ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1370.76

1/21/92

SUBJ: Aircraft Certification Automation Program

1. PURPOSE. This order provides the strategy for the automation programs within the Aircraft Certification Regulatory Program (ACRP). It also provides the strategy for achieving the goals and objectives of the national and regional Information Resources Management Plans (IRMP) and a plan for the orderly development of work program automation and information systems. It identifies the objectives, responsibilities, philosophy, strategy, and general requirements for the automation programs developed by the Aircraft Certification Service.

2. DISTRIBUTION. This order is distributed to the branch level within the Aircraft Certification Service in Washington headquarters and Brussels, the Aircraft Certification Directorates in the regions, and the Regulatory Support Division at the Aeronautical Center. This order is also distributed to the regional Financial and Information Resources Divisions.

3. BACKGROUND. The IRMP provides the strategic overview and systems plan for the application of state-of-the-art computer technology to satisfy the information needs of the Federal Aviation Administration (FAA). This plan stresses how every employee's work environment and how they do their jobs can be impacted. Participation from all levels within the organization is essential in order to achieve the challenging goals and objectives of this program. The IRMP, Chapter 12, indicates that the future of data automation in the FAA is the development of information support systems that are user oriented, user designed, user operated, and user controlled. The IRMP recognizes that data automation can only be effective if automatic data reporting processes are developed by those who have manually executed those same processes repetitively.

a. To support the implementation of the IRMP, the Safety Information and Technology Division, APR-300, was established in 1985. The division was responsible for carrying out the plan for the Aviation Safety Analysis System (ASAS) as defined in Chapter 6 of the IRMP. The IRMP states that the long-term goal of ASAS is to develop and implement a cost-effective, fully integrated, comprehensive, and automated certification and safety information system that will meet the needs of all

organizational elements within the agency. (On September 30, 1991, APR was officially dissolved, and ASAS, as a formal effort, was no longer associated with the automation program of the Associate Administrator for Regulation and Certification (AVR).)

b. By early 1987, problems were encountered with automation systems to the extent that management became concerned with the effects these problems may have on aviation safety. The electronic telecommunications capabilities used to transmit airworthiness directives were compromised because some offices had upgraded their Lanier equipment, which was not compatible with Lanier equipment that had not been upgraded. Problems were also encountered during the prototyping of the Project Information and Control System (PICS) in the Southwest Region. These problems led to the establishment of the Information Systems Steering Group, a management-level group within the Aircraft Certification Service, whose first task was to develop a solution for an improved electronic telecommunications capability and was then tasked to develop a strategic plan for the automation programs within the Aircraft Certification Service. In April 1987, the Aircraft Certification Service formalized its first strategic plan to support the implementation of the IRMP within the Aircraft Certification Service.

4. DEFINITIONS. This section provides definitions of terms that are used throughout this Order.

a. Automatic Data Processing (ADP) includes five main functions which encompass the collection, communication, computation, control, and coordination of information. These functions are described further as:

(1) Collection of information through data collection equipment.

(2) Communication between man-machine, man-man, and machine-machine, through generating and regulating the flow of data collected.

(3) Computation with the information, such as data logging, data analysis, and data processing with the help of mathematical formulations.

(4) Control of operations, both human and mechanical, on the basis of information analysis.

(5) Logical coordination among the preceding four functions.

b. Aviation Safety Analysis System - a cost-effective, fully integrated, comprehensive, and automated certification and safety information system that was to meet the needs of all the organizational elements within the agency. The ASAS was to provide the capability of satisfying information needs, provide data support to identify potential safety issues, furnish management information to enhance employee utilization and productivity, provide the capability to respond more efficiently to internal and external information requests, and provide timely and accurate information that is easily accessible by users. Its development, implementation, and maintenance was to be coordinated and controlled through the now dissolved Safety Information and Technology Division. The system ASAS was intended primarily for use by the organizations under the former Executive Director for Regulatory Standards and Compliance.

c. Hardware - the equipment that is used to run the software programs, i.e., computer/terminal, printers, plotters, cables, etc.

d. Local Automation Programs - programs that are established to develop, implement, and maintain automation and information systems that will reside on hardware within the interfacing office. These automation and information systems are standard in structure at the national level, but the data that these systems process and store are unique to each office. These systems are designed to interface other computer systems when the data they process are required for national use.

