

The Need for Fundamental Reform of Air Traffic Control

The Crisis in Air Traffic Control

The summer of 2007 has been the worst ever for flight delays. But it is merely a foretaste of what is to come, as growing flight activity bumps up against the capacity limits of an air traffic control system still based largely on 20th-century radar technology and "by hand" procedures. The inter-agency Joint Planning and Development Office has estimated the economic consequences of not dramatically expanding air traffic control (ATC) capacity at \$40 billion per year by 2020. Without large-scale capacity expansion, delays would reach such major proportions that the only way to maintain orderly operations would be to ration airspace capacity, imposing higher costs and fewer choices on both airline passengers and users of general aviation.

Two key actions that will affect how the United States addresses this challenge are (1) reauthorization of the Federal Aviation Administration (FAA), and (2) appointment of a new FAA Administrator. Bad choices in either or both of these will delay the speedy replacement of an obsolete ATC system.

In 1997, the National Civil Aviation Review Commission, headed by Norm Mineta, produced a blueprint for fundamental ATC reform. It called for unifying FAA's ATC functions into a single entity, which would be funded by payments for its services and which could fund its capital (modernization) expenses via long-term revenue bonds. It would be run by a board and management, much like a government corporation. Many of the ideas in the Mineta Commission report had been endorsed by previous federal commissions, including the Aviation Safety Commission (1988) and the Airline (Baliles) Commission (1993).

In the late 1990s, Congress took the first steps toward implementing these reforms, by authorizing the creation of the Air Traffic Organization (ATO) within FAA. But while a welcome first step, the creation of the ATO, and its able management by Russ Chew until early 2007, was only a first step. In its present form, the ATO is not up to the task of making the kind of paradigm shift called for by the Joint Planning and Development Office (JPDO) —implementation of semi-automated, satellite-based air traffic management (ATM), along with a massive integration of huge amounts of data in real time.

The proposed NextGen system, if implemented in a timely manner and at an acceptable cost, would dramatically expand the system's capacity. But NextGen involves complex technologies and radically different procedures for safely separating planes in flight. The ATO has ongoing problems managing individual technology-replacement projects, most of which are still over budget, behind schedule, and poorly managed. NextGen is a far more high-risk endeavor than those existing projects. And it also raises many trade-offs between safety and increased capacity that must be addressed and resolved in a transparent manner. Aviation users face massive costs to properly equip their aircraft to make use of NextGen technologies, but at this point they have little confidence in the

business case for those investments. They have been promised major increases in ATC productivity since the early 1980s—yet have seen no such increases, despite the expenditure of tens of billions of dollars.

Why We Have Stepped Forward

Each of us has been involved with air transportation policy for a major portion of his career, having served variously in the U.S. Department of Transportation, the FAA, and in senior positions in airlines, airports, and other aviation companies and trade associations. We are deeply concerned that in its current efforts to reauthorize the FAA, Congress has failed to move forward with significant reform of the air traffic control system. Neither the House nor the Senate bill addresses the growing mismatch between the factors that increase ATC costs and the factors that drive ATC revenue. Neither bill makes any substantive changes in the structure or governance of the FAA's Air Traffic Organization, despite the fact that it is a far cry from what the Mineta Commission proposed a full decade ago. Neither bill addresses the need for more transparent safety regulation of ATC as we move forward to change the basic paradigm (from manual, radar-based air traffic *control* to partially automated, satellite-based air traffic *management*).

In short, our assessment is that Congress has not realistically addressed the challenges inherent in implementing the NextGen approach to air traffic management. Drawing on the work of many previous expert bodies, most recently the Mineta Commission, and our own aviation experience, we offer the guidelines below for meaningful reform.

Governance and Management

The Air Traffic Organization needs to be able to run like a user-cooperative, providing its members/customers with safe, cost-effective air traffic management services. It should be run by a chief executive officer, rather than a chief operating officer, with the normal strategic responsibilities, powers, duties, and accountability of a chief executive. He or she should be able to hire and fire the management team and to hold them accountable for delivering results. The managers, in turn, should be able to hold their staff accountable for delivering results. There should be fair treatment for all current employees during the transition to the new ATO. The chief executive should report to a board of directors, selected to represent the key constituencies of: commercial air service operators, business and general aviation, airports, ATO employees, civil and military government users, and the traveling public. The board should have the normal powers and duties of a co-op's board, including approval of the strategic plan, review and approval of the capital budget, and review and approval of the operating budget. The chief executive should be a member of the board, but would be hired and fired by the board.

Separation of Regulation from Operations

There should be arm's length separation of aviation safety regulation from the delivery of ATC/ATM services. This is especially important as the ATO moves forward to

implement the dramatic changes in technology and procedures inherent in the NextGen concept. Many decisions about increasing capacity by reducing aircraft spacing (thanks to new technologies and procedures) have important safety implications, and should be arrived at in a transparent manner. Arm's length separation cannot be accomplished as long as ATO operations and aviation safety regulation reside in the same governmental unit. Hence, the ATO should be organizationally separate from, rather than a part of, the FAA. This change would also put the United States in compliance with International Civil Aviation Organization principles and with the global practice in other Organization for Economic Co-operation and Development (OECD) countries.

Financial Self-Support

The ATO should have its own dedicated revenue sources sufficient to cover its annual operating and capital costs, plus a prudent reserve fund. The revenues should be derived from the ATO's aviation customers, rather than the federal government's general fund (except for the government paying the ATO for services provided to government aircraft). The revenues should be structured in such a way that the ATO can issue and service debt, such as revenue bonds and other financing instruments necessary to support the capital expenditures needed for major modernization. The structure of the revenues should be developed by the ATO board of directors, subject to appeal to the Secretary of Transportation.

Facility Consolidation

As part of modernization efforts, the ATO board must be free to develop plans for reorganizing and modifying its facilities and equipment, along with large-scale redesign of the airspace. If congressional approval is required, the process should be modeled after the Base Closing and Realignment Commission (BRAC) process used for military bases—i.e., an up-or-down vote on the entire plan presented, with no amendments. In this application of the process, the ATO stakeholder board would be the counterpart of the BRAC.

Conclusion

We are not speaking on behalf of any of the aviation trade associations or interest groups, despite a number of our previous affiliations with such groups. We step forward as volunteers, seeing only to promote a safer and more efficient aviation system. We offer the above reform principles as a challenge, not only to Congress but also to the aviation trade associations themselves. America needs a 21st-century air traffic management system, and we need it as soon as possible. A largely status-quo approach will not get us there. Congress needs to rethink the status-quo approach inherent in its current reauthorization bills, with inputs from aviation stakeholders.

[signed]

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