

April 27, 2000

Mr. Steven Brown
Associate Administrator
Air Traffic Services
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington DC 20591

Dear Mr. Brown:

On behalf of over 359,000 members, the Aircraft Owners and Pilots Association (AOPA) submits the attached proposal to establish a streamlined Federal Aviation Administration (FAA) Aeronautical Information Services (AIS) office.

This proposal provides a framework for consolidating all of the functions related to the publication of aeronautical data. If adopted, it will reduce administrative costs and improve efficiency.

The time is right for this streamlined AIS office, largely because of the recent passage of the Aviation Investment and Reform Act (AIR-21) and because of new requirements for chart changes and electronic data to support air traffic modernization. The Act transfers the Aeronautical Charting and Cartography (AC&C) Division of the National Oceanic and Atmospheric Administration (NOAA) to the FAA, creating an opportunity for the FAA to make positive changes to the AC&C program. Making AC&C part of a streamlined AIS office will provide the organizational structure necessary for the next century of aeronautical information dissemination.

AOPA appreciates the opportunity to present this proposal to you and we look forward to hearing from you concerning the FAA's transition plan for AC&C.

Sincerely,

/S/

Dennis E. Roberts
Vice President-Executive Director
Government and Technical Affairs

Aeronautical Information Services

A PROPOSAL FOR THE CREATION OF AN AIS OFFICE



Presented to the Federal Aviation Administration
April 25, 2000

EXECUTIVE SUMMARY

The United States Congress has directed that the Office of Aeronautical Charting and Cartography (AC&C) be transferred to the Federal Aviation Administration (FAA). This directive supports the 1996 Inspector Generals' (IG's) of the Departments of Transportation and Commerce recommendation that AC&C be transferred to the FAA.

The Aircraft Owners and Pilots Association (AOPA) strongly supports this transfer and proposes that the FAA create a director level, Aeronautical Information Services (AIS) office. This action would consolidate all of the functions related to the publication of aeronautical data under one line of business and should include AC&C, Aeronautical Information Division, National Flight Data Center, NOTAM Office, Publications Division, and Aviation System Standards (AVN). Consolidation of these functions would reduce administrative costs and improve efficiency.

BACKGROUND

AC&C currently resides at the Department of Commerce in the National Oceanic and Atmospheric Administration (NOAA). AC&C prepares aeronautical charts and other products for the federal government and the public. Air traffic controllers, pilots, and manufacturers of aviation databases use AC&C products.

The geographic area of charting responsibility includes the United States, west to the Philippines, southwest to Australia, north to Greenland, south to Argentina, and east to Eastern Europe. Responsibility is currently broken down as follows: FAA is responsible for supplying data within their area of responsibility, the Department of Defense's National Imagery and Mapping Agency (NIMA)/Aerospace Center (NIMAAC) supplies data in the Pacific and other areas. NIMAAC also coordinates military data for the United States and the area beginning with the overlap with the conterminous U.S. charts, southward to 4 degrees S. latitude.

In response to the National Performance Review and the Government Performance and Results Act (GPRA), NOAA streamlined their strategic plan to more closely support their core mission of coastal environmental management. NOAA determined that AC&C does not support this mission and in 1994 began negotiations to transfer AC&C to FAA.

Because of dissenting opinions, the Office of Management and Budget (OMB) requested that the Inspector Generals from the Departments of Transportation and Commerce study the issue and make a recommendation. In September 1996, the IG's completed a special interagency review of this issue and recommended that AC&C transfer to the FAA.

AOPA POSITION

AOPA agrees with the IG's report findings that AC&C directly supports the FAA's mission of aviation safety and strongly endorses moving AC&C to the FAA.

Aeronautical charts and related publications are essential sources of information for the safety of flight and compliance with FAA regulations. AC&C products directly support the operation of the Air Traffic Control (ATC) system and the National Airspace System (NAS) infrastructure and it is therefore logical that the program's priorities and requirements be under the direct control of the FAA.

The Congressional directive states that the transfer is to occur on October 1, 2000. AOPA believes that the transfer should take place in a timely fashion, however, because of the critical flight safety issues, it should not be rushed. To facilitate a smooth transition, the FAA should strive to have a comprehensive transition plan in place by October 1, 2000.

