First Convenient Source Tape	
Comments		

Case File No.	Signature of CCB Evaluator *(Typed and Signed)*	Date
EVALUATION	☐ Concur ☐ Nonconcur ☐ Not considered National	
RECOMMENDED IMPLEMENTATION	☐ Mandatory Patch ☐ Mandatory Next Source Tape ☐ First Convenient Source Tape	
Comments		

Case File No.	Signature of CCB Evaluator *(Typed and Signed)*	Date
EVALUATION	☐ Concur ☐ Nonconcur ☐ Not considered National	
RECOMMENDED IMPLEMENTATION	☐ Mandatory Patch ☐ Mandatory Next Source Tape ☐ First Convenient Source Tape	
Comments		

FAA Form 1800-16 (8-71)

For extended comments continue on plain paper over next lower box.

FIGURE 6. CASE FILE ACTION AND IMPLEMENTATION DIRECTIONS

TO (Routing Symbol)	CASE FILE ACTION AND IMPLEMENTATION DIRECTIONS	CASE FILE NO.
FOR ACTION	FROM: (Routing Symbol)	Date
FOR INFORMATION	Signature (Typed and Signed)	NOTICE TO ADDRESSEES: National processing of the subject case file has resulted in the actions and implementation information as outlined below.

EVALUATION ACTION

1. SCOPE OF CHANGE	2. ATS EVALUATION (1 See "Comments," below)		
☐ Local ☐ National	☐ Concur	☐ Nonconcur[1]	☐ Other[1]

IMPLEMENTATION ACTION

3. NOT APPLICABLE	4. PATCH IMPLEMENTATION DECISION	5. SOURCE IMPLEMENTATION
☐ See "Comments," below	☐ Yes Estimated distribution date: _____ ☐ No	☐ Will be included in next source tape ☐ Will be included in future source tape. Estimated distribution date: _____

Comments

AT Form 1800-1 (8-71)

FIGURE 7. NAS CHANGE PROPOSAL

NAS CHANGE PROPOSAL (Refer to FAA Order 1800.8C)	RIS: NS 1800-1	PAGE OF PAGES
	FOR CMD USE / DATE RECEIVED	NCP NO.
TO: Configuration Control Branch, NS-420, 800 Independence Ave., S. W, Washington, D. C. 20590	1. NAME OF ORIGINATOR	
	2. ORIGINATOR'S ORGANIZATION	ROUTING SYMBOL
	3. TELEPHONE NO.	EXT.
6a. PROGRAM ELEMENT ☐ NAS EN ROUTE STAGE A ☐ NAS TERMINAL ARTS	4. CASE FILE NO.	5. (Check one) ☐ NORMAL ☐ TEST ☐ URGENT
6b. SITE LOCATION:	7. END ITEM NO. AFFECTED	8. DATE INITIATED
9. DESCRIPTIVE TITLE OF NCP		
10. DESCRIPTION OF PROBLEM (Continue on supplemental sheets)		
11. DESCRIPTION OF CHANGE (Continue on supplemental sheets)		
12. REMARKS (Include Costs, Documentation, Schedules, and Interface Problems. Continue on supplemental sheets)	FORWARDING OFFICE: SIGNATURE	
	ROUTING SYMBOL	DATE
13. FOR CONFIGURATION MANAGEMENT DIVISION USE ONLY		
		NS-400

FAA Form 1800-2 (1-70) SUPERSEDES PREVIOUS EDITION

CHAPTER 4. NAS CHANGE PROPOSALS (NCPs) AND CONFIGURATION CONTROL DECISIONS (CCDs)

31. GENERAL. NCPs relating to any NAS computer program subsystem listed in SPO-MD-001 will be submitted for review through appropriate channels as specified in this Order and Order 1800.8, "NAS Configuration Management." AAF-300, ARD-100, or AAT-500, as appropriate, will provide the scheduling and assignment of CCDs to be installed in each system tape for approval by the Configuration Control Board (CCB) Chairman. Approved equipment modifications will be authorized by Electronic Equipment Modification (EEM) chapter or Time Compliance Technical Order (TCTO). The general NCP/CCD flow is shown in Figure 8.

