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*Office of Inspector General*

***Audit Report***

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***FAA's Use of RTCA, Inc., as an Advisory Committee***  
***Federal Aviation Administration***

*Report Number: AV-2000-095*  
*Date Issued: May 15, 2000*





**U.S. Department of  
Transportation**

Office of the Secretary  
Of Transportation

Office of Inspector General

# Memorandum

Subject: **ACTION:** Report on FAA's Use of RTCA, Inc.  
as an Advisory Committee  
AV-2000-095

Date: May 15, 2000

From: Alexis M. Stefani  
Assistant Inspector General for Auditing

Reply to  
Attn of: JA-10:x60500

To: Federal Aviation Administrator

In response to the request in the Conference Report for the Department of Transportation and Related Agencies Appropriations Act for Fiscal Year 2000, the Office of Inspector General reviewed the Federal Aviation Administration's (FAA) Use of RTCA, Inc. (RTCA) as an Advisory Committee. This report provides the information presented to the Appropriations Committees for your information and use.

The objectives of our review were to examine FAA's relationship with RTCA, review the role and organization of RTCA, and compare FAA's relationship with RTCA to that of other Federal agencies and their advisory committees. We based our analysis on the purpose and intent of the Federal Advisory Committee Act, which promotes the openness, accountability, and balance of viewpoints for advisory committees.

Over the past several years, FAA's use of RTCA has changed significantly and is unique in comparison to other Federal agencies' interactions with their advisory committees. RTCA's role has broadened from developing recommended technical standards to helping FAA shape the scope and direction of key aviation modernization initiatives.

We recognize that FAA and industry cooperation in modernizing the National Airspace System is important, particularly when significant investments in new technologies are required by both FAA (ground systems) and airspace users (new avionics). However, given the changing role of RTCA and the stakes being discussed in RTCA meetings, it would be prudent for FAA to take steps to ensure the agency receives independent, objective advice and that RTCA committees are open and balanced in representation.

We are making recommendations with respect to, among other things, FAA's level of participation in RTCA, openness of Free Flight meetings, and disclosure of potential conflict of interests to ensure balance in representation. In addition, FAA in conjunction with the Management Advisory Council should assess the role RTCA will play in future modernization initiatives and how RTCA will interface with the new Council.

During our review, we met with you, members of your staff, and RTCA officials regarding our findings and recommendations and have taken all comments into consideration where appropriate in preparing this report. FAA officials stated they concur with our recommendations and will proceed to implement them.

In accordance with Department of Transportation Order 8000.1C, we would appreciate receiving your written comments within 30 days. If you concur with our finding and recommendations, please indicate for each recommendation the specific action taken or planned and the target dates for completion. If you do not concur, please provide your rationale.

We appreciate the cooperation and assistance provided by you and your staff during the audit. If you have any questions or need further information, please contact me at x61992 or David A. Dobbs, Deputy Assistant Inspector General for Aviation, at x60500.

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# EXECUTIVE SUMMARY

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## *Use of RTCA, Inc., as an Advisory Committee Federal Aviation Administration*

*Report No. AV-2000-095*

*May 15, 2000*

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### ***Objectives***

The Conference Report on the Department of Transportation and Related Agencies Appropriations Act for Fiscal Year 2000<sup>1</sup>, directed the Office of Inspector General to review the relationship between RTCA, Inc. (RTCA) and the Federal Aviation Administration (FAA) and compare it to other Federal agencies' interactions with Federal advisory committees. The objectives of our review were to examine FAA's relationship with RTCA, review the role and organization of RTCA, and compare FAA's relationship with RTCA to that of other Federal advisory committees.

### ***Background***

RTCA is a private, not-for-profit, corporation that helps shape technical standards and develops recommendations regarding communications, navigation, surveillance and air traffic management issues. It was organized in 1935 on the initiative of the Department of Commerce and by mutual agreement of interested Government and non-Government organizations. Today, RTCA includes over 200 member organizations, including FAA, major airlines, airspace user associations, aviation labor unions, airports, and aviation service and equipment suppliers. RTCA's primary source of funding is dues paid by its members. FAA provided \$330,000 in support of RTCA in 1999, which represents about 24 percent of the RTCA operating revenue.

RTCA is chartered by FAA as a Federal advisory committee, and it is therefore subject to the requirements of the Federal Advisory Committee Act (FACA)<sup>2</sup>, as well as regulations and guidelines provided by the General Services Administration, which is responsible for overseeing all Federal advisory committees. Congress enacted FACA in 1972 to bring about more review, oversight, and accountability for advisory committees.

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<sup>1</sup> House Report 106-355, accompanying H.R. 2084 (Public Law 106-69).

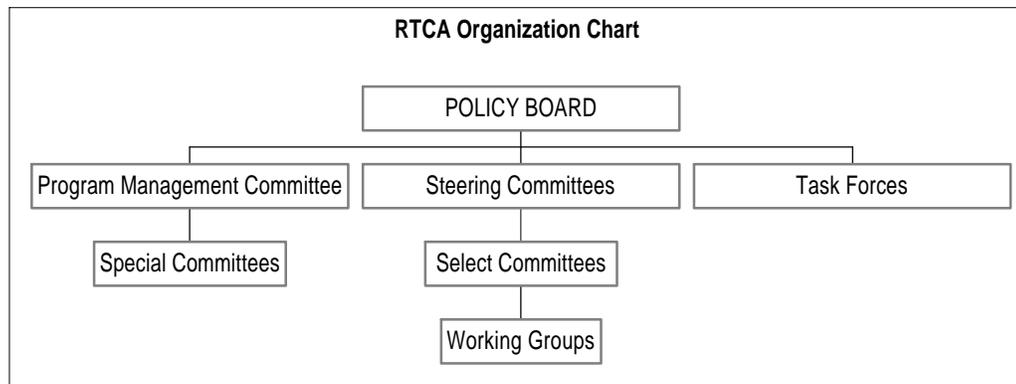
<sup>2</sup> Title 5 United States Code Appendix 2.

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The majority of RTCA's work is performed at the request of FAA. RTCA is now significantly involved in assisting FAA in the transition to Free Flight<sup>3</sup>. The RTCA Policy Board, a 17-member governing body that establishes policies and programs for RTCA, selects the committee membership for this effort. RTCA has established a multi-level committee structure for various Free Flight initiatives that is different from RTCA's traditional "special committees."