Currently, the collection, validation, and dissemination system is fragmented and inefficient, creating a situation where improper charting policy decisions can occur. Additionally, NOAA officials (outside of AC&C) without aviation experience or expertise have the authority to make decisions that have the potential to compromise aviation safety. For example, twice in the past six years, NOAA attempted to arbitrarily discontinue World Aeronautical Charts (WACs) and raise prices for its remaining products. They did this without consulting the FAA to determine the operational and safety impacts that could occur as a result of these actions.

The FAA is responsible for the safe and efficient use of airspace. They collect, validate and disseminate aeronautical data for the publication of aeronautical products and the current AC&C office uses the information to create its charts and other products. The FAA is clearly more associated through funding, aviation safety, and program direction than any other governmental entity and we believe that AC&C is a perfect fit for the mission and organization of the FAA. In fact, for the past two fiscal years, FAA has funded AC&C almost exclusively.

AOPA proposes that AC&C become a part of a director level AIS office within the FAA. With the recent transfer of AC&C to the FAA, it is our opinion that the time is right to create an AIS office that streamlines the flow of information within the FAA. By consolidating the functions of AC&C, Aeronautical Information Division, National Flight Data Center, NOTAM Office, Publications Division, and AVN, the FAA would improve service, quality, and the availability of information critical to the safety of flight. A single AIS office would reduce administrative costs and improve efficiency. The AIS office would also enable the FAA to better track the cost of these services. When excessive costs are easier to identify and reduce, the FAA can function more efficiently while providing superior service. Additionally, this proposed AIS office is similar to the model offered by the International Civil Aviation Organization (ICAO) *Aeronautical Information Services, Annex 15, Chapter 3*.

OBSERVATIONS

Funding and Personnel: According to FAA sources, approximately \$34 million in appropriated funds are needed for the FAA to support the program (for FY 2000). However, FAA personnel have indicated that this figure does not include many of the indirect personnel and support costs that are currently absorbed by NOAA, or received through the public sale of nautical charts. Also, the current structure of AC&C prevents the development of new, safety enhancing products. Funding has been relatively flat and there has been a struggle to just maintain current services. Under current funding levels, AIS would have to eliminate an old product before developing a new one, which is not feasible since demand for current products remains strong. This lack of funding is impacting the program's ability to work on new and innovative products such as an electronic navigation database. New chart products, such as those that support the transition to RNAV and Free Flight have been curtailed due to lack of funding. In addition to this stagnation, there is growing desire for the digitization and dissemination of charts via electronic format. Because aeronautical information is critical to aviation safety, AOPA is interested in working with the FAA and NOAA to identify these funding shortfalls and ensure that all necessary resources are in place to support the program. Additionally, consolidation of AIS functions would help facilitate a secure budget process for funding a core product base and new products to support modernization.

The IG's report outlines personnel issues related to transferring AC&C to the FAA. The FAA will have to adjust its downsizing goals, as the transfer will cause an increase in full-time equivalents (FTE). Without adjustments, AC&C could be subject to unacceptable reductions in staffing. We believe that relief from current downsizing goals can be accomplished and that sufficient relief can be secured to reduce the risk of funding and personnel shortfalls.

Additionally, AIS personnel (other than AVN, and the NOTAM Office) should be collocated with existing FAA aeronautical information services personnel. Placing all of the AIS personnel at one physical location within FAA Headquarters would eliminate current program inefficiencies and improve internal coordination.

Consolidation of AC&C's Reproduction and Distribution Divisions: The AC&C program has a long history of success with a vertically integrated operation that includes printing and distribution support. Although many products are currently printed and distributed using contract support, the program has been able to maintain flexibility by preserving a core capability to handle part of these functions. Having an in-house printing and distribution capability has accommodated changes in product specifications, deadlines and technology. The FAA should retain this capability and look for ways to modernize and digitize the information.