32. DEVELOPMENT PLAN. A development plan will be prepared by AAT-540, ARD-140, and/or AAF-360 for each CCD or package of CCDs and will be distributed to all NAS ARTCCs or ARTS-III facilities (whichever is appropriate) and regional (Air Traffic and Airway Facilities) Automation Branches/Staffs. At least the following items will be addressed in the plan when applicable (i.e., no COMPOOL for terminal or maintenance programs):

    a. Schedule for affected documentation changes.

    b. Schedule for COMPOOL tape release.

    c. Adaptation impact and schedule (responsibility, non-operational support system tape (NOSS), briefings, etc.).

33. DOCUMENTATION. The minimum documentation provided with each tape release consists of:

    a. A current national PMSR reflecting the status of this tape.

    b. A list of the new CCDs included in this tape.

    c. Baseline documentation changes with appropriate nomenclature, i.e., A3d2.0 or A3d2.1.

    d. Adaptation users' manuals and data collection formats (if necessary).

    e. Updates to the appropriate test plans (if necessary).

34. TESTING PROCEDURES.

    a. Upon receipt of a new system tape, the changes between the new tape and the previously released tape should be reviewed by the facility automation staff responsible for implementation. A test plan for the new tape shall be generated by the facility. This plan shall describe the tests to be performed to verify

the tape before operational use. Special emphasis should be placed on verification of approved local changes. Implementation of the new system tape is expected to be completed by the date specified in the Site Program Bulletin that is distributed with the tape. Distribution of the facility test plan should be according to region Automation Branch (Air Traffic and Airway Facilities) discretion. The facility baseline tests should be modified as described in the test plan to ensure thorough verification of the new system.

b. Verification tests of new system tapes for operational computer programs should be carried out in a controlled environment and documented according to local procedures. On completion of testing, a report summarizing the status of the tape and a date established for operational use of that tape shall be generated. This report shall be in the following format and forwarded to AAT-500 and AAF-300 through the regional Automation Branches:

1.0 Introduction
2.0 Summary of Test Activity
3.0 Evaluation of Test Results
4.0 Conclusion
5.0 Recommendations

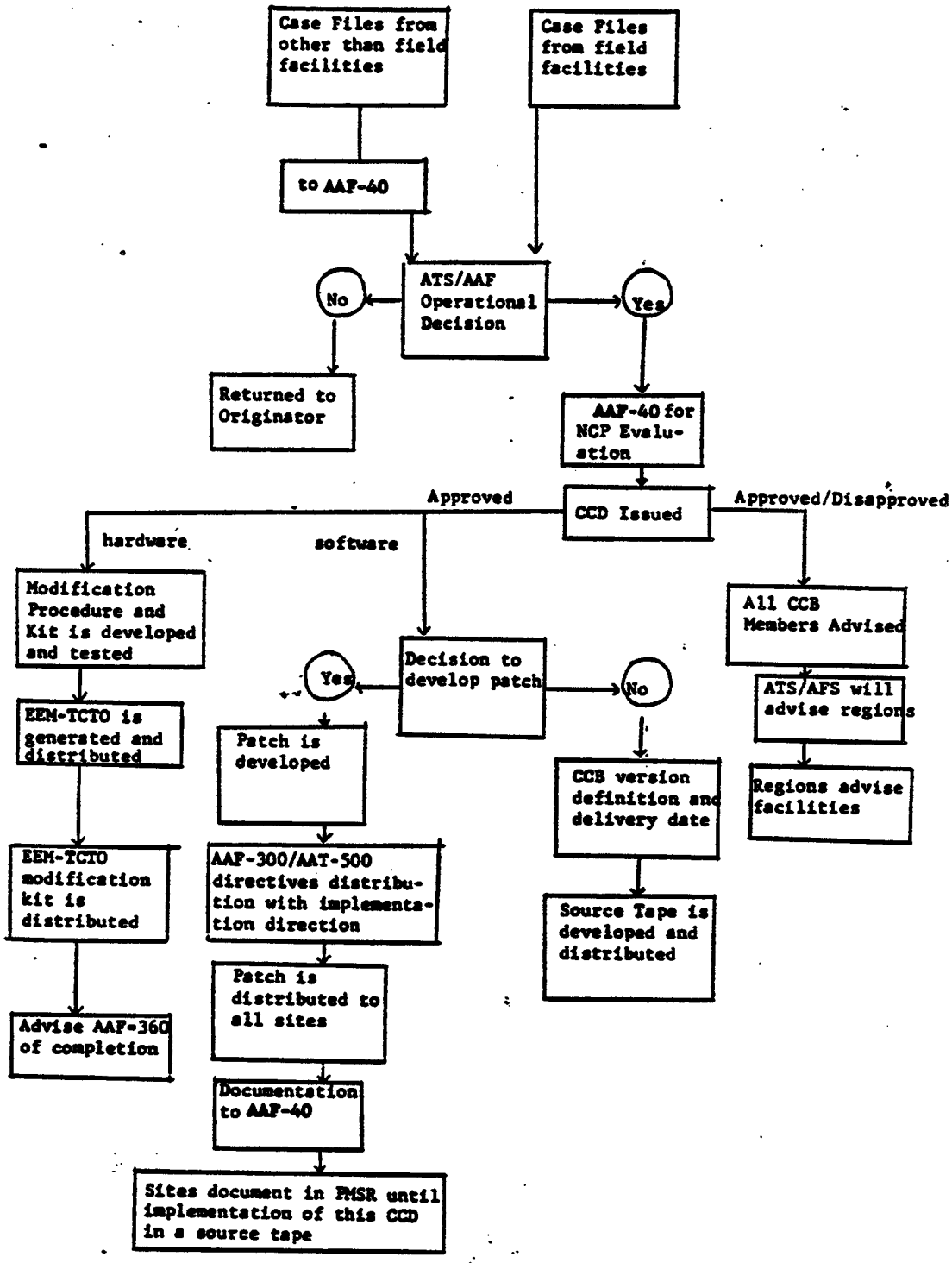
35. MODIFICATION DISTRIBUTION. Development and distribution of approved program modifications to facilities may be authorized by the AAT Automation Division (AAT-500) or the AAF Radar/Automation Engineering Division (AAF-300) for programs under their jurisdiction. They will provide the regions and field sites with an expected distribution date. AAT-540 or AAF-360 will develop and distribute the modification, and implementation by the facilities is expected to be completed as specified in the Site Program Bulletin that is distributed with the modification.

36. HARDWARE CHANGES. For proposed hardware changes for those automation elements under the jurisdiction of the AAF, the general flow is shown in Figure 8.

37. DEVELOPMENT AND DISTRIBUTION OF HARDWARE MODIFICATIONS. When a CCD is issued for a hardware modification, AAF-360 will develop a prototype modification for verification testing. During the testing, the modification will be improved as required for national implementation. If a kit is required, action will be initiated to have the kit fabricated and stocked, and distribution of the EEM chapter will be held until the kits are available. The final draft EEM or TCTO will be generated and forwarded to the appropriate Headquarters office for approval. All necessary documentation and kits should arrive at the facility at the same time. After completion of the modification, the site shall forward status information to AAF-360.

38. - 40. RESERVED.

FIGURE 8. CASE FILE REVIEW CYCLE



CHAPTER 5. EXCLUSIONS

41. SOFTWARE. Locally developed and maintained computer programs excluded from these procedures:

    a. ARTS I at Atlanta, Georgia Tower

    b. ARTS at Knoxville, Tennessee Tower

    c. ARTS IA at Kennedy International Airport

    d. Simplex Programs (Albuquerque, Salt Lake City, Minneapolis, Miami)*

    *Although excluded from the central maintenance concept of these procedures, these programs are configuration controlled and changes shall be processed according to Chapter 2.

