



DEPARTMENT OF TRANSPORTATION

TAD-494
NEWS

FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20590

122.11

REMARKS PREPARED FOR DELIVERY BY
ALEXANDER P. BUTTERFIELD, ADMINISTRATOR
FEDERAL AVIATION ADMINISTRATION
TO THE GREATER MIAMI AVIATION ASSOCIATION
MIAMI, FLORIDA
SEPTEMBER 12, 1973

I am delighted to be here--I think. I add the qualifier for two reasons. First, because of the composition of my audience; and secondly, because of the subjects I've been asked to discuss. Sam Higginbottom tells me this august group is divided about equally between scheduled airline proponents and general aviation enthusiasts. The positive note he projects--proponents on the one hand, and enthusiasts on the other--is a relief to me. Some of the "Skeds," I'm told in Washington, are convinced that FAA is ridiculously indulgent regarding the rights of general aviation. I've also heard that many in private aviation are just as convinced that FAA is bent on annihilating general aviation by favoring the airlines. Neither extreme, of course, is the case, nor will it ever be. There is plenty of room "up there" for all of America's growing aviation fleet, if we use the airspace sensibly.

575011

But the fleet mix is changing and growing--not just in numbers of aircraft, but in size, gross weight, speed and range. The advances in general aviation in the last decade or two, for example, have brought much faster and longer ranged aircraft into the nation's airspace. As a reference point, many of the planes flown for business and pleasure today are considerably faster than the fastest fighters of World War II, and some are larger than a number of our scheduled airliners in the 'Fifties. Ocean hopping is no longer the province of long-ranged scheduled airliners. And the coast-to-coast, border-to-border flight of general aviation aircraft have become routine business and pleasure flight objectives.

In much the same fashion that the urbanization of America brought about laws, fencing, speed limits, traffic lights and other restrictions that were imposed for the public safety, so have come Federal Aviation Regulations to provide for the safety of all who use the national air space. There's space, to be sure, for the sportsman pilot who simply wants to punch holes in the sky, but he's got to exercise considerable judgment in where he does it and how.

The point is, I'm afraid, whether we like it or not, the "wild blue yonder" is no longer wild. It has had to be tamed. Henceforth, judgment, professionalism and flight planning are the watchwords for private aviation today, and I must say, increasingly so in the congesting airspace of the 'Eighties.

During the decade of the 'Seventies remaining, we expect the number of general aviation aircraft to increase by 75 percent--to well over 200,000 aircraft. In combination with the approximate 3,300 air carrier aircraft providing a forecast 17,000 flights per day by 1980; the U.S. military's demand for ATC services for its 34,000 units; and the increasing demands of foreign flag carriers, the FAA is faced with a two-to-three fold increase in system capacity during the next 8 years.

So how do we cope with this surging demand? The technology exists--in abundance--all the way from computers to improved communications, coding techniques, phased array antennas, lasers, and a fine assortment of acronyms which I will describe later.

Our present-day ATC system is computer-based and semi-automated. It bears little resemblance to the manual system of the Thirties with its time separation of aircraft. The automatic system now installed at the major terminal areas, ARTS III (for automated radar terminal system), processes beacon signals emitted by aircraft transponders that provides the air traffic controller--directly on his radar--with the identity and altitude of the aircraft he is tracking. Data processing equipment automatically follows and updates each aircraft position from the time the aircraft enters the terminal approach area until final touch-down. A simplified system, called ARTS II, is to be installed at lower activity terminals.

The other major component of the automation program involves the installation of an en route system called the national airspace system or NAS Stage A.

This highly complex system provides controllers with such automatic functions as on-line entry of proposed flight plans from both local and remote sources; automatic flight plan updating, data forwarding, and display; and automatic radar tracking of both beacon and non-beacon equipped aircraft. All 20 en route centers in the U.S. are now equipped with the basic computer hardware, and are already processing and distributing flight plan information. The Miami Center now has automatic flight data processing, and radar processing will be commissioned in July of 1975.