Savings could be realized by consolidating current printing functions with a similar government printing operation. For example, currently the AC&C Reproduction Division prints aeronautical charts in the Commerce Department building on the National Mall in Washington, District of Columbia. This facility is space limited and has extremely high overhead cost. Moving the Reproduction Division to less expensive space outside of the Capitol Beltway would result in savings. AOPA supports the IG's

finding that consolidating the AC&C Reproduction Division with the United States Geological Survey (USGS) in-house printing operations would realize great cost savings. According to the IG's report, the USGS maintains a large printing operation in Reston, Virginia, where it prints maps produced by its regional centers, other Department of the Interior agencies, and NIMA. The USGS has officially stated that it is willing to accept the AC&C printing operation. USGS has the expertise and excess capacity that would make the transition of this function a logical action.

Supporting Legislation: Current legislation unnecessarily restricts AC&C's ability to develop, produce, and distribute new products for improving air safety. To develop new products, AC&C must draw on its current appropriated funding base and historically this funding has remained relatively flat. As a result, some customer demand for new products to support modernization is going unfulfilled. There is not enough funding available to pay for the development, production and distribution of new products. To resolve this problem, AOPA would be supportive of the development of new legislation to remove restrictions and streamline current funding sources.



CURRENT ORGANIZATIONAL STRUCTURES OF THE AERONAUTICAL CHARTING ORGANIZATIONS



The current structures of the various aeronautical charting organizations are very fragmented and responsibilities are scattered among numerous governmental organizations. This frequently leads to internal communication problems, uncoordinated procedural and charting changes, and a procedures design process that is cumbersome, at best.

NOAA's AC&C manufacturers products according to specifications developed by the Interagency Air Cartographic Committee (IACC). IACC members include representatives from the FAA, NIMA, and NOAA. In addition, AC&C maintains products developed in accordance with joint FAA/NOS specifications and guidelines. Due to limited staff within the FAA's cartographic standards division, AC&C must also coordinate with the following FAA offices:

Air Traffic Airspace Management Program

- Airspace and Rules Division
- Aeronautical Information Division

Air Traffic Procedures Division

Air Traffic Tactical Operations Division

- US NOTAM office

Aviation Standards Division

Flight Standards Service

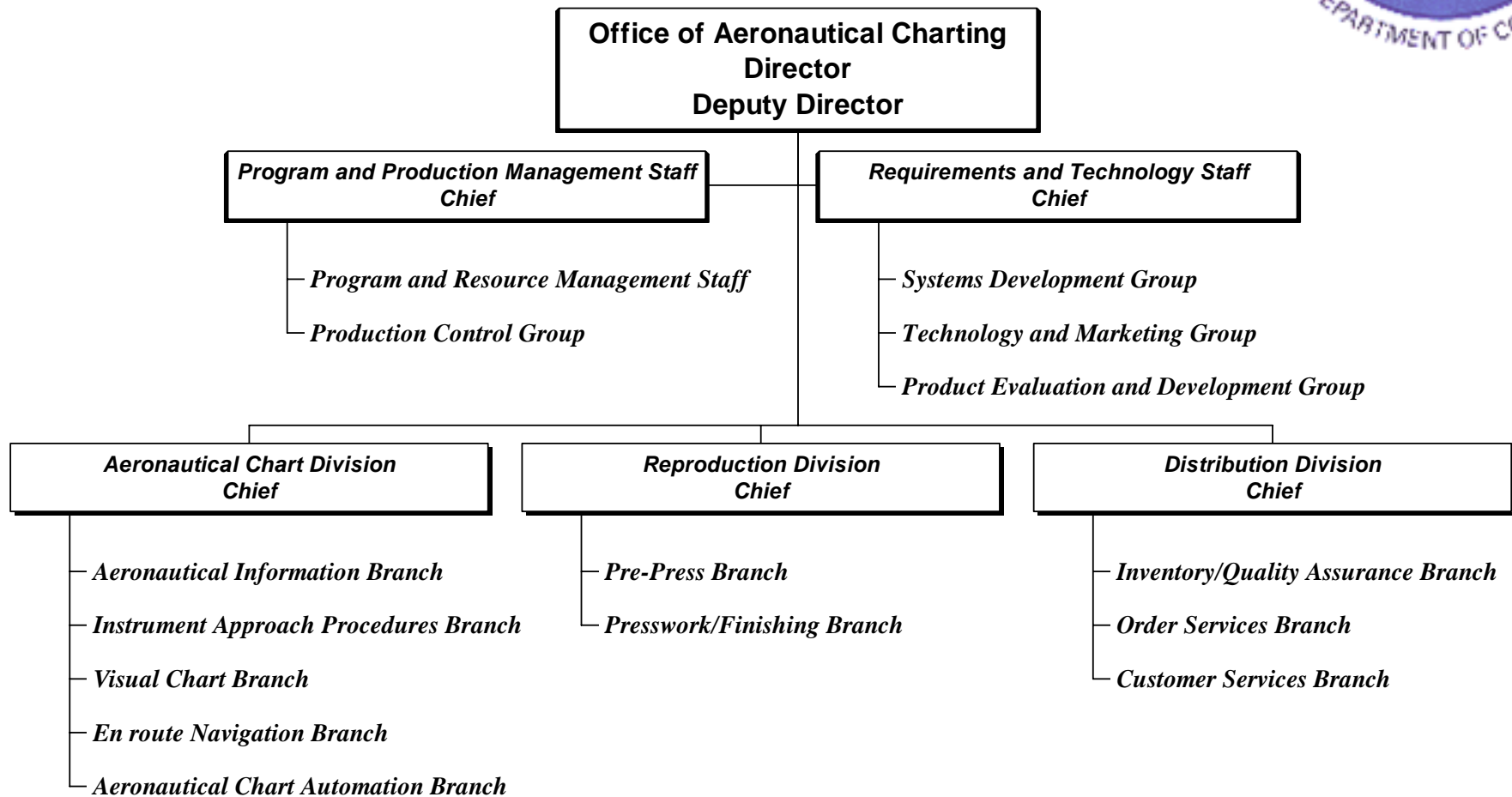
- Flight Technologies and Procedures Division