42. HARDWARE. The equipment identified in SPO-MD-001, NAS ATC Subsystem Baseline Configuration, as interface end items may be modified by cognizant authorities in accordance with agency Order 6032.1 provided they do not affect the en route and/or terminal automation program. Washington offices and services with primary responsibility for interface end items will submit case files or NCPs as appropriate in accordance with this Order or agency Order 1800.8 when they recognize that a modification to the interface end item will affect the NAS automation.

43. ENVIRONMENTAL SUBSYSTEMS. All environmental subsystems are excluded from this Order.

44. - 50. RESERVED.

CHAPTER 6. PROCEDURES FOR DELIVERY AND IMPLEMENTATION OF SYSTEM TAPE UPDATES

51. RESPONSIBILITIES.

a. National Field Support Group (NFSG).

(1) When the next system tape delivery has been defined and scheduled, the NFSG via Site Program Bulletins shall initiate a phased delivery sequence of items specified for that system tape delivery.

(2) Site Program Bulletins issued by the NFSG will normally accompany each delivery and will describe the package contents.

(3) Items scheduled for delivery but omitted from the package will be so noted and a proposed delivery date included in the Site Program Bulletin.

(4) The NFSG will adjust the interval between events to compensate for a varying degree of field resource utilization and effect a smooth transition.

b. Field Sites.

(1) Field sites shall schedule their local resources keeping in mind that because of schedule overlap their staffs may be implementing two systems concurrently.

(2) Facility action(s) described under each event are intended to suggest those areas of endeavor for which manpower and hardware resources should be scheduled to evenly distribute the workload throughout the complete bring-up cycle.

(3) Facilities shall report any deficiencies in tapes or documentation immediately to NFSG with copy to regional automation branch.

52. DESCRIPTION OF EVENTS. The eight events listed below detail the sequence of system deliverables by the NFSG to en route and ARTS-III computer sites.

a. Event I - Notification of Planned System Changes.

(1) The NFSG shall distribute a notification to ARTCC or ARTS facilities and the regional Air Traffic Automation Branch and the Airway Facilities Division that includes the following:

(a) Identification of the planned system version and sub-version.

(b) A list of functional changes to be included in that system.

(c) Tentative distribution schedule Events II through VII of this chapter.

(d) Proposed changeover date.

(2) The en route and terminal facilities, upon receipt of the initial package, shall analyze the changes and begin advance planning, including intra/inter-facility coordination for the following:

(a) Procedural changes.

(b) Training.

(c) Hardware and manpower resources required to implement necessary changes.

(3) The en route and terminal facilities within 30 days shall notify the region if the proposed implementation date cannot be met because of resource limitations. In this event, the facility shall also notify the region of the nature and duration of the resource limitation. Failure to respond indicates an acceptable proposed implementation date.

(4) If any terminal facilities require a change in site adaptation, they shall begin collection of necessary data.

b. Event II - Preliminary Documentation.

(1) The NFSG shall distribute the following preliminary documentation and information:

(a) Errata changes to existing documents (CPFSs, Users' Manuals, etc.) and a brief description of the functional changes included in this system delivery.

(b) Suggested test methods of plans that will assist the facilities in developing their local test plan.

(2) The en route and terminal facilities, upon receipt of the data specified in Event II (Item 1a above), shall begin a concentrated effort to accomplish the following:

(a) Finalize procedural changes with emphasis on changes that affect external facilities.

(b) Finalize training plans and procedures.

(c) Prepare necessary test plans and procedures.

(d) Collect required adaptation data - (en route only).

(e) Finalize collection of site adaptation changes and forward to their ASFs. (Satellite ARTS facilities only).

(f) Analyze local non-operational programs for possible impact.

c. Event III - Distribution of Required Support Software.

(1) The NFSG shall identify and distribute the following:

(a) Those support software components (NOSS, Library, COMPOOL, ARTS-III Field Library Tape, etc.) required for the new operational software.