e. National Automation Programs - programs that are established to develop, implement, and maintain an automated central repository and source of national reference material and resource information pertinent to expenditures and manpower requirements. Generally this repository will reside within other computer system environments remotely located from its users and accessed through a wide area network. Types of national automation programs include the resource planning and budget control systems.

f. Regional Automation Programs - programs that are established to develop, implement, and maintain automation and information systems that are controlled by the regional Resource Management Divisions, AXX-40, in the Central, Southwest, New England, and Northwest Mountain Regions. These systems are not redundant of ASAS systems developed by the former Safety Information and Technology Division, APR-300, and generally reside on the Data General mini-computers located at the regional office. The regional automation and information systems include systems that automate communications between

regional support divisions and program divisions, e.g., the Electronically Generated and Transmitted SF-52 System (EGATS) is used to request personnel actions; or the System for Acquisition Management (SAM) is used to request procurement actions.

g. Software - the instructions used by computer hardware to process pre-programmed commands and the supporting documentation, including user manuals, templates, etc.

h. Compatibility - Compatibility is a term applied to both hardware and software systems to describe the ease with which a computer program running on one machine may be made to run on another machine. Hardware compatibility is achieved through similarity of instruction sets (or the ability to simulate similarity of instruction sets), whereas software compatibility deals with the use of a language that can be translated into the (perhaps very different) instruction sets of several machines. Two computers are said to be software compatible with respect to a particular language if a source program from one machine in that language will compile and execute to produce acceptably similar results on the other. Computing equipment and compilers of particular manufacturers have been deliberately designed so that programs running on competitive equipment can be easily converted to run on their systems. Conversely, equipment and systems have also been designed to maximize the difficulty of converting programs so that they cannot be run on competing equipment or systems. The result has been that true compatibility is almost never achieved between equipment from different manufacturers.

i. Interchangeability - Interchangeability when used in automation has the same meaning as used in other disciplines. It is permitting mutual substitution without loss of function or suitability.

j. Portability - It often happens that a program that runs on one computer is required on a second computer that is of a type different from the first. If the program has been written in a sufficiently flexible way for such a transfer to be made relatively easily, the program is said to be "portable." A program written in an assembly language is tied to a particular computer and therefore is not portable. On the other hand, a program encoded in a machine-independent, higher level language may be portable. When talking of portability, one cannot ignore the question of efficiency. If a program is transferred from one computer to another, but runs unnecessarily slowly or occupies excessive storage on the second computer, then it is not truly portable.

5. OBJECTIVES.

a. The objectives of the strategic plan for automation programs are to assure that:

(1) The benefits of automation and information systems exceed the overhead required to maintain these systems.

(2) Adequate policies, procedures, and guidelines are developed for the use of automation and information systems.

(3) All aspects for implementing a new system are addressed, i.e., training, workload, assignments, responsibility, maintenance, human resources, etc.

(4) Automation programs are considered in AIR's planning process as approved by the Aircraft Certification Management Team (ACMT).

(5) Automation programs are given adequate priority.

b. Automation programs for the Aircraft Certification Service will provide:

(1) Tools to assist in the accomplishment of the Aircraft Certification Regulatory Program, to increase employee productivity, and to accumulate statistical information for the purpose of resource justification and management decision making.

(2) Assistance to the work force in their accomplishment of the day-to-day activities by automating their tasks where appropriate.

(3) An accessible repository of information resulting from the accomplishment of the above activities that will satisfy the information needs of the FAA and of the aviation community.

(4) With little or no additional input from those performing aircraft certification regulatory tasks, resource utilization information that is required in the budget justification and resource utilization decision process.

6. RESPONSIBILITIES. An Information Systems Steering Group (ISSG) will manage the automation programs for the Aircraft Certification Service through the policies, procedures, and guidelines established by this order.

The ISSG is a management-level group composed of the Assistant Manager of each of the directorates, AIR-100, AIR-200; Manager, System Surveillance & Analysis Division, AIR-300; Manager, Automated Systems Branch, AIR-520; Manager, Engineering and Manufacturing Branch, AVN-110. The group will be accountable to the ACMT. The ISSG will be supported by the Planning and Program Management Division, AIR-500, Information Systems Users Groups, and Information System Focal Points. The Executive Staff, AVR-10, is a support organization to the Aircraft Certification Service (AIR) and serves as the staff to AVR-1.

a. Information Systems Steering Group. The Information Systems Steering Group will be chaired by the Manager, Automated Systems Branch, AIR-520, and is responsible for:

(1) Recommending policies, procedures, and guidelines for automation programs within the Aircraft Certification Service.