Various Headquarters and Field Facilities

Air Route Traffic Control Centers National Aviation Facilities Experimental Center (NAFEC)



Office of Aeronautical Charting and Cartography





NATIONAL OCEANIC SERVICE OFFICE OF AERONAUTICAL CHARTING & CARTOGRAPHY ORGANIZATIONAL STRUCTURE

Requirements and Technology Staff

Technology and Marketing Group: This group is the public relations arm of AC&C. They coordinate a website presence for AC&C, participate in FAA Safety Seminars, and draft/update users guides. In addition, the group provides follow-up services to ensure compliance with IACC specifications and develops product standards. In their customer service role, they handle correspondence, staff an 800-line for public input, and frequently visit NOAA chart agents.

Systems Development Group: The group coordinates Information/Technology issues for AC&C from all staff to the director's work stations. Work recently completed includes the creation of a new computer based distribution system. The office is currently coordinating a new automated ordering system.

Product Evaluation Group: Participates in IACC specifications establishment. In addition, this group is charged with the oversight of the AC&C's flight edit group.

- **Flight Edit Group:** Conducts aerial reviews of Sectionals, TACs, and Minimum Safe Altitude Warning (MSAW) sites. Conducts aerial photography of obstructions. Corrects errors on visual charts.

Program and Production Management Staff

Program and Resources Management Group: The group is the Human Resources work group that provides administrative services for AC&C. Additionally, they coordinate paperwork for personnel changes, travel, new and recurrent training, etc. The group facilitates hiring, and schedules work related events for the entire division. Perhaps most importantly, they recommend product prices by monitoring costs incurred by AC&C in their production of materials and data.

Production Control Group: The group plans and schedules chart production and is responsible for coordinating contracts and interfacing with the charting contractors when changes to chart specifications require modification of the contracts. Additionally, they coordinate implementation of chart changes within the production divisions of AC&C and determine what funds are to be allocated for the products.

Aeronautical Chart Division

Manages the chart program and operates a computer support facility to evaluate and select basic source material.

Instrument Approach Procedures Branch: Plans and directs the construction and maintenance of Terminal Procedures Publications (TPP). Maintains liaison role with FAA to support the development of safe and accurate procedural data.