(b) Site adaptation symbolic program tape for maintenance programs. (Not applicable to ARTS-III facilities).

(2) The en route and terminal ASF facilities will verify operational acceptability of all support software (excluding maintenance and diagnostic programs).

(3) The en route facilities shall:

(a) Commence assembly of adaptation data.

(b) Commence assembly of bulk store flight plan tape, if required.

d. Event IV - SYSOUT Tapes and Program Listing Tapes.

(1) The NFSG shall distribute SYSOUT tapes to en route facilities and program listing tapes to the terminal ASFs.

(2) The en route facilities will print out SYSOUT tapes.

(3) The ASFs shall commence assembly of adaptation data and generate program and adaptation listings as required.

e. Event V - System Software Delivery.

(1) The NFSG shall integrate and test as a single system the operational and functional (CDC/DCC) en route software.

(2) The NFSG shall distribute the system tape(s) to the en route and terminal ASFs as appropriate.

(3) The en route and ASF facilities shall merge site adaptation with the new system software.

(4) The en route facilities shall:

(a) Generate local site tapes or disks.

(b) Begin limited maintenance and diagnostic testing of the functional software as a non-integrated unit.

(5) The ASFs shall:

(a) Generate operational program tapes for Satellite ARTS Facilities (SAFs) under their jurisdiction.

(b) If available memory permits, verify the load capability of new program tapes.

(c) Label and distribute operational program tapes and required listings to SAFs as required by ATS and AFS.

f. Event VI - Status Accounting.

(1) The NFSG shall distribute:

(a) PMSRs to en route and terminal facilities.

(b) Initialization tape to the en route facilities.

(c) Finalized operational changeover date--this finalized date will be determined by the Air Traffic Service based on field resource limitations communicated to the NFSG.

(2) The en route and terminal facilities shall:

(a) Convert and test verified patches contained in the PMSR.

(b) Utilize the PMSR as a baseline to verify the accuracy of reported PTR closures, newly implemented functions, and unresolved PTRs.

(c) Test for the presence of PTRs discovered locally on previous systems which were reported too late to be included in this PMSR. Except for emergency PTRs, other program troubles in the previous system which surface after receipt of the current system tape should be held in abeyance. If the condition is detected in

the current system, the PTR shall be reported against the current tape.

(d) Convert and test patches for local in scope case files as authorized in Chapter 3.

(e) Report PTRs against the tape as soon as possible.

(f) Complete system testing and verify operational acceptability. A test activity report shall be submitted in accordance with Chapter 4, Paragraph 34 of this Order. If the facility anticipates the need for NFSG support services beyond those provided during regularly scheduled hours, notification shall be forwarded to the regional office and precede changeover by two weeks so that the field support group can schedule the necessary support resources.

g. Event VII - Final Documentation.

(1) The NFSG shall distribute final updates to all revised documents.

(2) The en route and terminal facilities shall update all appropriate documents to reflect the current status of the system.

h. Event VIII - Operational Changeover.

(1) The NFSG will ensure adequate coordinated support is provided for sites starting operation on a new system tape.

(2) The en route and terminal facilities will ensure that procedures and training previously implemented are achieving the desired results.

(3) Operational notification.

53. - 60. RESERVED.

CHAPTER 7. HARDWARE DISCREPANCY REPORT

61. REPORTING HARDWARE TROUBLES. The Hardware Discrepancy Report (HDR), FAA Form 6030-3 (Figure 9) is the document to be used for the reporting of hardware troubles, i.e., hardware not operating according to the hardware specification. The HDR shall be used for discrepancies of an unusual or recurring nature and/or problems for which a fix is required other than a failed component replacement. The HDR shall not be used to describe requested changes nor to suggest hardware improvements as these functions are reserved for the case file/NCP form. In addition to its primary use as a reporting document, the HDR is used to record the action taken to correct the problem.