(2) Recommending budget criteria established for automation programs that are included in the annual call for estimates.

(3) Approving the automation development and implementation plans developed under the direction of the Planning and Program Management Division, AIR-500.

(4) Evaluating the progress of automation programs on a minimum semiannual basis and determining any changes that may be necessary to the policies, procedures, and guidelines.

(5) Appointing representatives from within their respective component of the Aircraft Certification Service organization to serve on Information Systems User Groups (ISUG) and Information System Focal Points (ISFP).

(6) Prioritizing automation programs.

(7) Recommending national subsystem go-ahead and resource commitments to the Director of Aircraft Certification Service through the ACMT. The respective ISSG member and ACMT member will be responsible for making the final decision on their Directorate's system go-head when resources are committed within their own program.

b. Planning and Program Management Division, AIR-500. The Planning and Program Management Division, AIR-500, is responsible for:

(1) Chairing the Information Systems Steering Group.

(2) Assuring compliance with Department of Transportation/FAA directives, e.g. 1370.XX, and directives established by the former Executive Director for System Operations relating to the automation programs within the Aircraft Certification Service.

(3) Developing, maintaining, and executing the ISSG plan for developing and implementing automation programs within the Aircraft Certification Service.

(4) Assisting the ISSG in establishing the budget criteria for hardware, software, maintenance, training, etc. for the divisions and directorates to use when they are assessing the automation needs for the FY Call for Estimates.

(5) Organizing and chairing user groups that may be necessary to determine requirements for new automation programs. Notices and minutes of meetings will be sent to appropriate ISUG or ISFP members with copies to Directorate Technical Support Staffs (103's) and ISSG members.

(6) Providing guidance, direction, and technical expertise for implementing a computer application system which successfully serves the Aircraft Certification Service, and ensuring that applicable standards are met, and that compatibility, interchangeability, and portability features are considered.

(7) Coordinating the Aircraft Certification Service's requirements for automation programs with the Executive Staff, AVR-10, and ensuring that these requirements are implemented properly.

(8) Administering a continuing evaluation program to inform high-level management within the Aircraft Certification Service of the progress of implementing the plan. The Planning and Program Management Division should, with the assistance of ISFP's and ISUG's, identify where automation and information systems are not being implemented in accordance with the plan and formulate recommendations or responses for high-level management. The Planning and Program Management Division should prepare an evaluation report for the ISSG and the ACMT at least quarterly and concurrent with regularly scheduled ACMT meetings.

(9) Administering the budget resources for the execution of Aircraft Certification Automation Program and, as Information Resource Management (IRM), approving the acquisition of all AIR automation hardware, software, telecommunications, and those support activities which impact national automation programs. The support activities include training methodologies, plans, and execution.

c. Executive Staff, AVR-10. The Staff represents AIR automation interests at the agency and department level. This includes budget submissions. It works with AIR personnel to develop AVR automation policy and coordinate AIR interests with other AVR organizations. The Staff supports AVR headquarters automation activities as directed and supported by AVR organizations and ensures that agency and department policies are made known and followed.

d. Information Systems Focal Points (ISFP). The ISFP's are knowledgeable in the technical hardware and software of automation computer systems and provide oversight of the day-to-day operations and advice on plans and specifications. The ISFP's represent the AXX-103's from each of the Directorates and a computer systems analyst in AIR-520 is the responsible ISFP for headquarters support. The ISFP's are responsible for:

(1) Implementing and controlling automation programs within their assigned directorates/divisions and for providing guidance to automation staff in remote field locations. This includes maintaining inventory records of computer hardware, software, and documentation, coordinating training programs, maintaining programs for hardware, procuring of supplies, maintaining system configuration, and general administering local systems, etc.

(2) Assuring the maintenance of an on-site library that contains user manuals, microfiche, system descriptions, procedures, orders, directives, etc., that support on-the-job training (OJT) activities, standard operating procedures, and system configuration and maintenance activities.