- **Eastern Procedures Section:** Collects, evaluates, and selects information used in instrument charts and digital files. Manages chart production schedule and

compiles IAPs, SIDs, STARS, Airport Diagrams, and special charts as required.

- Western Procedures Section: Collects, evaluates, and selects information used in instrument charts and digital files. Manages chart production schedule and compiles IAPs, SIDs, STARS, Airport Diagrams, and special charts as required.

Visual Chart Branch: Plans and directs the construction of Visual Aeronautical Charts and other special charts in accordance with IACC. Works with IACC to develop charting specifications and assures quality control of charts. Reviews press copies of all Visual Charts prior to publication.

- Eastern Chart Section: Performs cartographic compilation and quality assurance for Sectional Charts, TACs, WACs, Flyway Planning Charts, Helicopter Route Charts, Grand Canyon Chart, and Aeronautical Chart User's Guide for the US and portions of Canada and Mexico. Provides final "production ready" graphics to the Reproduction Division for printing.
- Central Chart Section: Performs cartographic compilation and quality assurance for Sectional Charts, TACs, WACs, Flyway Planning Charts, and Helicopter Route Charts. Assembles aeronautical and topographical data for new products and for the maintenance of all existing chart products. Provides final "production ready" graphics to the Reproduction Division for printing. Produces NOS Aeronautical Catalog, IFR, and VFR Chart Brochure, Aeronautical Chart User's Guide, and the NIMA Public Sale Aeronautical and Nautical Chart and Publications.
- Western Chart Section: Performs cartographic compilation and quality assurance for Sectional Charts, TACs, WACs, Flyway Planning Charts, Helicopter Route Charts, Grand Canyon Chart, and Aeronautical Chart User's Guide for the US and portions of Canada and Mexico. Assembles aeronautical and topographical data for new products and for the maintenance of all existing chart products. Provides final "production ready" graphics to the Reproduction Division for printing.

En route Navigation Branch: Plans and directs the construction and maintenance of Instrument Flight Navigation and associated charts including the en route Low and High Altitude Charts, Radar Video and Position Display Maps, Low and High Controller Charts, and Special Graphics.

- Special Compilation Section: Constructs and reviews Radar Video Maps and Position Display Maps. Provides cartographic support to terminal and en-route facilities. Creates and maintains digital data files to support the FAA's D-BRITEs. Reviews and verifies all chart manuscripts and drawings for completeness and accuracy.
- En route Eastern Section: Constructs and reviews Instrument Flight Navigation Charts, Planning Charts, Oceanic Route Charts, Air Traffic Control System Command Center Charts, and graphics for the AIM and other products. Prepares manuscripts for construction of new charts.

- En route Western Section: Constructs and reviews Instrument Flight Navigation Charts, Planning Charts, Oceanic Route Charts, Air Traffic Control System Command Center Charts, and graphics for the AIM and other products. Evaluates select source data and prepares manuscripts for the construction of new charts and for the revision of existing products.

Aeronautical Chart Automation Branch: Manages the computer operations and software/hardware development for the division. Devises new automation capabilities to enhance the efficiency of chart production. Develops new requirements into system specifications. Prepares the short and long-range ADP plans and the ADP budget for the division. Handles databases, data flow to various groups within AC&C. Manages support systems of databases and manages ARINC Specs, ARINC changes, and modifies ARINC framework as necessary.

