I AM pleased to be a guest tonight of the Kansas City Chamber of Commerce as it celebrates the twentieth anniversary of the inauguration by TWA of its transcontinental service through this throbbing hub of air transportation.

AIRLINE OUTLOOK AT CLOSE OF 1948

As the year 1948 closed its books on December 31 many question marks faced our most dynamic and spectacular transportation facility—the airlines. On that day they had every right to have fear in their hearts. The cost of doing business was going up hour by hour, and try as hard as they might red ink crept into and gradually took over their ledgers.

Competition was hitting them hard. Their credit was exhausted and their day by day revenues would not begin to sustain them. The CAB had slowed down to a snail's pace in awarding back mail pay long overdue. The outlook for a general recession in business was generally recognized as a virtual certainty. Its intensity and endurance were the only unknown factors. The mass production lines were turning out much larger and much more efficient planes which the airlines could not afford to purchase, but if they were to remain in business neither could they afford not to purchase.

In that dark hour I announced that the Senate Committee on Interstate and Foreign Commerce would undertake at once a thorough investigation of every phase and aspect of the airline industry. This awakened the CAB, and in that "Ivory Tower" things long delayed began to happen. Today the picture is quite different.

Fixed charges and operating expenses now have registered slight declines. The morale of employees has shown marked improvement. The long looked-for buyers market has returned, and the almost forgotten traveling salesman is calling on the trade again. Merchants are playing their inventories close to the belt and watching the market with an eagle eye. This necessitates frequent and quick journeys, and so they travel by air. The new commodious efficient planes are leaving and arriving with dependable regularity and nearly everyone can have a seat without too much advance reservation. Air safety has made tremendous gains. The recent aircraft disasters in far parts of the world should not be confused with the excellent record of our certificated domestic airlines.

On June 29th, my Committee heard the 79th witness in the longest and most comprehensive aviation hearings in Congressional history. Govern-
mental Agencies, Airline officials, Airport Management, representatives of organized labor, Attorneys, Economists, Investment Bankers, Consultants, critics and everyone who had anything to contribute were heard at length. However, our most important witness, the Secretary of National Defense, said he would not be ready to testify for some weeks. While this is a disappointment, we understand the necessity for the delay and we will wait patiently.

Due to the extremely heavy burdens of Congress at this particular time, our Committee has not had an opportunity as yet to study and analyze the recently completed hearing material and so has not reached a conclusion with respect to it. The statements, therefore, I make tonight are my own and do not necessarily reflect the thinking or the judgment of the Senate Committee on Interstate and Foreign Commerce. In due course our Committee will publish a report.

In its efforts to be intelligently helpful, the Committee has employed a small, but competent staff who will continue during the balance of the year a searching study into all phases of airline operation, in order to assemble vital facts and pertinent statistics for the guidance of the Members of the Committee.

While the picture is much brighter today than it was six months ago, the airlines are not yet out of the woods. Much, very much, remains to be done by our three horse team—the CAB-CAA, the Airline Industry, and the Congress. If we pull together in friendly cooperation, we will keep them flying.

Most economists are agreed that the war boom is over. Industrial production is going down rapidly and unemployment is increasing steadily. Nearly four million are unemployed and more than four million more are only partially employed. . . . Every industry in the United States, and more especially the transportation industries, must give full thought to these unpleasant factors. This is a time in this country which will separate the men from the boys.

Immediately after the close of hostilities the bubbling spirit of unbridled optimism swept air transportation off its feet and a hectic wave of expansionitis ran its course. To keep pace with the potentials of the cruel mirage of unlimited volume and huge profits, management's imagination soared into the stratosphere and orders for large, luxurious, newly designed aircraft running into millions of dollars were placed; and additional personnel were hurriedly hired and trained for business that did not develop.