To continue upgrading the ATC system as quickly as possible, FAA will begin shortly to introduce several new systems to enhance the capabilities of the present ARTS III and NAS Stage A. The new systems include the discrete address beacon system (DABS), electronic voice switching system (EVS), and microwave landing system (MLS). Along with these new systems, we will also expand our operational capabilities to provide intermittent positive control (IPC).

The electronic voice switching (EVS) system will provide the controller with faster and more reliable communications, as well as a degree of flexibility and adaptability not possible in today's system. We hope to begin installing the EVS system in traffic control centers early in 1976.

Moving into the subject of landing systems, we are greatly pleased with the potential efficiency and accuracy which the all-new microwave landing system holds. The MLS system, you may know, can be installed at sites which cannot accommodate the present ILS glide slope due to unsuitable terrain conditions.

With MLS, air carrier aircraft, equipped with airborne computers, will be able to execute precisely, almost limitless numbers of curved approaches to airport runways instead of the present straight line approaches thus giving more flexibility in the use of the airspace. General aviation aircraft equipped with simple, inexpensive versions of the same equipment would be able to make simple straight-in localizer-glide slope type approaches. So, as you can readily see, MLS will answer a range of needs and requirements.

The microwave landing systems will begin going on-line about 1977 in parallel with the existing instrument landing system. In this way, those aircraft equipped with VHF/UHF systems will be able to continue using them to amortize their costs. Commercial carriers will be able to phase in their new MLS electronics over a ten-year period as the older systems begin to be phased out, probably around 1985.

As some of you may know, we are in advanced development of a radar beacon with discrete address capability. When it is completed and becomes operational throughout the system, we will be able to track every aircraft equipped with transponders and data links, whether they are flying VFR or IFR. Looking ahead a few years, with this same equipment, it would also be possible to incorporate intermittent positive control (IPC) capability. This, of course, would be highly desirable from a flight safety point of view, for the equipment could then automatically warn aircraft of dangerous situations and relay instructions to avoid collisions. Practical considerations, however, indicate that we will likely settle for a system which has most of the desirable features of positive control, but which will not impose heavy costs or restrict the freedom of general aviation aircraft.

The system comprising DABS and IPC that we are working on would provide advisory and separation services to aircraft, touching the VFR flight regime only when that flight's course and altitude put it in conflict with other traffic or a positively controlled boundary. It would not require pilots to file a flight plan or to operate under an air traffic control clearance. It would only require that an aircraft be equipped with a transponder, be able to receive and send data link messages, and have an appropriate cockpit display.

An automatic computer-generated voice traffic advisory system for general aviation has already been tested at Knoxville. During the tests a general aviation pilot called for VFR advisories as he crossed the area under control, and a computer directly responded to his request with a synthesized voice. At the same time, his position and predicted course were being tracked automatically by the ARTS system. If another aircraft came within five miles of intercepting his predicted track, the computer flashed an alert on the controller's radar scope.

In effect, although this experimental system is but a single step toward IPC, it also strengthens a basic premise of the upgraded third generation system; namely, our current ground-based ATC system will be the primary means of aircraft collision avoidance.

I think you will agree generally with me that we are moving as rapidly as possible to achieve the capability of handling the air traffic forecast for the 'Eighties. I just wish that expansion and modernization plans for our nation's airport system were moving as rapidly.

You, here in the Miami area, are particularly fortunate in that the controversy as to where to build Miami's new and badly needed jetport is approaching final resolution. I am, of course, very much aware that the issues have been many and are extremely difficult. The FAA strongly recommends the development of a new airport in south Florida to relieve Miami International.

The FAA has been a staunch supporter of the jetport pact which, among other things provided for a site selection committee for a new airport. Moreover, the FAA concurs in the results of the study funded under our Planning Grant Program which recommended site 14 (on the north county line separating Dade from Broward Counties, 15 miles inland from the east coast), as the replacement for the controversial Everglades Jetport. I prefer saying nothing more regarding the jetport issues because its eventual solution must be made by the citizens of this region not and I emphasize not, by the FAA. Finally, a subject that I know is of increasing interest and concern to all of you, is the looming threat of an energy crisis. And, of immediate concern, the effect on aviation of President Nixon's Phase IV Economic Stabilization Program.