(3) Establishing the specific requirements for implementing hardware and software necessary to implementing and maintaining local area networks where they are required.

(4) Facilitating the exchange of information between directorates, field offices, and headquarters relating to the implementation and operation of automation programs within the Aircraft Certification Service. Those focal points are expected

to act as conduits for the two-way communication necessary to establish a functioning automation system that will be useful to both employees and managers.

(5) Working with ISUG's to identify problems and/or enhancements with automation and information systems.

(6) Assuring the maintenance of security procedures for access to local systems and ensuring that procedures are defined for encouraging backup of all mass storage devices, e.g. hard disks.

(7) Keeping ISSG members apprised of ISFP meetings and results of the meetings.

e. Information Systems User Groups (ISUG). Members should have working knowledge of the automated system(s) they are supporting. The ISUG are chaired by AIR-520 personnel, or their designees, and are composed of representatives from each of the directorates and headquarters divisions. Representatives from AVN-110 will be encouraged to attend meetings of the user groups. Representatives to each user group will be expected to be an active knowledgeable participant in the respective group. Each ISUG is responsible for:

(1) Establishing the detailed requirements for specific automation and information systems.

(2) Assuring that detailed requirements established for specific automation and information systems comply with the automation environment established by this order.

(3) Assuring that all the user requirements of automation and information systems are included in the requirements document.

(4) Assuring the development of an orderly implementation program, assessing the benefits gained by the new system, identifying problems, and recommending enhancements and/or deficiencies to the Planning and Program Management Division, AIR-500, for corrective action.

(5) Keeping ISSG members apprised of meetings and results of the meetings.

f. Staff Office, Office, and Branch Managers. Staff office, office, and branch office managers are responsible for:

(1) Supporting the Aircraft Certification Service automation programs by dedicating staff resources when required to formulate the requirements of a new system or enhancement program.

(2) Ensuring that adequate procedures are in place for implementing a new system and that old procedures are terminated when replaced with new ones.

(3) Ensuring that the training required to support automation programs is provided.

(4) Ensuring the integrity and accuracy of data stored in information systems by monitoring the data through the use of information reports.

g. Users. Users are responsible for:

(1) Using the problem report system to identify problems with automation and information systems. (Order 1370.52B, Appendix 5, Information Resources Management - Policies and Procedures, August 27, 1984)

(2) Working with ISUG's and ISFP's to identify program requirements for new systems and deficiencies with existing systems.

7. STRATEGY. The strategy for developing automation and information systems will be to use a structured systems analysis approach applying total quality management (TQM) principles. Structured systems analysis breaks down a system into manageable pieces or modules that can be managed throughout the life expectancy of the system. Structured systems analysis uses data flow diagrams, a data dictionary, structured English, decision tables, and decision trees, in a controlled documentation environment to systematically analyze problems and determine their resolution prior to and after system design and implementation. It also provides a method for communicating a system's design among the members of a large design team and among the ISUG's. The TQM emphasizes the need to identify customers for the purpose of addressing their needs as defined by them. A more complete description regarding the procedure for the implementation of national systems can be found in appendix 1.

a. General. This strategy focuses on those automation programs where the Aircraft Certification Service is the source (and maintainer) of information. Automation programs where the

source of information is from outside the Aircraft Certification Service, but whose information is of use to the Aircraft Certification Service, shall be coordinated with the appropriate organizations on a case-by-case basis.

b. Baseline. The requirements for automation and information systems will be determined initially by defining current systems implemented by the ACRP. Source documents, such as public service indicators, Project SMART, or other relevant documents, will be used to determine additional automation needs.

c. Standards. The initial phases of ADP development will include the specification of general and detailed standards that are required to optimize system capability, enhance interoffice efficiency, reduce overhead activity, and minimize training impact. The standardization requirements must consider all aspects for automation and information systems, including human factors, data input, compatibility with national and regional level computer networks, and training.

d. Training. Employees should work with their supervisors and training coordinators to include as part of their Individual Development Plan (IDP) emphasis on automation environments and associated applications as necessary. The objectives for training for office employees are divided into two categories: managers and non-managerial.

(1) Managers. Training objectives include, but are not limited to:

(a) Understanding of, and ability to use, automation technology and computer-based systems in general.