In 1945 the entire domestic route miles amounted to approximately 63,000 miles. By 1948 it had grown to 139,000 miles. In 1946 the 16 domestic scheduled airlines were operating a total of 400 planes. In January 1949 this figure rose to 790, of which 313 were 4-engine planes with tremendously increased seating capacity. When it became evident the anticipated increased traffic had not developed and would not be developed, rapid maneuvers to reduce expenses to avoid complete financial collapse were taken. Great credit is due the airlines for the speed with which they reversed their field and ran for cover. Nevertheless, they have not gone as far, nor as fast, as the economic pressures of the day demand.

CONSOLIDATED SERVICES AND FACILITIES

In Washington, the seven airlines serving it have established consolidated ticket offices in the U. S. Capitol, the Pentagon, and in the Navy Department. Only one manager, seven ticket agents and one auditor are necessary to run these three offices for the seven airlines. In 1948, they transacted more than a million dollars worth of business, and a careful check shows that
almost half was for personal travel and not for official government travel. According to one recognized aviation trade journal, this volume of business “was done without a squawk from any airline about favoritism, service, etc.”

The obvious query arises, “Is this joint use of facilities and consolidation of services plan being carried out at each airport; and if not, why not?” The attitude of the industry can best be summed up in the words of Mr. Patterson, President of United, who, in his testimony before our Committee said:

“If we are really to have competition and real competition—we cannot be in consolidated ticket offices with employees working for all parties concerned. You just cannot have competition under those circumstances. They become order takers.”

I am not subscribing to the theory that the combined office plan could eliminate all the individual ticket offices in every city, but I believe it can be done without injuring sales to a far greater extent than now practiced.

Furthermore, once a passenger has determined the line he desires to travel, competition does not require duplication at the airport of ticket offices, information booths; and other travel services. It is obvious that tremendous savings could be realized if ramps and loading equipment, such as tractors, tanks, and all other devices were pooled as one unit instead of maintaining a separate system for each carrier. The same applies with equal force to gasoline and oil and to air-ground communication systems. One group of personnel could operate all such services for all airlines instead of maintaining separate crews. We must not forget that more than 50 percent of an airline’s expenses are the wages and salaries of its employees.

Following the war an interesting and revealing experiment in the consolidated operation of an airport took place at Willow Run. Unfortunately, it was not a conspicuous success due to petty quarrelling, and jealousies and the sabotage of the personnel of the various airlines involved. Nevertheless, John Brown, an analyst for the corporation which conducted the operation testified that there was a saving of 30 percent in manpower, and in terminal building space. He also maintains that individual airlines received better and quicker service under the consolidated operation. A more aggressive approach by the airlines in this direction would, I believe, produce savings without sacrifice in service. If the CAB eliminated some of these lone wolf duplicating operations as legitimate expenses in determining mail pay, we would have a very different story, as I see it.

INTERCHANGE AGREEMENTS

Interchange of equipment provides another way to save money. It would encourage through traffic arrangements without extending the route of a carrier and without increasing overhead cost to the extent that would be necessary in the event a route was extended by a carrier. The theory of interchange is very appealing to a passenger because he remains aboard the same plane over two or three different routes of different carriers.

The advantages are three-fold: (1) cost of operations are much lower than in extending a route of a carrier; (2) it may be a means of strengthening a short-haul or regional carrier, who ordinarily does not receive the benefits of traffic moving beyond his terminal; and (3) elimination of what is now branded excessive competition between points, since instead of duplicating routes, such an interchange avoids the necessity of duplicating or extending routes, but at the same time offers substantially the same service to the public. It can well be said that had interchange agreements been entered into more extensively during the post war expansion period, we might have had a more constructive development of the air route pattern.
without duplicating route certifications. This might well have contributed to the elimination of the losses sustained by many carriers during the past three years.

**COACH SERVICE**

In my opinion, air transportation is about to become the most attractive and economic transportation in history. It has already outdistanced all competitors in the element of speed. I still look for a tremendous increase in air traffic volume. During the past year or so we have seen three basic approaches emerge designed to increase load factors and revenues by reducing fares.

First, we have the so-called coach service offered at off-hours by the scheduled carriers, and at more convenient hours by the irregular carriers at approximately four cents per mile compared to the standard six-cent fare. Second, the inauguration of the family plan system wherein reduced rates are made available on off-days during the week; and third, the excursion fares offered to points by various scheduled carriers during the off-seasons.