As shown below, there is a Free Flight Steering Committee, the parent committee whose meetings are open to the public, and a Free Flight Select Committee, which is a subcommittee whose deliberations are closed to the public. In addition, below the Select Committee level, RTCA established working groups, whose meetings are also closed to the public. RTCA has established a similar structure for examining the certification of air and ground systems. Traditional RTCA special committees and task forces are open to the public.



## ***Results***

Our results are based on the requirements and objectives of FACA. Among other things, FACA promotes *openness, accountability, and balance of viewpoints* so that advisory committee recommendations will be the result of objective and independent judgment.

RTCA has made and continues to make valuable contributions in shaping technical standards and providing advice and recommendations to FAA on a wide range of air traffic control modernization technologies. RTCA has been helpful in

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<sup>3</sup> Free Flight changes the philosophy of FAA and aircraft operators from that of air traffic control to air traffic management. It will allow pilots and controllers to share information and work together to manage air traffic.

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achieving consensus on highly complex technical issues. Over the past several years, FAA's use of RTCA has broadened significantly from developing recommended technical standards to playing a major role in shaping the scope and direction of FAA's key modernization initiatives, such as Free Flight Phase 1, Safe Flight 21, and Data Link.

FAA and industry cooperation in modernizing the National Airspace System is important, particularly when significant investments in new technologies are required by both FAA (ground systems) and airspace users (new avionics). However, the lines have now blurred between RTCA providing advice through recommendations and providing elements of program decision-making and management -- i.e., determining which technologies to implement, at what pace, and at which locations. Accordingly, to ensure that RTCA activities are in accordance with FACA, which promotes objectivity, openness, and balance in representation, FAA should make a number of changes.

- First, to avoid being seen, in substance and appearance, as giving advice to themselves, senior level FAA officials who are responsible for FAA's major lines of business should not serve in voting and decision-making roles on the RTCA Policy Board. Also, FAA should designate agency officials at all levels of RTCA, including committees, subcommittees, and working groups as non-voting members. It is acceptable and desirable for FAA representatives to serve as *ex officio* members and attend meetings to share information and exchange views. At the time of our review, 30 percent of the Policy Board and Free Flight activities were comprised of FAA officials, including many of the agency's most senior decision-makers.
- Second, FAA should ensure RTCA provides information to the public on deliberations of closed subcommittee and working group meetings. A key element of FACA is openness and public access. FACA allows subcommittees to be closed, but to meet the spirit of the law agencies should seek to include the public as much as possible, such as posting meeting minutes and committee member information on the advisory committee's web site, especially if deliberations (as distinguished from mere fact-finding) are occurring at the subcommittee level.
- Third, FAA should ensure RTCA adopts policies and procedures for selection of RTCA committee members to ensure potential conflicts of interest and paid representational positions are disclosed and addressed. This is especially important when making committee member appointments to ensure the committees are comprised of a balanced set of interests, some of which will be

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competing. The purpose is not to eliminate competing interests from serving on the advisory committee, but to ensure a balance in representation from across the spectrum of the aviation community and to ensure that it is known which interests are being represented.

In addition, FAA in conjunction with the new Management Advisory Council, needs to assess the role RTCA will play in future air traffic modernization initiatives, given the Council's role as expanded in the Aviation Investment and Reform Act for the 21<sup>st</sup> Century.

### **FAA Representatives Should Not Serve in an Official, Voting Capacity on RTCA Boards, Committees, and Working Groups**

A key requirement of FACA is obtaining independent, objective advice through the medium of an advisory committee. FAA participation in RTCA is critically important to exchange views and information with the aviation community and industry to gain agreement on modernization initiatives, but agency officials should not vote and make decisions that influence the recommendations of the advisory committee. In comparison to other agencies we reviewed, FAA's membership at all levels of RTCA is more extensive. FAA should not, in substance and appearance, be seen as providing advice to itself.

FAA officials hold positions on RTCA committees at all levels, from the Policy Board down to working groups. FAA representatives serve as full voting members. Of the 17 members on the Policy Board, 4 are current FAA key decision-makers, including the Acting Deputy Administrator. Three of these four members are also members of the Free Flight Steering Committee. FAA members make up nearly a third of the Policy Board and Free Flight committees and working groups.

Senior FAA executives and program managers deliberating and voting on recommendations of an external advisory committee does not foster the appearance of a truly objective, external advisory committee that provides advice and recommendations to FAA. Further, key FAA decision-makers who exercise considerable policy and budgetary influence over FAA programs (such as the Acting Deputy Administrator, the Associate Administrator for Research and Acquisitions, and the Associate Administrator for Regulation and Certification) serving on both the RTCA Policy Board and Free Flight Steering Committee as full voting members gives the impression that FAA is ultimately providing advice to itself. Some FAA officials indicated they are uncomfortable with this arrangement.

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To ensure FAA is obtaining objective advice, FAA needs to limit its voting and decision-making participation so that the relationship with RTCA is kept at arms-length in substance and appearance. It must be clear that FAA has retained full and complete policy, program management, and decision-making authority. FAA senior level officials who are responsible for FAA's major lines of business should not serve in voting and decision-making roles on the RTCA Policy Board. Also, FAA should designate agency officials at all levels of RTCA, including committees, subcommittees, and working groups as non-voting members.

It is acceptable for FAA representatives to serve as *ex officio* members and attend meetings to share information and exchange views, but senior level agency officials should not hold voting and decision-making positions on RTCA boards, committees and working groups. Otherwise, RTCA loses its character as an advisory committee that is supposed to give advice to FAA, including the very FAA officials who currently vote on what that advice will be.

Further, given that FAA makes up nearly a third of the Policy Board and Free Flight activities and the changing role of RTCA, FAA should consider options—and take steps—to reduce its committee membership. Options include reducing the number of FAA officials serving on committees, subcommittees, and working groups or disengaging from committee membership and attending meetings when invited to provide information, assistance, and technical advice. When an advisory committee's membership is so heavily populated by the same officials to whom it is supposed to provide external and objective advice, its ability to function as an advisory committee can be impaired.

### **FAA Should Ensure RTCA Takes Steps to Provide Public Access to Closed Meeting Deliberations**

We identified a number of issues regarding openness and public access, key elements of FACA. Of concern is the closure to the public of the Free Flight Select Committee and its four working groups, the restrictive committee member selection process wherein an individual must be appointed or invited to join by the RTCA Policy Board, and the lack of minutes available to the public for these meetings. Because of the closed nature of these RTCA proceedings, it is unclear to those outside the process how decisions are made and who makes them.