62. HDR HANDLING BY AAF-360. Every valid HDR received by AAF-360 will be described in a national Hardware Maintenance Status Report (HMSR) along with its identification and other comments. The national HMSR shall be produced and maintained by AAF-360 and will be distributed on a regular basis. AAF-360 shall initiate all required corrective actions for every valid HDR received culminating in the issuance of an Electronic Equipment Modification (EEM) Chapter or Time Compliance Technical Order (TCTO). This corrective action shall be reflected in the HMSR.

63. HDR GENERATION. When it is suspected that a piece of NAS hardware is not functioning within its specification as defined in the equipment instruction books, a proposed HDR shall be generated for initial review by the facility. This review is to eliminate misunderstandings, human errors and to identify proposed improvements which should be reported as case files as early as possible.

    a. If the initial review of the HDR results in the determination that the problem is in fact an improvement beyond the scope of the hardware specification as defined in the equipment instruction books, the HDR shall be retained at the facility and the improvement should be processed as a case file.

    b. The facility should examine the national HMSR to determine if the HDR is a duplicate of a previously reported problem. If the HDR is a duplicate, it shall be marked as such and forwarded to AAF-360 and a copy sent to the regional AAF division to indicate the scope of the problem and to transmit additional background and any additional problem information to aid in the analysis of the problem.

    c. If the review indicates a valid HDR is not previously identified, an HDR number will be assigned. The HDR should be examined for correctness and completeness with emphasis placed on the information provided under "Description of Problem." The HDR should then be forwarded to AAF-360 and a copy sent to the regional AAF division along with any significant documentation.

FIGURE 9. HARDWARE DISCREPANCY REPORT

RIS: AF 6030-10

Please Type	HARDWARE DISCREPANCY REPORT	☐ DUPLICATE HDR EXISTS

HDR NUMBER	1	2	3	4	5	7	8	9	10	11	TYPE FACILITY	ORGANIZATION
											ENROUTE	AF
											TERMINAL	AT

HARDWARE SUBSYSTEM	HARDWARE TYPE	HARDWARE MODEL	SYSTEM TAPE ID	23	24	25	26	27	28	29	PRIORITY

REFERENCE(S)	ATTACHMENT(S)

DESCRIPTION OF PROBLEM

ORIGINATOR'S SIGNATURE AND ROUTING SYMBOL

ACTION TAKEN BY AF-360

AF-360 USE ONLY	DATE	INITIALS	FACILITY USE ONLY	DATE	INITIALS
HDR RECEIVED			HDR INCLUDED IN HMSR		
HDR INCLUDED IN HMSR			EEM AVAILABLE FOR USE		
FIX WAS AVAILABLE TO TEST			EEM INSTALLED		
FIX VERIFIED BY TEST GROUP			EEM NUMBER		
EEM DISTRIBUTED			*SEE REVERSE SIDE FOR INSTRUCTIONS*		

FAA FORM 6030-3 (8-72)

FIGURE 10. REVERSE OF HARDWARE DISCREPANCY REPORT

INSTRUCTIONS FOR COMPLETING FAA FORM 6030-3

ENROUTE - TERMINAL - Check one

AF - AT - Check the service of the PTR originator

HDR No. - Box 1 & 2 - Contain month
Box 3 & 4 - Contain day of month
Box 5 - Contains last digit of year
Box 7, 8 & 9 - Each site shall number their HDR's sequentially starting at 001 at the beginning of each calendar year. If more than 999 numbers are required, Box 7 will contain an alphabetical character.
Box 10 & 11 - Identifies the originating facility.

HARDWARE SUBSYSTEM - Subsystem utilizing the hardware for which the HDR is written.

HARDWARE TYPE - Identification of hardware type experiencing this discrepancy.

HARDWARE MODEL - Identification of hardware model experiencing this discrepancy.

SYSTEM TAPE ID - That the HDR was initially identified on:

Box 23 - A - ARTS
C - CCC
D - CDC
E - DCC
Box 24 - A - Operational Programs
D - Diagnostic Programs
M - Maintenance Programs
N - Support Programs
Box 25, 26 & 27 - Sequential No. (3d digit may optionally be used as a descripter)
Box 28 - Facility Adaptation Update Level
Box 29 - Facility Patch Update Level

PRI - Enter one of the following:

E - Emergency is a problem that prevents a site from continuing automation activities on this system.