No matter how you view these proposals, they all simmer down to reducing fares as an inducement to the public to use air transportation so that the carriers might build higher load factors, increase utilization of equipment and augment their badly needed revenues. Of the three, no one will deny the fact that air coach service has had the most spectacular effect on the development of real mass air transportation.

For some months non-scheduled operations have been conducted by the so-called irregular carriers at reduced rates between main traffic points, such as San Francisco to New York, Los Angeles to New York, New York to Miami, and Puerto Rico to New York. In each instance, the public responded with enthusiasm.

In September 1948, Pan American Airways was the first scheduled carrier to increase seating capacity, remove some of the frills and inaugurate the coach type service between Puerto Rico and New York. They reduced the one-way fare from $100 to $75 in order to compete with the non-scheduled carriers who were carrying hundreds and hundreds of passengers between these two points. The phenomenal success of Pan American can be best illustrated by referring to its operations in the first quarter of 1948, when it was operating a deluxe service only. At that time it carried 4,360 first-class passengers between New York and San Juan. During the first quarter of 1949, it carried 7,399 first-class passengers and in addition 10,984 coach passengers. The record shows there was little diversion of first-class passengers to the coach service. A new market of mass air transportation was opened up, and for the first time was exploited by an established competent operator.

A "wait and see" attitude had been adopted by the domestic carriers until Capital Airlines, in November 1948, with the approval of CAB, inaugurated a New York-Chicago coach service. It proved to be an immediate success in spite of the fact that this service was available only in the inconvenient early morning hours. The customary lack of travel between midnight and 7 A.M. requires facilities and planes to remain idle, and idle plants and planes eat profits. The fare between those two cities for this early morning travel was reduced from $44.10 to $29.60. The development of the traffic was spectacular, as were the load factors. In the entire year 1948, Capital Airlines carried only 1,002 passengers in its regular first-class service between Chicago and New York, while in the month of December 1948 alone, the second month of its coach service operations, it carried three times as many passengers, or 3,072 in aircoach service. In the first four months of
1949 Capital carried 10,242 air coach passengers. Again the growth was not at the expense of its regular scheduled service; in fact it had exactly the contrary effect. It helped strengthen the first-class service.

Northwest's air coach experiment has enjoyed the same phenomenal success and has averaged 80 percent load factors on some of its coach flights. Mr. Hunter, its President, testified the air coach passengers come from "an entirely different market; they look different, they come out to the airport differently, they come out to the airport with their own lunches, you see the bananas and orange peels that you see in tourist coaches." Northwest contends that its surveys indicate that 40 percent of its air coach passengers would not have traveled by air if it were not for the low fares. Similar statements have been made with even higher percentages by practically every non-scheduled operator who has appeared before our Committee.

The CAB still regards coach service as a limited experiment and permits it to be conducted only to evaluate its soundness. It has limited the scope of the experiment so as not to lead to a general breakdown of the fare structure of the regular service. Low coach service to date has been approved by them for only six carriers. While the Board is slowly accumulating data for evaluation, there are definite signs that this is one way of immediately opening up a new class of air traffic.

AIR FREIGHT SERVICE

While it cannot be denied that air freight has a real place in the field of air transportation, practically every certificated carrier appearing before our Committee roundly and caustically criticised the recent action of the CAB in tentatively certifying four all-cargo carriers. The question is whether the potential is sufficient to warrant the certification of specialized freight carriers at the possible expense of the present certificated carriers in that field.

Severe criticism has been directed toward the certificated carriers for failure to develop the air freight business after the war. The amount of freight carried by them before the independent cargo carriers entered the field was negligible. Whatever the reason, the total tonnage carried was small. The keen competition between the independents and the certificated carriers has increased the volume of freight tremendously. In 1946, 16 certificated carriers transported approximately 18 million ton-miles of cargo, while the non-certificated carriers transported 25 million tons. But in 1948, the certificated carriers transported 70 million ton-miles, while the non-certificated carriers, which had decreased in number, handled only 48 million. This, however, is only a small fraction of the recognized potential.