It is not unusual for Federal advisory committees to rely on subcommittees. A subcommittee, such as the Free Flight Select Committee, can be created and even be closed, but it cannot serve as a mere proxy for the full committee. To meet the

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spirit of the FACA, open meetings should not simply be a "rubber stamp" of the subcommittee's recommendations, and the public should not be excluded from the committee deliberative process. At a minimum, minutes documenting what occurred at closed meetings should be made available to the public.

For example, recommendations regarding Free Flight, Safe Flight 21, and Data Link are being formulated and deliberations are occurring at the Free Flight Select Committee and its working groups. These recommendations are then presented at the open Free Flight Steering Committee meetings and are almost always adopted or ratified with scant discussion in these public sessions. In effect, the Free Flight Select Committee is the key entity that conducts the deliberations and makes critical recommendations for this important effort, all in a closed fashion.

In addition, the Free Flight Select Committee's Free Flight Phase 1 working group works informally with the FAA Free Flight Phase 1 Program Office. This creates the potential for recommendations to flow directly to the agency from the advisory committee's working group before the committee has deliberated and approved the recommendations. FAA can and should exchange views on Free Flight initiatives with industry, but *FACA requires that recommendations flow up through the committee deliberation process, not directly to the agency outside of the public eye.* Also, the RTCA Policy Board reviews and discusses Free Flight Select Committee recommendations prior to the open Steering Committee meeting. This discussion, although not used for approval purposes, is again outside public scrutiny. Minutes of these meetings are recorded, but not made available to the public.

In contrast, other advisory organizations we reviewed established controls to meet the openness criteria of FACA. For example, the National Aeronautics and Space Administration (NASA) has established controls to ensure that closure of subcommittee and working group meetings is justified as non-deliberative (e.g., for the purposes of fact-finding only). NASA requires a memorandum for the record to be approved by the General Counsel and the Advisory Committee Management Officer to justify closing a meeting. The National Academy of Sciences (Academy), among other things, posts ongoing project descriptions and minutes of closed meetings on the Academy's web site.

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### **FAA Should Ensure RTCA Adopts Procedures to Ensure Balanced Membership, Including Disclosure of Potential Conflicts of Interest and Representational Interests**

A key requirement of FACA is the desire for balance in committee representation. A wide range of views and competing interests that reflect the aviation community's diverse stakeholders are needed to make independent judgments and reach consensus on air traffic control modernization efforts. *The key is to make sure that potential conflicts of interest<sup>4</sup> are disclosed and properly addressed before individuals serve on RTCA committees.*

Currently, FAA and RTCA do not require committee members to disclose potential conflicts of interest before or after being appointed to committees. Other agencies we reviewed take steps to ensure that potential conflicts of interest are disclosed. The individuals serving on RTCA's Policy Board and Free Flight committees are aviation industry leaders and represent the primary stakeholders (i.e., airlines and equipment manufacturers) that stand to benefit from RTCA recommendations. Given the role of RTCA and the stakes being discussed in the Free Flight meetings, it would be prudent for FAA to ensure RTCA adopts procedures so that potential conflicts of interest are fully disclosed and properly addressed when appointing members to committees. Because of the way in which committee members are currently selected (by the 17-member RTCA Policy Board), disclosure would also help ensure a balance in representation from across the spectrum of the aviation community and industry, including competing interests.

Most other Federal advisory committees we reviewed had established controls to determine and address conflicts of interest, but FAA did not have such controls. For example, as a matter of policy, both the Department of Defense and NASA designate all their committee members as "Special Government Employees" (SGE), thus making it necessary for members to provide financial disclosures and abide by conflict of interest laws. Controls established by the National Academy of Sciences (Academy) should serve as models for FAA and RTCA to consider. For example, the Academy requires that each committee candidate fill out a form on potential conflicts of interest and biases, and the Academy posts the names and brief biographies of the recommended committee members on the Academy's web site for public comment prior to making the final selection.

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<sup>4</sup> Conflict of interest is any financial or other interest or affiliation that conflicts with the service of an individual because it could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization.

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## **FAA and the Management Advisory Council Should Assess the Role RTCA Will Play in Future Air Traffic Modernization Initiatives**

In addition to the issues we have discussed in this report, FAA in conjunction with the Management Advisory Council (Council) needs to determine the role RTCA will play in future air traffic modernization initiatives. The FAA Reauthorization Act of 1996 established the Council to advise FAA on a wide range of management, policy, and regulatory matters. The Aviation Investment and Reform Act for the 21<sup>st</sup> Century expanded the Council's role to oversee the air traffic control system, including modernization. The Council's Air Traffic Services subcommittee is expected to oversee administration, management, conduct, direction, and supervision of the air traffic control system. This Council will be faced with a number of questions regarding how to move forward with key air traffic control modernization projects. Given the Council's stated roles and responsibilities, FAA and the Council should assess the role RTCA will play in future modernization initiatives and how RTCA will interface with the Council.

### ***Recommendations***

RTCA is playing a major role in shaping air traffic control modernization programs. Therefore, FAA needs to establish safeguards to ensure the agency is receiving independent, objective advice and that RTCA provides information to the public regarding closed committee deliberations and has balanced committee representation. FAA should:

- Establish controls regarding FAA participation to ensure senior level FAA officials do not serve in voting and decision-making roles on the RTCA Policy Board and designate agency officials at all levels of RTCA as non-voting members.
- Consider options—and take steps—for limiting FAA committee membership, such as reducing the number of FAA officials on committees, subcommittees, and working groups or disengaging from committee membership and attending meetings when invited to provide information, assistance, and technical advice.
- Ensure RTCA takes steps to provide information to the public regarding closed subcommittee and working group deliberations, similar to those adopted by the National Academy of Sciences.

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- Ensure RTCA adopts policies and procedures for selection of RTCA committee members similar to those adopted by the National Academy of Sciences to ensure potential conflicts of interest and paid representational interests are disclosed and properly addressed to ensure a balance in representation.
- In conjunction with the Management Advisory Council, assess the role RTCA will play in future modernization initiatives and how RTCA will interface with the new Council.

### *Agency Comments*

During our review, we met with FAA officials, including the FAA Administrator, and have taken all comments into consideration where appropriate in preparing this report. FAA concurs with our recommendations and will proceed to implement them. FAA officials also emphasized the important contribution RTCA makes to the agency and their desire to continue to receive this valuable advice and recommendations from RTCA.