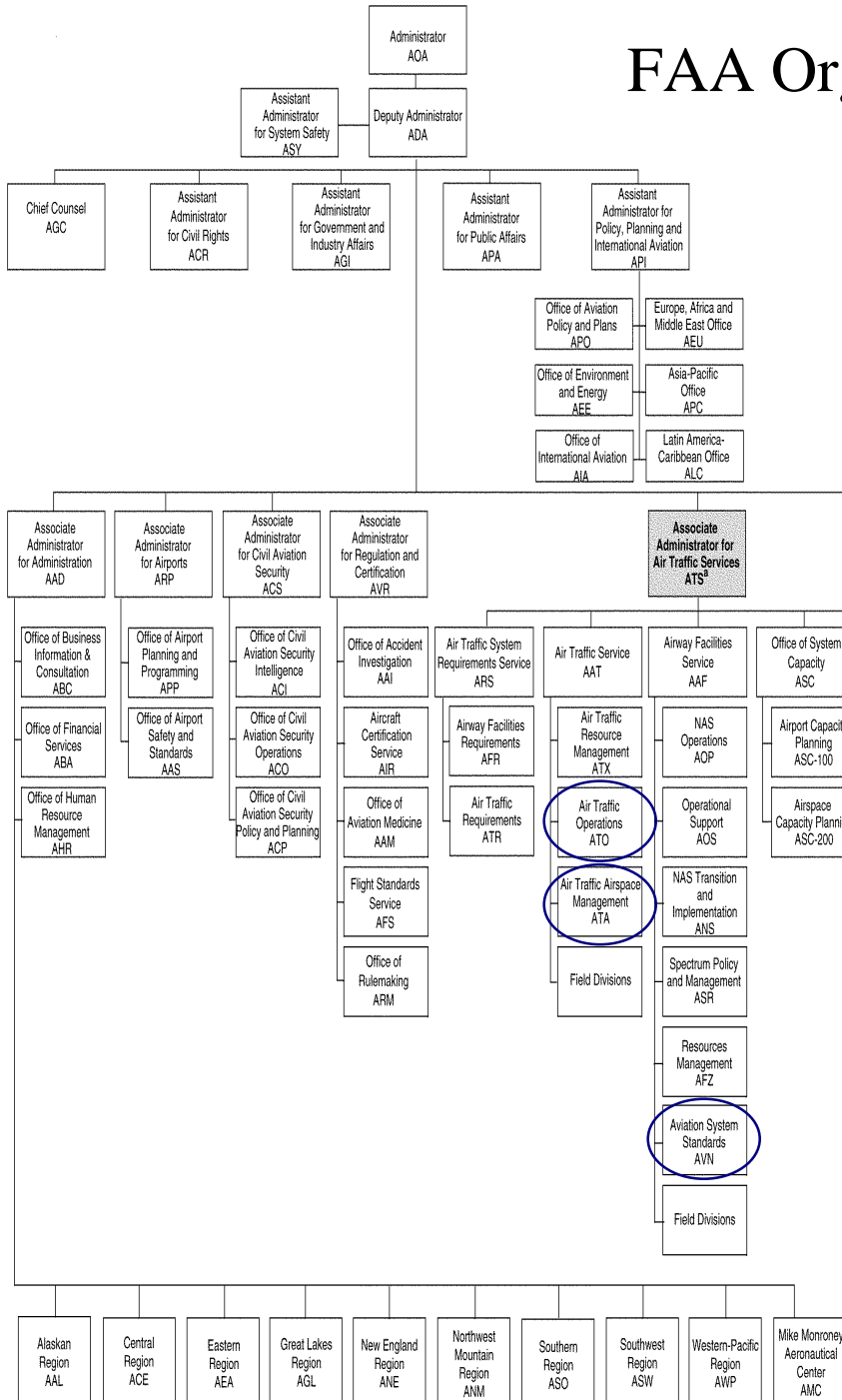
- Operations/Systems Section: Drafts and oversees the DP procurement plans, budget and support services. Oversees all major ADP contracts and coordinates training needs, interfaces with NOAA facilities, tracks inventories and oversees the security of the computer site. Develops functional requirements and technical specifications for procurement of new hardware and software.
- Applications/Development Section: Develops new requirements into code and integrates into the application systems. Develops new digital chart compilation procedures. Provides ongoing user training to the other charting branches and writes documentation necessary to run application systems. Studies new developments in digital mapping and advises on methods to improve efficiency.

Aeronautical Information Branch: Acquires, evaluates, and selects aeronautical navigation information needed for the construction and maintenance of charts and related publications.

