

airways because the rules and operating procedures are explicit and pilots and aircraft are generally qualified for IFR. The next in order of simplicity is the strictly VFR (Visual Flight Rules) situation where all aircraft are operating by the "see and be seen" rules. The third and most difficult controlling situation is where some aircraft are operating under visual flight rules and others under instrument flight rules. This is compounded by the aircraft having a wide range of performance characteristics, i.e., minimum and maximum flying speeds, approach speeds, turning radii, rates of climb, and maximum cruising altitudes. Throw in a mixture of pilot skills and capabilities, and we find the controller in a situation that is almost untenable.

The controller lacks the added tools to preserve system integrity at all times. He desperately needs better means for speed control, bright display radar scopes in busy towers, non-jammable radio systems, altitude information, and many others. He needs more concrete for landing and departing aircraft. He needs better, more timely, and accurate weather and flight information. The controller needs the sympathetic understanding of the pilot, the FAA, Mr. John Q. Public, and his Congress. *Most people do not understand his problems.*

The present ATC system is predicated upon implicit cooperation and trust between pilot and controller. The pilot remains the tactician and the controller the pathfinder. Unfortunately, a vast majority of pilots lack appreciation and understanding of the problems and limitations of ATC. I see a crying need for greatly increased pilot education, better dissemination of information pertinent to use of the airway system, better and more comprehensive pilot training programs in which standards of performance are significantly above the minimum standards established in the Federal Air Regulations. Above all there must be a better rapport between the pilot and controller.

In my opinion, the FAA has done a rather inadequate job of familiarizing pilots with ATC problems. Current pilot training programs do not stress understanding of ATC. The majority of controllers have no time to extend effort in sharing their problems, their limitations, or their expertise with pilots. In some respects, I blame the controllers for this immobility. Yet, I can see why they are not acting as true professionals. They are overworked, underpaid, and, thus, demoralized. This brings us to the second point—human oriented problems—which greatly constrains ATC.

Staffing levels at terminal facilities, in particular, are based upon the amount of IFR traffic generated. Likewise, the salary structure is based upon the amount of IFR traffic. There are numerous airports in the United States that have approximately three times as many VFR operations as instrument operations. For example, Columbus, Ohio, had, during CY 1967, slightly more than 300,000 VFR operations and 121,000 instrument operations. The personnel at Port Columbus International Airport are professional in every sense of the word, but severely overworked. There has been some effort to provide more qualified controller personnel, but the magnitude of the increase is small and does not have a very desirable effect on system operation. Surely the basis for staffing strengths are unrealistic.

Controllers need professional standing within the aviation community to include recognition as a professional body, favorable promotion and salary schedules, and earlier retirement benefits. The Federal Aviation Administration has, in general, failed to adequately meet the needs of controllers and elimination of their pressing problems. The controllers need better lines of communications for making recommendations for updating regulations, procedures, and specific controlling techniques. They are better qualified, more knowledgeable as a group, and in touch with reality than most of the rule makers in Washington.

An example of this failure of the line of communications is the recent elimination of special VFR operations at 33 hub airports under Part 93.113 of the FAR's. This new regulation was instituted without proper public hearing and without consideration of the overwhelming support for continuance of the existing VFR. The FAA last summer distributed questionnaires to all major terminal control groups concerning their interpretations of the problems of special VFR. I know of two major hub airports where 80 percent of the controllers were in favor of continuing special VFR. The majority of controllers feel that, when properly supervised, special VFR is many times less dangerous than flying in basic VFR conditions in airport control zones. There was vigorous opposition to the present regulation voiced by the Aircraft Owners and Pilots Association, National Business Aircraft Association, National Aviation Trades Association, the National Air-Taxi Conference, and numerous individual air carrier pilots. They were not allowed to speak out.