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# ***INTRODUCTION***

## ***Background***

RTCA, Inc. (RTCA) is a private, not-for-profit, corporation that helps shape technical standards and develops recommendations regarding communications, navigation, surveillance and air traffic management issues. It was organized in 1935 on the initiative of the Department of Commerce and by mutual agreement of interested Government and non-Government organizations. Today, RTCA includes over 200 member organizations, including the Federal Aviation Administration (FAA), major airlines, airspace user associations, aviation labor unions, airports, and aviation service and equipment suppliers. RTCA's primary source of funding is dues paid by its members. FAA provided \$330,000 in support of RTCA in 1999, which represents about 24 percent of the RTCA operating revenue.

RTCA is chartered by FAA as a Federal advisory committee, and it is therefore subject to the requirements of the Federal Advisory Committee Act (FACA)<sup>1</sup> as well as regulations and guidelines provided by the General Services Administration (GSA), which is responsible for overseeing all Federal advisory committees. Congress enacted FACA in 1972 to bring about more review, oversight, and accountability for advisory committees. Among other things, FACA promotes *openness, accountability, and balance of viewpoints* so that advisory committee recommendations will be the result of objective and independent judgment.

The majority of RTCA's work is at the request of FAA. RTCA is now significantly involved in assisting FAA in the transition to Free Flight<sup>2</sup>. The RTCA Policy Board, a 17-member governing body that establishes policies and programs for RTCA, selects the committee membership for this effort. RTCA has established a multi-level committee structure for various Free Flight initiatives that is different from RTCA's traditional "special committees." There is a Free Flight Steering Committee, the parent committee whose meetings are open to the public, and a Free Flight Select Committee, which is a subcommittee whose deliberations are closed to the public. In addition, below the Select Committee level, RTCA established working groups, whose meetings are also closed to the public. RTCA has established a similar structure for examining the certification of air and ground

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<sup>1</sup> Title 5 United States Code Appendix 2.

<sup>2</sup> Free Flight changes the philosophy of FAA and aircraft operators from that of air traffic control to air traffic management. It will allow pilots and controllers to share information and work together to manage air traffic.

systems. Traditional RTCA special committees and task forces are open to the public (Exhibit A provides an organization chart of RTCA). The following table describes the purpose of RTCA boards, committees, task forces, and working groups.

### **RTCA Boards, Committees, Task Forces, and Working Groups**

Name	Purpose
Board of Directors	Establishes RTCA policies and programs in conjunction with the Policy Board and reviews and approves the RTCA's operating budget.
Policy Board	Establishes RTCA policies and programs in conjunction with the Board of Directors. Appoints the Chair and Vice-Chair of the Program Management Committee and task forces. Appoints the co-chairs and members of the Steering and Select committees.
Program Management Committee	Provides executive management of all special committees. This committee provides the special committee tasking, appoints committee chairs, and reviews and approves completed products. Holds open meetings.
Special Committees	Develop recommended technical standards. Hold open meetings.
Task Forces	Formed to review and make recommendations on certain major initiatives, such as Free Flight. Hold open meetings.
Free Flight Steering Committee	Establishes an agreed-to Free Flight implementation strategy and milestones. Holds open meetings.
Free Flight Select Committee	Supports the Free Flight Steering Committee in implementation of previous Free Flight recommendations and assists in defining future Free Flight phases. Holds closed meetings.
Free Flight Working Groups	Four working groups currently established by the Free Flight Select Committee to support the Select Committee with Free Flight Phase 1, Free Flight Phase 2, Surveillance, and Safe Flight 21. Holds closed meetings.

### ***Objectives, Scope, and Methodology***

The Conference Report on the Department of Transportation and Related Agencies Appropriations Act for Fiscal Year (FY) 2000<sup>3</sup>, directed the Office of Inspector General to review the relationship between RTCA and FAA and compare it to other Federal agencies' interactions with Federal advisory committees. The objectives of our review were to examine FAA's relationship with RTCA, review the role and organization of RTCA, and compare FAA's relationship with RTCA to that of other Federal advisory committees.

We conducted our work at FAA Headquarters, RTCA, and other selected locations in Washington, D.C., between November 1999 and March 2000. Our work covered the activities of RTCA from January 1996 to March 2000. We performed

<sup>3</sup> House Report 106-355, accompanying H.R. 2084 (Public Law 106-69).

the review in accordance with Government Auditing Standards prescribed by the Comptroller General of the United States and included such tests of procedures and records as we considered necessary. There has been no prior Office of Inspector General or General Accounting Office audit coverage regarding FAA's use of RTCA as an advisory committee.

To answer our objectives, we performed the following steps.

- We examined FAA's relationship with RTCA and how the relationship and RTCA's role has evolved over time. We reviewed the history of RTCA through literature research, RTCA charters, and minutes of RTCA meetings. We analyzed how recommendations are formulated, reviewed, and submitted to FAA. We also attended selected RTCA meetings.
- To review the RTCA organization, we analyzed the overall RTCA organizational structure and the committee structure for RTCA Special Committees and Free Flight. We also reviewed RTCA procedures regarding appointment of committee members. We obtained lists of members of the RTCA governing bodies and Free Flight committees and analyzed the composition of each to determine which organizations were represented.
- To compare the relationship between FAA and RTCA with other Federal advisory committees, we reviewed policies and procedures for other committees within the Department of Transportation, Department of Defense, and the National Aeronautics and Space Administration. In addition, we met with officials at the National Academy of Sciences to discuss controls established for its committees.

In addition to these steps, we interviewed or met with representatives from FAA, RTCA, and other Federal agencies. (Exhibit B provides a list of individuals and organizations we contacted.) We also consulted with officials at the General Services Administration regarding requirements of the Federal Advisory Committee Act.

## ***FINDING AND RECOMMENDATIONS***

### ***RTCA's Changing Role in Shaping Air Traffic Control Modernization Issues***

RTCA's role has changed dramatically over the past several years, from developing recommended technical standards to helping FAA shape the scope and direction of key aviation modernization initiatives. In the last 4 years, RTCA has been actively involved and made substantial recommendations with respect to various Free Flight initiatives, including Free Flight Phase 1, Safe Flight 21, and Data Link. FAA estimates the initial cost for the various Free Flight initiatives at limited locations is over \$1 billion -- costs for deploying these technologies Nationwide are uncertain but substantial, likely totaling billions of dollars.