- Aeronautical Data Section: Maintains all airport information and information on NAVAIDS. Coordinates production of NAVAID digital data file for the United States (as provided by the FAA). Prepares and maintains tabular data on air/ground communications for FAA air traffic facilities, AWOS, and Canadian air traffic facilities. Maintains Airport/Facility Directory, Alaska and Pacific Chart Supplements. Would be responsible for coding of procedures into a navigation database and verification of that data.
- Airspace Section: Coordinates airspace change proposals as received from the FAA. Provides the FAA with cartographic airspace advice for new/revised airspace. Maintains liaison with other government agencies and governments of other countries. Maintains the Airspace database files containing descriptions and coordinates of all regulatory airspace. Maintains, in digital format, airway fixes and computational programs to produce the Digital Aeronautical Chart Supplement every 56 days.

- Obstacle Analysis Section: Collects, evaluates and disseminates information on hazards to air navigation such as towers and antennas. Evaluates and validates digital terrain data for ARTS radar sites, applies obstacle information (man-made) to the digitized terrain data to determine the minimum safe altitude for the MSAW System.

FAA Organizational Chart



*ATS is currently being reorganized



CURRENT FAA AERONAUTICAL CHARTING SERVICES

Aeronautical Information Service Division

Responsible for collection, collation, validation, storage, and dissemination of aeronautical data detailing the description and operations status of all components of the NAS to ensure that air navigation is safe and efficient. Conducts analysis to determine current and future data requirements and develops cartographic standards.

National Flight Data Center: Maintains the national aeronautical information databases and is responsible for assigning location identifiers for facilities.

Plans and Programs: Conducts analysis of current and future automation systems. Provides maintenance support for the National Airspace Resource System (NARS) database and produces NASR data files for distribution. Disseminates data files in accordance with the 56-day cycle. Designs and develops data processing systems to support aeronautical information services.

Cartographic Standards: Develops, directs and recommends national policy for the air cartographic program. Serves as the FAA liaison for cartographic sciences and provides technical expertise, design and advisory service. Directs development of products produced by AC&C and establishes the United States position for standardization of international chart products via the ICAO.



CURRENT FAA AERONAUTICAL INFORMATION SERVICES

Aviation System Standards (AVN):

Aviation System Standards has total responsibility for managing and administering instrument procedures development as well as the FAA's flight inspection program. Airborne inspection of navigational aids is a two-part operation requiring the skills of highly trained flight crews. The first part is an evaluation of the NAVAID'S signal quality and reliability. The second part is to validate information that is charted on instrument approach procedures. Their validation includes all aspects of the charted procedures.

AVN uses the following vision statement: "To be the provider of choice for aerospace products and services." Clearly, they recognize their role in the collection, validation, and dissemination of aeronautical information.

US Notice to Airmen Office:

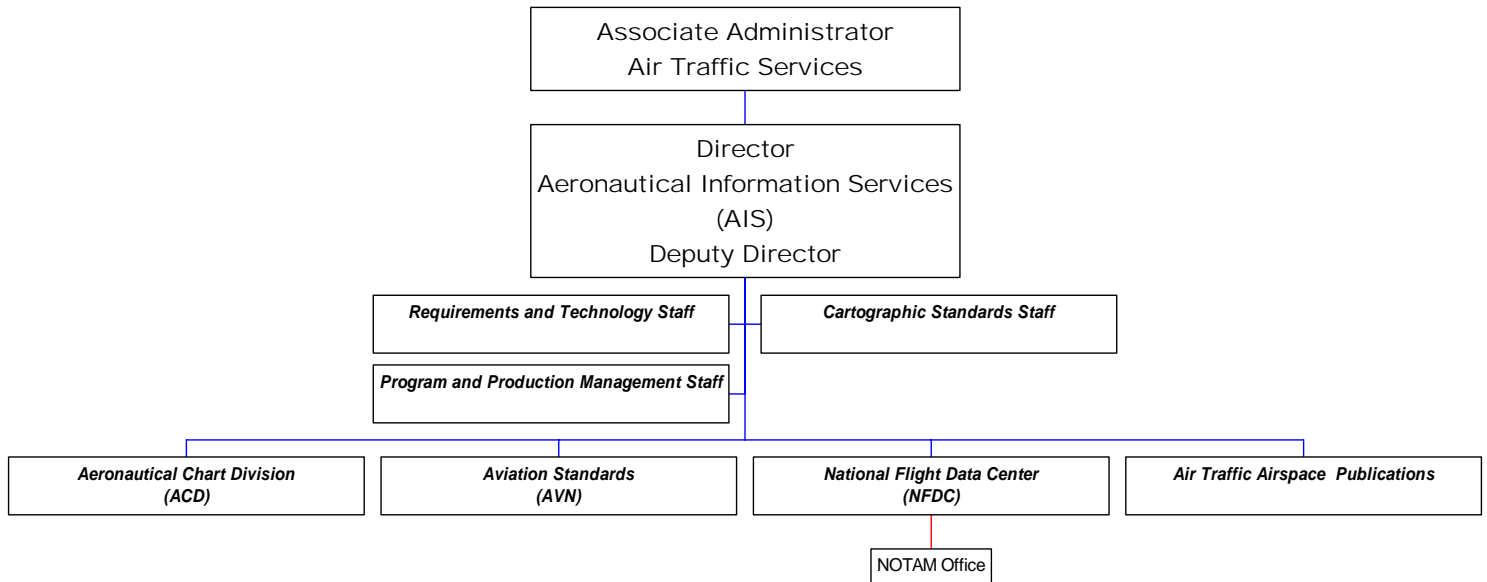
The NOTAM office is the most up-to-date resource for information related to the NAS. This office disseminates information on unanticipated or temporary changes to components of or hazards in the NAS until the associated charts and related publications have been amended.