First, let me say this about the energy crisis and its effect on aviation transportation: So far, in the commercial sector, it has had little actual impact on the nation's scheduled air carriers except to make managers more conscious of fuel economy. A number of carriers, as you probably know, have voluntarily instituted flight and cruise control procedures aimed at achieving fuel economies and, crisis or not, from a business management point of view, I believe the exercise has had a positive effect. It is true that temporary aviation fuel and petroleum shortages have been felt in one or two areas, the northeastern United States, for example; but these isolated instances have been due to contractual disputes, strikes, etc., not short supplies, per se.

Largely, the same situation prevails in connection with avgas supplies and other petroleum products for general aviation usage. Corporate aviation departments, commuter and air taxi operators, in some instances, have tightened up their flight procedures. And, in the case of corporate aircraft, some companies have tightened up their flight scheduling. In other private sector operations, business travel, pleasure and sports flight have been unaffected. Once again, there have been sporadic instances of temporary petroleum shortages on a local basis, but these, for the most part, have been caused by contractual situations and, in few instances, by snags in individual company distribution programs.

At the same time, I do not want to imply that a crisis does not exist, for one does. As you know, President Nixon has appointed Colorado Governor John Love to head a high-level White House Energy Office. And he has asked the Congress to create a new Cabinet Department devoted to energy and natural resources and a new independent Energy Research and Development Administration. Moreover, the President has announced a new \$10 billion program of energy research and development to extend over the next five years. The new program contains a number of essential proposals which have been made to the Congress aimed at increasing energy supplies and thereby keeping inflationary prices down.

Price controls have also helped to slow inflationary pressures confronting us all. But in the long run, dependence on controls would destroy the economy and demolish our prosperity. Eventually, the only thing that will keep prices down is sufficient supplies to meet the demand. Controls will not provide supply, nor for that matter will they substitute for fiscal and financial discipline by consumer, industry, and government.

Phase IV of President Nixon's economic stabilization program has already proved to be far more flexible than the price freeze implemented under Phase III, whereby pass-through price increases are permissible. What's more, I believe we can all agree that Phase IV controls are selective enough to preserve the production incentives needed to assure that market-place demand can be met.

For example, recent FAA studies have shown that avgas and other aviation petroleum products represent approximately 60 percent of the variable operating costs for general aviation flying. These studies have also revealed that general aviation is highly sensitive to cost changes. So any sudden surge in prices for fuel, which represents a significant percentage of the total operation cost, would result in a dramatic drop in aviation activity. But, to preclude any lessening of the supply of avgas, jet fuel, and other aviation petroleum products, increases in petroleum prices are to be allowed only to the extent of proven industrial and distribution cost increases. Phase IV controls have been structured carefully with just enough resiliency to allow production to expand, business to grow, and for the industrial pace to be maintained.

The new system of price controls requires business men to notify the government's Cost of Living Council in advance of any proposed price increase. The Council, I can tell you, will permit only those increases which represent an actual pass-through of dollar-for-dollar cost increases.

The more than three-quarters of a million active U.S. pilots can thus be assured there will be no wild, inflationary surge in the cost of aviation petroleum, nor for that matter, in other aviation product, equipment or accessory areas. The government intends to assure a continuation of a competitively viable air transportation industry. All in all, Phase IV is a bold step, worthy of our support.

In closing, the significance of aviation as an industrial factor in our national economy continues to grow at an amazing rate. Indeed, manufacturing elements comprising our aerospace industry, in combination with our air transportation industry, make aviation undoubtedly the nation's largest employer. U.S. aerospace product exports are the largest positive contributors to our position in international balance of payments. The world's seven largest airlines are U.S. owned and, parenthetically I might add, 90 percent of all Americans who travel abroad from U.S. cities, do so by the air mode. Last year, the nation's airlines transported some 193 million persons between domestic and international city pairs. This year air line passenger travel will climb to well above the 200 million passenger mark. And general aviation is growing as spectacularly.

We are just now really entering the air age. The primary mission of the FAA is to enhance the safety of all aspects of flight through the efficient management of the nation's air space. With your help and continued support, we can and always will do a better job.

Thank you.

#