H - High priority is a problem that can be procedurally handled but has an adverse affect on the system.

L - All others.

REFERENCES - Indicate the document(s) and paragraph that define(s) how the hardware should respond.

ATTACHMENTS - Indicate what type and number of attachments.

DESCRIPTION OF PROBLEM - State:

(a) The problem in detail.
(b) The expected results.
(c) The actual results.
(d) The system configuration, if pertinent.
(e) The adaptation, if unique to the problem.
(f) Patches that may be a factor.
(g) Is problem transit or duplicatable?
(h) Any other facts considered to be pertinent.
(i) The suggested fix, if one is available.

ACTION TAKEN - The action taken to resolve the problem or close the HDR.

APPENDIX 1. GLOSSARY

Area Support Facility (ASF). Those Automated Radar Terminal System (ARTS) facilities equipped with high-speed peripheral equipment used in support of ARTS facilities.

Baseline Document. The identification of specific end items as listed in SPO-MD-001, "NAS Air Traffic Control (ATC) Subsystem Baseline Configuration."

Configuration Control Decision. A record of decision approving a baseline configuration and all subsequent changes to end items.

End Item. Descriptive designation for a deliverable product.

Functional Computer Programs. Operational computer programs for the IBM 9020E Display Channel Complex (DCC) and the Raytheon Computer Display Channel (CDC).

Hardware Discrepancy (HD). A problem encountered and diagnosed as any NAS hardware not performing in accordance with current baseline documents.

Hardware Improvement (HI). A proposed change that would improve the design of any NAS hardware and which would thus result in a change to any baseline document. These changes should be suggested on FAA Form 1800-2, "NAS Change Proposal" and processed according to Chapter 3.

Hardware Maintenance Status Report (HMSR). A national document published by the NFSG as required to provide automation hardware status accounting and modification information.

Information Patches. These are corrections generated by a site and have not had sufficient baseline testing to confirm their system validity. When they are distributed to the field, they will be included within the unresolved section of the PMSR. If a site encounters the same or similar problem, that the patch was designed for, it may use the information patch as a basis for the development of its own patch. Implementation of patches so developed should be in accordance with Chapter 2.

National Field Support Group (NFSG). This group located at NAFEC is composed of representatives of the Development Programming Branch (ARD-140), the Automation Engineering Support Branch (AAF-360) and the National Data Systems Branch (AAT-540) and is the interface with the field facilities for these branches.

Operational Computer Programs. Computer programs for the control of air traffic that have reached Initial Operating Capability (IOC) at the first facility and have been transitioned to the operating services.

Program Improvement (PI). A proposed change that would improve the design or code of a program which would not result in a change to any baseline document. These changes should be suggested on FAA Form 6100-1, "Program Technical Report."

Program Maintenance Status Report. A national document published by the NFSG with each new system tape which provides status accounting and patch information for the various operational software packages.

Program Trouble (PT). A problem encountered and diagnosed as any computer program in the NAS not performing in accordance with current baseline documents.

Satellite ARTS Facility (SAF). Those ARTS facilities which lack sufficient equipment to assemble operational program tapes and who are supported by an Area Support Facility (ASF).

Support Programs. The nonoperational support system, the data reduction and analysis program and other programs used for system support.

Test and Maintenance Computer Programs. Computer programs used for equipment checkout, integrated testing, diagnostic and maintenance purposes.

Time Compliance Technical Order (TCTO). The equivalent of an FAA Electronic Equipment Modification (EEM) that conveys authorization and instructions to modify AN/FYQ-47/49, Common Digitizers and associated AN/FYQ and AN/FYA type equipments.

Verified Patches. These are corrections issued by central maintenance organizations following verification testing. They will be included within the Resolved section of the PMSR.