Examples of NOTAM information include:

- Runway closures
- Malfunctions to navigational aids
- Missile launches
- Special traffic management programs (STMP)
- Changes affecting airport arrival and departure procedures

PROPOSED STREAMLINED AIS DIVISION

The proposed AIS Division would be a director level office and would place all of the offices under one line of business at the FAA. It would incorporate AC&C, Aeronautical Information Division, National Flight Data Center, NOTAM Office, Air Traffic Airspace Publications Division, and AVN under the same division in Air Traffic Services. The following diagram depicts AOPA's proposed organizational structure for the new AIS:



AOPA recommends inclusion of the NOTAM office, Publications Division, and AVN because the functions of these organizations are integral to the development and use of aeronautical information products.

AVN develops standardized instrument flight procedures and certifies these procedures through airborne inspections of NAVAIDS. They also provide maintenance and engineering support for all FAA aircraft. These functions directly support the development of accurate aeronautical information products and the Flight Edit mission of the ACC would fold into the flight inspection function of AVN. AOPA believes that placing AVN with this AIS office would streamline procedures and facilitate the dissemination of aeronautical information from one source. Clearly, the AVN mission would benefit from better coordination

The FAA's Publications Division produces aviation publications associated with air traffic rules and procedures such as the NOTAM Order, AIM, Pilot Controller Glossary, Air Traffic Control Order, and other publications closely aligned to the AIS mission.

The NOTAM office disseminates information on unanticipated or temporary changes or hazards in the NAS until the associated charts and related publications have been amended. NOTAM information can include notices of runway closures, NAVAID changes or malfunctions, and changes affecting airport arrival and departure procedures. The NOTAM office function fits squarely into the AIS mission.

The role of the proposed AIS Office would be to provide the aeronautical information needed to ensure a safe and efficient NAS. The ability to perform this role is dependent on an organizational structure that is efficient and provides for a single channel to be used for the flow of information. Additionally, an efficient working arrangement is required to facilitate the exchange of information. This means that personnel (other than AVN and the NOTAM Offices) must be in one geographic location. In general, the organizational structure should:

- Establish clear levels and sources for gathering accurate and reliable aeronautical information.
- Provide a mechanism for validating information.
- Provide procedures for notifying users of errors or omissions in published aeronautical information.
- Ensure the timely production and distribution of aeronautical products.

CONCLUSIONS

The AC&C transfer is scheduled to take place beginning in FY2000 and the FAA should develop an AIS transition plan by the October 2000 deadline. A solid transition plan will provide the FAA with opportunities to enhance efficiency, eliminate duplication of services, and reduce administrative costs. Additional budget savings would also be realized by modernizing and consolidating the reproduction and distribution functions at the USGS.

Aeronautical charting involves essential safety of flight services and AOPA is confident that this AIS plan provides the framework for an orderly and efficient transfer of these services.