(b) Knowledge of benefits gained by the use of automation technology and computer-based systems. Areas of focus are standardization, improved accuracy, control, accessibility, and use of information, and man-machine interface considerations.

(c) Knowledge of automation philosophies, plans, and schedules.

(2) Non-managerial employees. The objectives for technical, program support and clerical/secretary personnel are similar, but they are met through different means:

(a) Understanding of automation technology and computer-based systems from the perspective of achieving and maximizing job performance.

(b) Understanding of the overall organizational goals, objectives, and priorities and where they fit into the organization.

(3) Each division and directorate should prepare a training program implementation plan. The plan should include training requirements, deliverables with schedule, approach for new employees and existing employees, and methods and techniques used to develop the training program, e.g., interviews and observation. A documentation system will be used to define standard operating procedures helping users locate instructions on how to use a specific computer-based or manual system.

(4) Training and personnel coordinators within each division and directorate will develop a plan resulting in appropriate training, using existing programs already established or as established within the OATS environment.

(5) Alternatives for training are:

(a) On-the-job training using standard operating procedures (SOPs), classes, one-on-one training, new employee orientation program, etc.

(b) Contract with professional and/or academic institutions.

(c) On-line tutorials, self study guides, VIDEO.

(d) On-line help.

(e) Train-the-trainers approach.

(f) Combinations of any of the above.

(6) National systems developed by Aircraft Certification Service will provide for a training program which will include self-study materials and/or formal classroom training.

(7) Training for local systems will be the responsibility of the organization which developed the particular system.

e. Standard Operating Procedures. For their own local systems each division and directorate should develop standard operating procedures that identify responsibilities for employees and define their interface with new or existing automated systems, i.e., who is responsible for data entry, ensuring data

integrity, acquiring user Identifications (ID's), etc. Procedures for national systems of interest only to Aircraft Certification will be developed by AIR-520 and approved by the ISSG or appropriate representatives. Procedures for other national systems will be developed in a coordinated effort with AIR-520 and other appropriate organizations and appropriate Aircraft Certification personnel as determined by division and directorate managers and directors.

f. Implementation Plan. Each division and directorate should prepare an implementation plan for the orderly deployment of hardware and software within their respective organization.

(1) The detailed plan should be based on needs, feasibility, and risk assessments. The format for the plan will be provided by AIR-520. Each division and directorate will update its plan annually.

(2) Deployment may also be based on immediate problems that have been identified, opportunities for benefit, and directives that require the collection of information for management reporting purposes.

(3) The plan should comply with national and regional guidelines set forth in the IRMP's, this order, and other pertinent correspondence that identifies constraints and requirements for automation and information systems. Definition of constraints and requirements will be determined by the parties responsible for the design approval of the system.

g. Computer Inventory. The Automated Systems Branch, AIR-520, will establish an inventory of automation hardware and software for the Aircraft Certification Service.

h. User ID's. Each division and directorate should ensure that each office has user ID's and passwords it needs to access systems.

8. REQUIREMENTS. This section identifies the general requirements to ensure an orderly development of national, regional, and local automation programs.

a. General.

(1) Automation and information systems shall provide an interface to the end-user that is user-friendly. A user-friendly system may include on-line documentation and a hierarchy of menus at a minimum.

(a) The system should provide a positive response to the user of no greater than 3 seconds during peak computer utilization after the request by the user was made.

(b) If a hierarchy of menus is used, an expert mode should be provided for the experienced user. The system should be designed to allow the user to correct operational and data entry errors.

(2) A security system shall be provided to ensure protection and reliability of automation and information systems.

(3) Hardware and software chosen by AIR-520 and ISFPs are always within the constraints of FAA and DOT standards. Only when waivers are specifically granted can exceptions be made.

b. National Automation Programs.

(1) All platforms, stand-alone microcomputers, local area networks (LANs), wide area networks (WAN), and mainframes, will be evaluated by AIR-520 for appropriate implementation of national automation programs.

(2) When national programs are designed, attention will be paid to the possibility of "queries" from within and outside the Aircraft Certification Service. This would include public access to public information.