During this period the non-certificated freight carriers have lost millions of dollars; nevertheless, while the CAB has tentatively certified four all-cargo carriers to operate the Board made it a vital part of the proposed franchise that the operation would be without mail pay. We, in Congress, are very much interested in the decision by the Board, and particularly the opinion wherein it states that no mail pay is to be given to the tentatively certificated cargo carriers.

AIR MAIL PAY

During the past three years Federal appropriations for mail pay have been increasing and numerous questions have been asked as to why, during this period of unprecedented prosperity, airlines should require additional mail pay, when there was no substantial increase in the volume of mail carried. In 1946, the total mail pay for domestic and international carriers was $42,967,000; in 1947, it was $69,489,000; in 1948, it was $111,521,000;
and in 1949, it is expected to reach the huge total of $125,000,000. Clearly the CAB is underwriting the airline commercial losses with mail pay. No one knows how much of these payments are subsidy and how much is compensatory.

Last January some airline officials took the position that there is nothing wrong with the industry, which bigger and better mail pay will not cure. During the hearings, a few airline presidents accused the United States Government of bad faith because their mail pay was being held to a minimum. However, many airline presidents urged that compensatory mail pay be separated from subsidy to create an incentive to all airlines to get on a self-supporting basis, and to remove the stigma of subsidy from the airlines which are now earning every cent of their mail pay, and quite a few are earning every cent paid them. It is my considered view that to mix mail pay with subsidy is a sloppy and wasteful way to do business. The CAB should recognize the element of abuse inherent in it and correct it. Naturally, the privilege of awarding mail pay without specific standards and without limitation gives CAB a lot of power over the airlines which it might well like to retain.

With greater commercial business of all kinds since the war, the trend towards increased financial dependence upon government support in mail payments, airport facilities, and navigation aids, is one of the basic paradoxes that has given rise to the investigation we are now conducting. On its face there would appear to be something radically wrong with airline management, the CAB, or the statutory provisions for promoting air transportation.

It seems to me that if we are to find out if the airlines are a "subsidy ridden industry devoid of incentive to be commercially successful"—which they vigorously deny—the first thing to do is to find out the fair compensation that should be paid for the services rendered and how much subsidy is now being paid, and for precisely what it is being paid.

Capt. Rickenbacker of Eastern and C. R. Smith of American have proclaimed that the present method of meeting the carrier's need through air mail payments penalizes the efficient carriers. C. R. Smith put it this way to the committee:

"The complete lack of standards in payment for the transportation of mail obviously represents a discouraging situation to the efficient operation. One company transports mail between two terminal points, with modern equipment and adequate schedules. Another company operates along the same route, serving the same terminal points, but providing a mail service of substantially less utility than the first. But the second of the operators receives two to ten times as much as the first operator for transporting a pound or ton of mail between the two identical points. And not only that, if the first operator finds a way of reducing his cost, he is quite apt to have his rate reduced. He may, at the same time, find the rate of his competitor increased by reason of greater 'need' for additional mail compensation.

"I know of no system which will produce less incentive, or act so much as a drag on the exercise of the highest degree of management ability. Often, rather than an incentive to do your best, the present system of mail payment seems to offer reward for lack of result."

There is much merit in this position, and much to be said for the establishment of mail rates which will provide identical rates for the performance of identical services, provided, of course, the services performed by any two carriers can be identical.

Since the war, the method provided in the Civil Aeronautics Act of determining air mail payments for future periods seems to have broken down, and the Board has resorted to the establishment of temporary rates,
which place the carriers on "cost-plus"—a basis never contemplated by the framers of the Civil Aeronautics Act.

I am of the opinion that it is very important to arrive at the amount of subsidy in some acceptable manner in the near future and if the CAB cannot or will not do so, it will be necessary for the Senate Committee on Interstate and Foreign Commerce to make such a determination.