#### **RTCA Involvement in Free Flight Initiatives**

<b>FAA Program</b>	<b>FAA Costs</b>	<b>RTCA Involvement</b>
<b>Free Flight Phase 1</b> Composed of new information exchange systems and automated controller tools.	\$722 million; Fiscal Years 1998 to 2004 for the limited deployment at selected locations. Costs for National deployment are uncertain but substantial.	RTCA recommendations included deployment sites, specific brand names of new controller tools, and general timeframes for implementation.
<b>Safe Flight 21</b> A demonstration program intended to validate the capabilities of new satellite-based communication, navigation, and surveillance technologies.	\$131.96 million; Fiscal Years 1999 to 2003 and beyond for development in the Ohio Valley and Alaska. Cost for implementing throughout the National Airspace System is uncertain but substantial.	Initially focused on a wide range of operational enhancements. Recommendations from RTCA resulted in a revamped program (renamed Safe Flight 21 from Flight 2000), which now focuses on nine operational enhancements.
<b>Data Link</b> A technology that offers controllers and pilots a new way to exchange information that is expected to be faster and more reliable than voice communications.	\$166 million; Fiscal Years 1999 to 2003 for initial steps. Cost to expand technology throughout the National Airspace System is uncertain but substantial.	RTCA made recommendations, to which FAA agreed, on the initial steps for implementing a data link for controllers and pilots. Recommendations included the use of a new data link technology (VDL-2) and changes in the deployment site.

For all three efforts, RTCA examined a wide range of technical, operational, and programmatic issues in considerable detail. FAA accepted RTCA's

recommendations with little or no modification and made corresponding financial commitments. For example, for Free Flight Phase 1, FAA adopted recommendations for specific technologies, locations for deploying new controller tools, and accepted milestones for implementing technologies by the end of FY 2002. RTCA also addressed operational and procedural issues regarding how the technologies would be used to improve the flow of air traffic.<sup>4</sup> Similarly, FAA adopted RTCA's recommendations on a revamped Safe Flight 21 (an effort to examine new satellite-based technologies and new cockpit displays) and the agency accepted major changes in scope and test locations. The lines have now blurred between providing advice through recommendations and providing elements of program decision-making and management, i.e., determining which technologies to implement, at what pace, and at which locations.

Given RTCA's changing role and the significance of the FAA programs in which RTCA is providing advice and recommendations, FAA and RTCA need to ensure appropriate and adequate safeguards are established. Some FAA and industry officials we spoke with agree that the lines between giving advice and program management have become blurred. Three areas should be addressed: FAA's level of participation in RTCA, openness of RTCA proceedings, and disclosure of potential conflicts of interest when appointing committee members to ensure a balance in representation. In addition, FAA in conjunction with the Management Advisory Council should assess the role RTCA will play in future air traffic modernization initiatives, given the Council's role as expanded in the Aviation Investment and Reform Act for the 21<sup>st</sup> Century.

***FAA Representatives Should Not Serve in an Official, Voting Capacity on RTCA Boards, Committees, and Working Groups***

A key requirement of FACA is obtaining independent, objective advice through the medium of an advisory committee. FAA participation in RTCA is critically important to exchange views and information with the aviation community and industry to gain agreement on modernization initiatives, but agency officials should not vote and make decisions that influence the recommendations of the advisory committee. They should not, in substance or appearance, be seen as providing advice to themselves.

Although other Federal advisory committees do have participation from current employees of the agency that sponsors the committees, FAA's participation in RTCA is more interwoven and extensive. As a result, it is difficult to determine where RTCA ends and FAA decision-making begins. As of November 1999,

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<sup>4</sup> For additional details, see Government/Industry Operational Concept for the Evolution of Free Flight. Addendum 1: Free Flight Phase 1 Limited Deployment of Select Capabilities (RTCA August 19, 1998).

47 (30 percent) of the 159 individuals serving on the RTCA Policy Board and Free Flight committees were FAA employees. These employees serve throughout the RTCA Policy Board and Free Flight committees and working groups and are full voting members. Some also serve on more than one committee. In comparison to other agencies we reviewed, FAA's membership at all levels of RTCA is more extensive.

FAA representation on the RTCA Policy Board has gradually increased from one member to the four members on the board today. Each FAA member has full voting rights for any issue that comes before the board. When the board was first formed in 1991<sup>5</sup>, only the Associate Administrator for Research and Acquisitions was a participant. Two additional representatives of FAA senior management, the Associate Administrator for Air Traffic and the Associate Administrator for Regulation and Certification, were added in November 1996 because they were deemed an integral part of resolving the "systems level" issues being addressed by RTCA. The Associate Administrator for Air Traffic Services later became the Acting Deputy Administrator, but remained on the RTCA Policy Board. Finally, in August 1998, the Policy Board invited the Director of the Free Flight Phase 1 Program Office to fill a Policy Board vacancy. Three of these four FAA representatives are also on the Free Flight Steering Committee.

FAA executives and program managers deliberating and voting on recommendations of an external advisory committee does not foster the appearance of a truly objective, external advisory committee that provides advice and recommendations to FAA. Further, key decision-makers who exercise considerable policy and budgetary influence over FAA programs (such as the Acting Deputy Administrator, the Associate Administrator for Research and Acquisitions, and the Associate Administrator for Regulation and Certification) serving as full voting members on both the Policy Board and Free Flight Steering Committee gives the impression that FAA ultimately is providing advice to itself.

The issue of FAA involvement is not new. In the 1960's, FAA disengaged briefly from RTCA because of the perception of giving advice to itself. In a letter withdrawing from participation in RTCA, the FAA Administrator at that time, wrote:

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<sup>5</sup> In 1991, there was only one executive management board, the Board of Directors. This board was restructured in 1997 to become two boards--the Board of Directors (for financial matters) and the Policy Board. FAA only participates on the Policy Board.

*"...If we were to continue our membership, by contributing manpower to RTCA committees, we would be put in the position of, in effect, of advising ourselves...."*<sup>6</sup>

Although RTCA was not established by statute, it is still subject to FACA provisions, which ensure that Federal agencies receive objective and independent advice. FACA requires appropriate provisions to ensure the advice and recommendations will not be inappropriately influenced by the appointing authority or by any special interest(s), but will instead be the result of the advisory committee's independent judgment. For example, when Congress established FAA's Research, Engineering, and Development Advisory Committee<sup>7</sup>, it provided that *the committee membership should be selected from among persons who are not employees of the FAA.*

FAA allows participation of current employees on some of its other advisory committees established at the discretion of FAA, but the number of employees who may participate is limited. For example, FAA's Aviation Rulemaking Advisory Committee has extensive operating procedures that establish what FAA's role should be. Although FAA employees are allowed to serve on working groups, the procedures stipulate there will only be one FAA representative per working group. The FAA representative is a voting member, but the procedures caution the FAA representative not to commit FAA to any specific course of action.