(3) All national programs resident on the mainframes will be designed to allow local personal computers (PC) to selectively download information to appropriate software for processing. National programs will be designed to accept batch upload from PCs. Redundant data entry shall not be required.

c. Regional Automation Programs. The regional Data General mini-computer hosts all regional automation and information systems. Field offices that are not collocated with the Data General mini-computer will require a WAN to access these systems. The communications capabilities required to support regional automation and information systems should be integrated with the communication capabilities provided to support national database communication requirements. Offices that are collocated with the regional mini-computer should have dedicated wiring between the program office's LAN area network and the region's Data General mini-computer.

d. Local Automation Programs.

(1) In accordance with the requirements established by the DOT and the national and regional IRMP's, the equipment

hardware and software must comply with requirements necessary to establish an environment defined by the OATS contract or as excepted by AIR-520 or AVR-10 as the headquarters IRM, or AMS.

(2) With regard to LAN's, topology and implementation of system architecture will be dependent on the size and configuration of each office in which the network will be installed and should be determined by the local ISFP and AIR-520.

(3) Software programs which reside on LAN's, but support national programs, must be standardized within each program function. This will ensure data integrity and allow for easy program maintenance on a national scale. The LAN will be capable of data transfer with national programs and other offices within the Aircraft Certification Service.

(4) The LAN's should be integrated with office automation applications such as word processing, spread sheet programs, database, graphics, security, etc., and other ADP capabilities such as printers, modems, etc., in order to effectively use the communication networks.

9. INFORMATION CURRENCY. Any deficiencies found, clarifications needed, or improvements to be suggested regarding the content of this order should be forwarded to the Aircraft Certification Service, Administrative Management Branch, AIR-530, Attention: Directives Management Officer, for consideration. Your assistance is welcome. Federal Aviation Administration Form 1320-19, Directive Feedback Information, is located on the last page of this order for your convenience. If an interpretation is urgently needed, you may contact the Automated Systems Branch, AIR-520, for guidance, but you should also use the FAA Form 1320-19 as a followup to verbal conversations.

Thomas E. McSweeny
for M.C. Beard
Director, Aircraft Certification
Service

APPENDIX 1. ISSG OPERATING PROCEDURES

1. STRATEGIC PLAN FOR AUTOMATION PROJECTS. To establish a strategic plan, a formal call will be made to all members of the Aircraft Certification Service. This process would be utilized every 3-5 years to identify automation needs for the ACRP. New projects may be proposed at any time through the ISSG as defined in paragraph 3. The dates below refer to the chronological schedule for the year of the call.

a. Call for Projects (Nov. 1 - Nov. 22).

(1) The ISSG will initiate a Call for Automation Projects to the entire ACRP work force. This will be accomplished with a letter asking for ideas on national automation projects which would assist employees in accomplishing their required work functions.

(2) Responses to the Call will be accomplished by filling out the attached Project Concept Paper Form which will be forwarded to the relevant ISSG member in the directorate/ division. Concept papers will be no longer than 3 pages and contain a narrative on the following elements:

(a) Statement of Need.

(b) Organizational Units Impacted.

(c) Description of Work to be Automated.

(d) Costs and Benefits.

(e) Description of Options Considered.

(f) Description of How Function is Currently Being Performed.

(g) Requestor's Name, Routing Symbol, and Position.

b. Evaluation and Consolidation (Nov. 22 - Dec. 15).

(1) The ISSG will consolidate the concept papers and evaluate each one. Evaluation criteria will include factors such as who would benefit from the proposal; the importance of the function being automated; the extent to which automation would facilitate work functions; and an initial assessment of cost and benefits.

(2) The ISSG will consolidate those concepts which best meet the evaluation criteria with existing automation projects identified in the latest strategic plan.

(3) The appropriate ISSG member will notify the project suggestor of the disposition of the suggestion.

c. Revised Draft Strategic Plan.

(1) The ISSG will develop a revised DRAFT strategic plan which briefly describes each project, the intended customer, benefit, and identifies any changes to the existing strategic plan. (Dec. 15 - Jan. 15)

(2) The DRAFT plan will be coordinated by AIR-500 and distributed to field office and headquarters branch level for input. (Jan. 15 - Jan. 29)

d. Finalized Strategic Plan (Jan 29. - Feb. 14).

(1) The ISSG will consolidate input from field offices and branches to finalize the ACRP Strategic Automation Plan for AIR-1 signature.

(2) The final ACRP Strategic Plan will be distributed to all employees.

NOTE: All dates are tentative.

2. ANNUAL PROJECT PRIORITIZATION (Feb. 14 - Mar. 1). (See paragraph 4 for prioritization criteria.)

a. Annual review and prioritization. Annually, the ISSG will review all automation projects and prioritize activities between and within each system.

(1) Priority should be given to ongoing projects in development or test phases, and maintenance and enhancements to existing systems if they are warranted.

(2) Activities within projects can be prioritized as well.

b. Periodic review. The ISSG will conduct a periodic review of those systems not sponsored by AIR to determine the level of support by AIR; e.g., Service Difficulty Reporting Subsystem.

(1) AIR-520 will be requested to brief the ISSG on the status of projects.

(2) The ISSG will determine the need to provide a representative to FAA working groups for the projects of interest.

c. Recommendation of priorities. Priorities will be recommended to AIR-520 for input to the formulation of the ACRP Annual Business Plan. On approval of the Plan, AIR-520 will bring these priorities to AVR-10 and will negotiate on behalf of the ISSG for resources for our priorities.

d. Revalidation of spending plans and review of project plans. Once funding levels are known, the ISSG will revalidate spending plans and review project plans for the fiscal year. It is anticipated that a meeting will take place in the fall.

e. Approval of and operation within priorities. Once the ACMT has approved these priorities and the funding level for automation projects is resolved, the ACRP is expected to operate within these priorities. If a change is warranted, AIR-520 on behalf of the ISSG must communicate significant changes in funding levels or project accomplishments to AIR-2.

3. PROJECT INITIATION, REVIEW, AND APPROVAL PROCEDURES.

a. Project Initiation.

(1) Initial Concept Paper Development. Projects will be initiated by ISSG approval or mandates from higher levels of management. Each project will have an initial concept paper containing the information on the attached form.

(2) Once a project has been initiated, the ISSG will establish and appoint members of the project's ISUG. The ISUG members will be selected based upon the following criteria:

(a) Members should be end-users of the proposed system.

(b) Members should have experience with the function being automated.

(3) An ISSG contact will be identified for each system. The ISSG contact should be familiar with the work function that is being automated, stay abreast of progress, and provide management emphasis and support. The contact will also

serve as consultant to the AIR-500 project manager, represent the system to other FAA managers as needed, and assist with the deployment and operational use of the system.

b. Project Review and Approval.

(1) Refined concept paper development. Once a project has been initiated and preliminary requirements have been developed with the ISUG, AIR-520 will develop a refined concept paper. This refined concept paper will include all factors on the initial concept paper and an initial exploration of automation options with corresponding rough estimates of costs and benefits. Options explored should include a review of existing software; costs and benefits should include both dollar and human resources costs associated with development and implementation of the system. This paper will be coordinated with the ISSG contact.

It is recognized at this point that the options and costs and benefits are rough estimates since the full requirements process has not yet occurred.

(2) Concept paper approval. The ISSG Contact will submit the refined concept paper to the ISSG for approval. If the ISSG approves the concept paper, AIR-520 is authorized to continue working with the ISUG and, as necessary, with the ISFPs on the requirements, design, and test documents as long as the project does not deviate significantly from the approved revised concept paper. As the ISUG and AIR-520 complete these major phases in project development, a statement of declaration will be added to each document indicating that the project remains consistent with the approved refined concept paper.

(3) Program schedule. A milestone schedule should be prepared when appropriate and included as part of the refined concept paper.

(4) Ongoing status updates. The ISSG Contact will present status reports to the ISSG semi-annually. The status report will contain: a system description; proposed activity for the current fiscal year with milestones; proposed activity for the next fiscal year; and any issues which the ISSG should be aware of or needs to address. These issues may include infrastructure support issues (e.g. training).

(5) Deviations from the approved refined concept paper. At any time when the project deviates significantly from the approved refined concept paper, AIR-520 will notify the ISSG contact. Together, they will identify the proposed changes to

the ISSG, using the latest approved refined concept pPaper for the project and adding the proposed changes, the rationale for the proposed changes, and the implications of those changes. The ISSG will act in an expedient manner to resolve these changes. The Refined Concept Paper will be altered, if necessary, and approved by the ISSG. The refined concept paper will therefore serve as an audit trail for automation projects.