FAA participation with exchange of views and information is critically important, but the agency must limit its participation so the relationship with RTCA is kept at arms-length in substance and appearance. It must be clear the agency has retained its decision-making authority. FAA senior level officials who are responsible for FAA's major lines of business should not serve in voting and decision-making roles on the RTCA Policy Board. Also, FAA should designate agency officials at all levels of RTCA, including committees, subcommittees, and working groups, as non-voting members. It is acceptable for FAA representatives to serve as *ex officio* members and attend meetings to share information and exchange views, but senior level agency official should not hold voting and decision-making positions on RTCA boards, committees and working groups.

Further, given that FAA makes up nearly a third of the Policy Board and Free Flight activities and the changing role of RTCA, FAA should consider options—and take steps—to reduce its committee membership. Options include reducing the number of FAA officials serving on committees, subcommittees, and working

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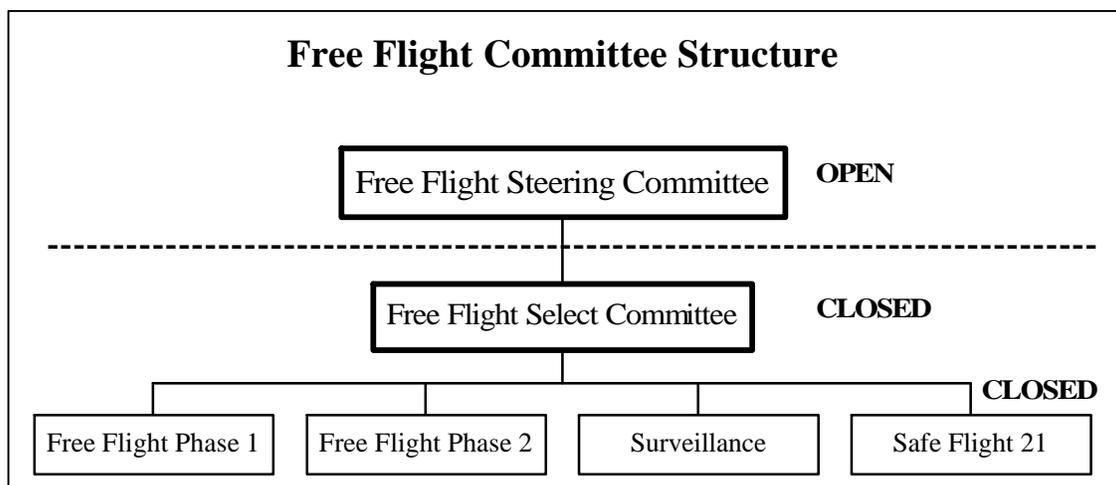
<sup>6</sup> The Authority of Agreement—A History of RTCA, p.62, William G. Osmun, 1985.

<sup>7</sup> Aviation Research Act of 1988, Public Law 100-591.

groups or disengaging from committee membership and attending meetings when invited to provide information, assistance, and technical advice. When an advisory committee's membership is so heavily populated by the same officials to whom it is supposed to provide external and objective advice, its ability to function as an advisory committee can be impaired.

***FAA Should Ensure RTCA Takes Steps to Provide Public Access to Closed Meeting Deliberations***

Key elements of the Federal Advisory Committee Act are openness and public access. However, the process for selecting members and the degree of openness for the RTCA Free Flight committees is different than RTCA's traditional special committees, which are open to the public. As shown in the following chart, all meetings of the committees below the Free Flight Steering Committee are closed to the public.



Some of the FAA and industry officials we spoke with during our review expressed concern about the lack of openness of the Free Flight Select committee and its working groups. Concerns expressed included the closure of the Free Flight Select Committee and its four working groups, the restrictive nature of who participates in the meetings, and the lack of published meeting minutes. Because of the closed nature of the RTCA proceedings, it is unclear to those outside the process how decisions are made and who makes them. While some FAA and RTCA officials we spoke with felt the process was sufficiently open, others agreed openness was a valid concern even though they were members of the Policy Board and Free Flight committees.

Under FACA, a subcommittee, such as the Free Flight Select Committee, can be created and even be closed, but it cannot serve as a mere proxy for the full

committee. GSA has proposed a new rule<sup>8</sup> that provides guidelines for how Federal agencies manage their advisory committees states:

*"If subcommittees conduct deliberations that lead to advice or recommendations that could later be adopted by their parent committee without further deliberations, such meetings should be subject to all openness and recordkeeping policies...."*

GSA cautions agencies to avoid excluding the public from attending any meeting where a subcommittee develops substantive advice or recommendations that are subject to only nominal review by the parent committee before submission to a Federal agency or official. Such exclusions run counter to FACA's provisions requiring contemporaneous access to the committee deliberative process. GSA also suggests that agencies should seek to be as inclusive as possible (e.g., posting committee information on the Internet).

We identified a number of issues regarding openness, including not only the closed nature of the Free Flight Select Committee and its working groups, but also the informal interaction of the Free Flight Phase 1 working group with the FAA Free Flight Phase 1 Program Office and the review of recommendations by the RTCA Policy Board during closed meetings.

- **Closed nature of the Free Flight Select Committee and its working groups.** Although the subcommittee structure is not uncommon for an advisory committee and is allowed by law, *significant deliberations are occurring and recommendations being formulated at the Free Flight Select Committee and below.* To participate as a member at this level, you must be appointed by the RTCA Policy Board. Almost all of the Select Committee recommendations are adopted with little discussion at the Free Flight Steering Committee. Also, minutes of the Free Flight Select Committee and working group meetings are not made available to the public.
- **Informal nature of the Free Flight Phase 1 working group.** The working group works informally with the Free Flight Phase 1 program office to proactively resolve issues as they arise. This creates the potential for recommendations to flow out of the working group directly to the agency for possible action before the committee has deliberated and formally approved the recommendations. *The law requires that recommendations flow up the committee deliberative process and not circumvent that process by being transmitted directly to the agency itself.*

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<sup>8</sup> GSA is revising the regulations implementing the Federal Advisory Committee Act, due to legislative changes, shifts in Federal policy, and decisions issued by the Supreme Court and other Federal Courts. See Proposed Rule "Federal Advisory Committee Management" issued on January 14, 2000.

- **Expanded role of the RTCA Policy Board.** The Policy Board has gone beyond its role of establishing policies and procedures. It also reviews recommendations of the Free Flight Select Committee prior to the open Free Flight Steering Committee meeting. We were told this review is for informational purposes only, not approval. However, different perspectives and views are discussed. Again, Policy Board meetings are closed and not currently subject to the Federal Advisory Committee Act. Minutes are recorded for these meetings, but are not made available to the public.