4. PROJECT PRIORITY EVALUATION CRITERIA. The following criteria will be used in prioritizing automation projects:

a. Feasibility.

b. Willingness to commit to long-term development.

c. Ongoing or new project.

d. Benefit to work force/number and quantity.

e. ACMT workload priorities.

f. Overall cost of development.

g. Operating cost.

h. Benefit to public, other FAA elements.

i. Criticality of work function.

j. Maintenance/enhancement to existing programs.

k. Termination vs. continuation of operation.

l. Complexity.

m. Commercial availability of similar database.

5. PROJECT DEVELOPMENT AND IMPLEMENTATION. At the direction of the ISSG and AIR-520, the ISUG will develop an implementation plan for new automation programs.

a. Plan development. The plan will emphasize the benefits of the program and how it operates to those the end-users. It will describe the training, manuals, equipment, and hotline support which will be provided. It will have provisions for:

(1) Informing users about the system.

(2) A method of providing feedback on acceptability of the system.

(3) If appropriate, a method for users to self-evaluate their proficiency in the use of the system.

(4) The designation of responsible organizations for actual implementation.

b. Plan implementation. Designated directorate and headquarters offices will implement the plan. The ISSG members will participate in national or regional telecons to inform the organization of the forthcoming introduction of the system. The ISSG members and ISUG members will participate in briefings introducing the system to their organizations. Managers will participate in the introduction of the system to convey their support of the system and to ensure that the benefits of the system are described.

c. Monitoring progress. ISSG members will monitor progress and arrange to have local feedback on system implementation. Serious issues that warrant national attention will be brought to the attention of the AIR-520 Project Manager.

6. EVALUATION. An evaluation of operational programs will be conducted approximately 1 year after introduction. Follow-on evaluation should be conducted every 3 to 5 years or more frequently depending on the results of previous reviews. The evaluation will examine whether the system is being used, whether it is performing its intended function, the adequacy of training, the adequacy of support (hotline, operating manuals, equipment), operational resource needs, usefulness to employees, and overall effectiveness of the complete system.

An evaluation group will be formed and chartered by the ISSG to conduct the evaluation, report results, and make recommendations. The ISSG will determine the appropriate actions.

7. NATIONAL IMPLEMENTATION OF NEW HARDWARE/SOFTWARE SYSTEMS. National implementation of new hardware/software systems will be preceded by the following:

a. Compatibility study of the interface of old and new systems. The study shall be conducted to ensure that continued functional capability exists and a plan to solve the identified problems will be formulated. This will be done by the ISFP chaired by AIR-520.

b. Training. Training needs analyses shall be conducted and training will be timed to planned usage of the new systems.

c. Transition plans. Transition plans for entry into the new systems will be developed locally and provide for accommodation of national requirements.

AUTOMATION PROJECT CONCEPT PAPER

ISSUE PAPER STATUS: ____INITIAL ____ REFINED ____APPROVED

DATE: _____

1. STATEMENT OF NEED. (Indicate why this information, process, or procedure should be automated at the national level and what function it would fulfill.)

2. ORGANIZATIONAL UNITS IMPACTED (CUSTOMERS). (Customers are defined as end-users of the proposed system. Identify internal customers by type; e.g., engineers in ACOs, policy staffs, principal inspectors; also identify any external customers; e.g., flight standards, public.)

3. DESCRIPTION OF WORK TO BE AUTOMATED. (Briefly describe the major functions of the project. Please do not describe the automation process.)

4. COSTS AND BENEFITS. (Describe possible benefits of automating this information, procedure or process.)

5. DESCRIPTION OF OPTIONS CONSIDERED. (This is optional. If you have ideas on how this could be automated, please include.)

6. DESCRIPTION OF HOW THE FUNCTION IS CURRENTLY BEING PERFORMED. (This is optional.)

7. REQUESTOR'S NAME, ROUTING SYMBOL, AND POSITION.

U.S. Department
of Transportation

**Federal Aviation
Administration**

Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order 1370.76

To: Directive Management Officer, AIR-530

(Please check all appropriate line items)

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:
(attach separate sheet if necessary)

☐ In a future change to this directive, please include coverage on the folowing subject
(briefly describe what you want added):

☐ Other comments:

☐ I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____

FTS Telephone Number: _____ Routing Symbol: _____

FAA Form 1320—19 (8-69)