Our analyses of other Federal agencies show that some take proactive steps to meet the openness criteria of FACA. For example, NASA has a requirement that all closed meetings, including those of subcommittees and working groups, must be justified as either non-FACA (e.g., fact-finding) or for reasons covered under the Government in the Sunshine Act (e.g., National security or proprietary information). NASA requires that a memorandum for the record be approved by the General Counsel and the Advisory Committee Management Officer to justify closing a meeting.

Given the significance of issues being explored, FAA needs to ensure RTCA provides information to the public regarding closed committee and working group deliberations. For example, FAA and RTCA should consider steps the Academy has taken to increase public access to current project activity. The Academy posts the following project information on its web site.

- Names and brief biographies of committee members,
- Notices of open meetings,
- Copies of written materials presented to the committee,
- Summary minutes of closed meetings,
- Descriptions of ongoing projects, and
- Copies of final committee reports.

***FAA Should Ensure RTCA Adopts Procedures to Ensure Balanced Membership, Including Disclosure of Potential Conflicts of Interest and Representational Interests***

A key requirement of FACA is the desire for balance in committee representation. A wide range of views and competing interests that reflect the aviation

community's diverse stakeholders are needed to make independent judgments and reach consensus on air traffic control modernization efforts. *The key is to make sure that potential conflicts of interest<sup>9</sup> are disclosed and properly addressed before individuals serve on RTCA committees.*

Currently, FAA and RTCA do not require committee members to disclose potential conflicts of interest before or after being appointed to committees. Other agencies we reviewed take steps to ensure that potential conflicts of interest are disclosed. The individuals serving on RTCA's Free Flight committees represent the users (e.g., airlines), the providers (equipment manufacturers), and FAA (the program administrator). Given the role of RTCA and the stakes being discussed in the Free Flight meetings, it is important for FAA to ensure that potential conflicts of interest are known to decision-makers and properly addressed when appointing members to RTCA committees. Because of the way in which committee members are currently selected (by the 17-member RTCA Policy Board), disclosure would also help ensure a balance in representation from across the spectrum of the aviation community and to ensure that it is known which interests are being represented, including competing interests.

Balance of committees should be reassessed when committee members change jobs. Members of RTCA Free Flight committees have remained in committee positions even though the organizations they represented have changed, sometimes blurring the line as to which "representational" hat they are wearing.

Controls established by the National Academy of Sciences (Academy) addressing conflicts of interest and bias issues serve as models for FAA and RTCA to consider. The Academy:

- Requires that each committee candidate fill out a form on his or her potential conflicts of interest. The form consists of five questions regarding the candidate's relevant organizational affiliations, financial interests, research support, Government service, and public statements and positions concerning the committee's topic;
- Requires a confidential discussion among committee members and project staff of potential conflicts of interest at the first meeting of every new committee; and

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<sup>9</sup> Conflict of interest is any financial or other interest or affiliation that conflicts with the service of an individual because it could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization.

- Posts the names and brief biographies of the recommended committee members on the Academy's web site for public comment before making the final selection.

Most other Federal advisory committees we reviewed had established controls to determine and address conflicts of interest, but FAA did not have such controls. For example, as a matter of policy, both the Department of Defense and NASA designate all their committee members as "Special Government Employees" (SGE), thus making it necessary for members to provide financial disclosures and abide by conflict of interest laws.

Another advisory committee within the Department of Transportation, the Intelligent Transportation Society of America (ITS America), is similar to RTCA in that it is a private, not-for profit, company that was not established by a Federal agency. ITS America designates its members as representatives like RTCA. However, ITS America *has a written policy on conflict of interest and members must sign conflict of interest statements agreeing to report and disclose all relevant information.*

### ***FAA and the Management Advisory Council Should Assess the Role RTCA Will Play in Future Modernization Initiatives***

The Reauthorization Act of 1996 established the Management Advisory Council (Council) to advise FAA on a wide range of management, policy, and regulatory matters. The Aviation Investment and Reform Act for the 21<sup>st</sup> Century expanded the Council's role to oversee the air traffic control system, including modernization. The Council's Air Traffic Services subcommittee is expected to oversee administration, management, conduct, direction, and supervision of the air traffic control system. This Council will be faced with a number of questions regarding how to move forward with key air traffic control modernization projects. Given the Council's stated roles and responsibilities, FAA and the Council need to assess the role RTCA will play in future modernization initiatives and how RTCA will interface with the Council.

## ***Recommendations***

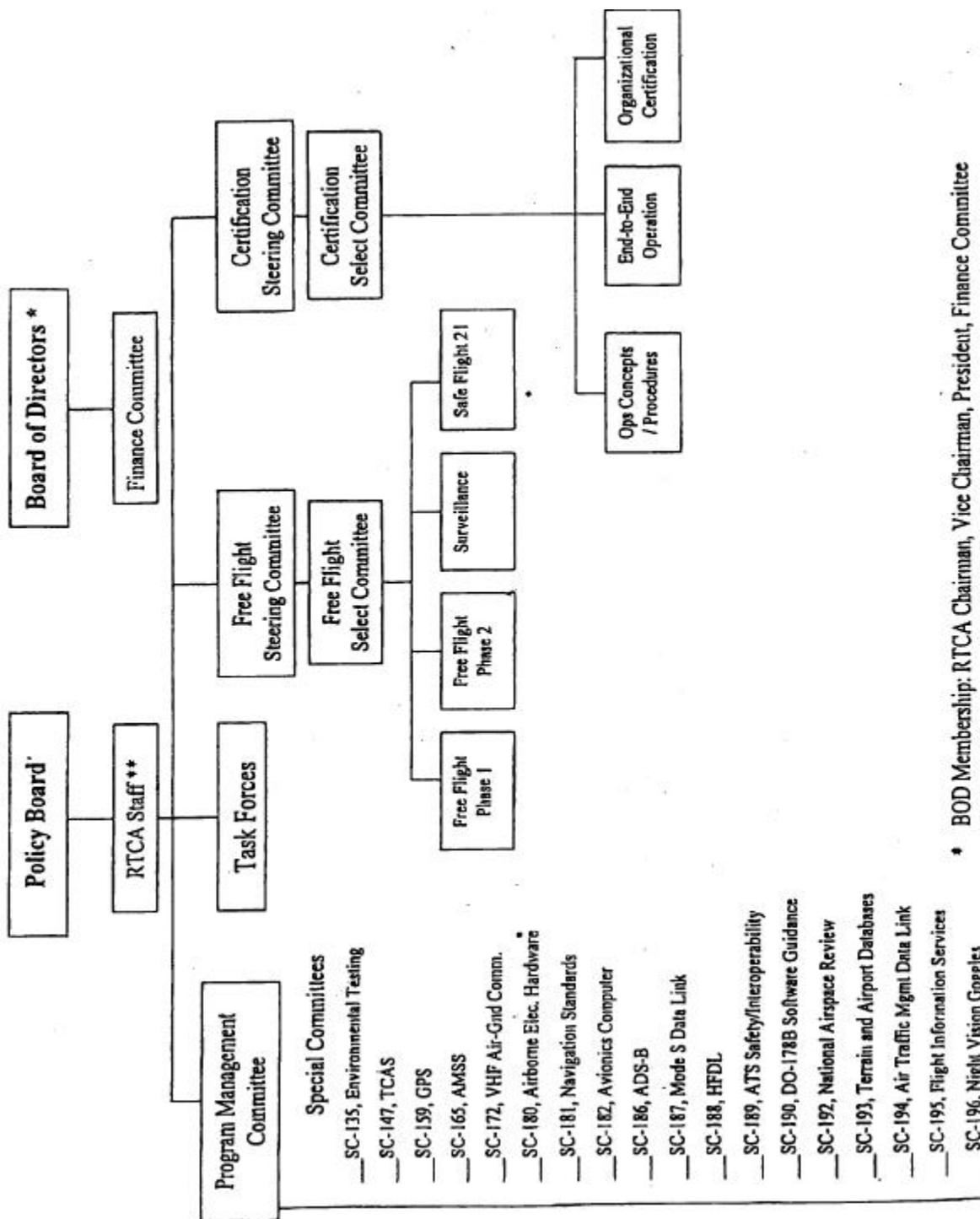
We recommend that FAA:

1. Establish controls regarding FAA participation to ensure senior level FAA officials do not serve in voting and decision-making roles on the RTCA Policy Board and designate agency officials at all levels of RTCA as non-voting members.
2. Consider options—and take steps—for limiting FAA committee membership, such as reducing the number of FAA officials on committees, subcommittees, and working groups or disengaging from committee membership and attending meetings when invited to provide information, assistance, and technical advice.
3. Ensure RTCA takes steps to provide information to the public regarding closed subcommittee and working group deliberations, similar to those adopted by the National Academy of Sciences.
4. Ensure RTCA adopts policies and procedures for selection of RTCA committee members similar to those adopted by the National Academy of Sciences to ensure potential conflicts of interest and paid representational interests are disclosed and properly addressed to ensure a balance in representation.
5. Ensure RTCA committees and working groups do not make recommendations directly to FAA program offices but rather follow the regular advisory committee process.
6. In conjunction with the Management Advisory Council, assess the role RTCA will play in future modernization initiatives and how RTCA will interface with the new Council.

## ***Agency Comments***

During our review, we met with FAA officials, including the FAA Administrator, and have taken all comments into consideration where appropriate in preparing this report. FAA concurs with our recommendations and will proceed to implement them. FAA officials also emphasized the important contribution RTCA makes to the agency and their desire to continue to receive this valuable advice and recommendations from RTCA.

### RTCA Organization Chart



\* BOD Membership: RTCA Chairman, Vice Chairman, President, Finance Committee Chairman, One non-government Policy Board Member

\*\* RTCA Staff provides administrative management/support to all volunteer activities

## ***Individuals and Organizations Contacted***

### **RTCA Staff**

David Watrous, President, RTCA  
Dennis Wright, Vice President and Corporate Secretary, RTCA  
Jerry Bryant, Manager, Technical Programs, RTCA

### **RTCA Industry Representatives**

Don Antonucci, President, Lockheed Martin Air Traffic Management  
Robert Blouin, Senior Vice President Operations, National Business Aviation Association  
Edward M. Bolen, President, General Aviation Manufacturers Association  
Phil Boyer, President, Aircraft Owners and Pilots Association  
Anthony Broderick, Former FAA Associate Administrator for Regulation and Certification  
Amr ElSawy, Senior Vice President and General Manager, The MITRE Corporation  
Dr. John Fearnside, Senior Consultant, Lockheed Martin Air Traffic Management  
Timothy Fehr, Vice President-Airplane Systems, Commercial Airplanes Group, The Boeing Company  
Robert Frenzel, Senior Vice President, Aviation Safety and Operations, Air Transportation Association  
Douglas Helton, Vice President Air Traffic, Airline Owners and Pilots Association  
Margaret Jenny, Vice President Corporate Business Development, ARINC  
Clay Jones, President, Rockwell Collins  
John Kern, Vice President, Regulatory Compliance and Chief Safety Officer, Northwest Airlines  
Dick Marchi, Senior Vice President, Airports Council International North America  
John O'Brien, Director Engineering and Air Safety Department, Air Line Pilots Association (RTCA Vice Chairman)  
James Pierce, Chairman and Chief Executive Officer, ARINC (RTCA Chairman)

**FAA RTCA Representatives**

Monte Belger, Acting Deputy Administrator  
Charles Keegan, Director Free Flight Phase 1 Program Office  
Thomas McSweeny, Associate Administrator for Regulation and Certification  
Steve Zaidman, Associate Administrator for Research and Acquisitions

**Other Government**

Ron Cormier, Senior Evaluator, General Accounting Office  
Neil Planzer, Executive Director, Department of Defense Policy Board on FAA  
Nye Stevens, Director, Federal Management and Workforce Issues, General  
Accounting Office

**Committee Management Officials and Other Related Officials**

John Collins, President and CEO, Intelligent Transportation Society of America  
Matt Crouch, Committee Management Officer, National Aeronautics and Space  
Administration  
Jim Dean, Director of the Committee Management Secretariat, General Services  
Administration  
John Ello, Executive Director, Defense Science Board  
Roberta Fede, Committee Management Officer, Department of Transportation  
Eric Harrell, Executive Director, Air Traffic Procedures Advisory Committee,  
FAA  
James Jensen, Director, Office of Congressional and Government Affairs,  
National Academy of Sciences  
Regina Jones, Program Analyst, Aviation Rulemaking Advisory Committee, FAA  
Peter Murrain, Group Federal Officer, FAA  
Lee Olsen, Committee Manager, Research, Engineering, and Development  
Advisory Committee, FAA  
Brenda Parker, Designated Federal Official, Commercial Space Transportation  
Advisory Committee, FAA  
Jan Peters, Special Assistant, Office of Systems Architecture and Investment  
Analysis, FAA  
Colonel Robert Schraeder, Executive Director, U.S. Air Force Scientific Advisory  
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