Congress should do what it can to point the way to a healthy and self-sufficient network of aggressive airlines adapted to the present and future needs of the commerce, the postal service, and the national defense. In directing the CAB to encourage the development of commercial aviation, the Civil Aeronautics Act has not differentiated among these three cardinal objectives. Clearly these are three distinct national interest objectives, and they should be differentiated for the purpose of determining the amount of the payments made.

While it is true that none of the three objectives are susceptible to valuation in terms of dollars, nevertheless, a reasonably acceptable approximation can be reached. It is my belief that if the national defense of the country makes it advisable to augment civil aviation facilities beyond their natural economic level, then this objective should be recognized as a cost to be attached to the military budget. Sound national bookkeeping requires that the expenditure of public funds for the Postal Service, the National Defense, and commercial transportation services should all be specifically labelled as such, and no longer be wrapped up in one package and called mail pay.

In classifying the support to be given the certificated carriers, we have four distinct groups with four distinct sets of problems:

FIRST. The Big Four: American, United, TWA and Eastern. They receive identical compensation for the transportation of mail which the Civil Aeronautics Board deems to be a "service rate." The Big Four contend there is no subsidy in this "service rate," although early in 1949, three of them received additional retroactive payments which made their corporate balance sheets much more attractive.

SECOND. The Regional Carriers, into which classification fall the rest of the intermediate and small trunk line carriers, are known as "need carriers." There is no uniformity in the "need rate" paid to these carriers for the transportation of mail as the rate is based on the anticipated deficits from their commercial revenue over their anticipated allowed expenses based on their past operating record.

THIRD. The Feeder Lines. Twenty-one of these local and feeder carriers have been certificated by the Board for a three-year experimental period. The objective of the Board in creating the local carriers was to provide adequate air service to the local communities throughout the country. Nonetheless, their dependence upon the Government has been considerable and now their mail pay bill is approaching $15,000,000 annually. When and if all of them get under operation, their payments may exceed $23,000,000.

FOURTH. International Air Carriers. The problems of this class of carrier differ from that of domestic carriers because of our national interest abroad. Previous to World War II, only one U.S. Flag Line (Pan American) operated overseas. Today there are twelve U.S. Flag Lines in international air carriage, exclusive of at least seven additional non-certificated carriers operating under temporary "specific exemption," issued by the Board.

Superimposed on these four types of certificated carriers are the irregular and contract carriers, and the cargo carriers recently tentatively granted temporary certification without mail pay.

I am gratified, of course, that the CAB has announced that it will undertake "a detailed examination of the cost to the carriers of handling the mail for use in determining compensatory rates and of the factors which enter into the determination of fair compensation for carrying the mail." This intent was announced in the Board's Statement of Economic Program.
for 1949, and I certainly hope that it was not just another New Year's resolution.

Some carriers have testified that the cost of rendering service to many of the smaller non-profitable points has caused their losses, which service, if discontinued, would put their whole system in the black. For example, one carrier serves 38 small cities on its system. Those 38 cities provide the carrier with 8% of its total revenue. For serving those 38 small cities the carrier receives $20,000 a month in mail pay. The carrier claims that if it could discontinue service to those 38 cities it would save $4,000,000 a year for the company.

The argument contained in the foregoing example is a logical one. However, this company petitioned the Board for the right to serve these cities, and it convinced the Board that these points should have service. The Board did not arbitrarily say to this company "you serve these points." This problem of overexpansion of route systems and service to non-profitable points is not solely the Board's fault; the carriers share the responsibility for wanting to be certificated to serve every community in sight before a possible competitor got there. Expectations of receiving generous mail pay for such operations may have contributed some incentive.

CAB DELAYS AND EXPENSE

In April I made a report to the United States Senate on communications in which I criticised the Federal Communications Commission by stating:

"Through the Commission's failure to make decisions, great harm has been done, not only to individuals, but to whole communities... in many instances, failure to take any action is far more deadly and disastrous than an adverse action might be. When pending matters are delayed year after year the Commission's victims are tied up without recourse. They can make no plans for the future and they cannot go to the courts for relief."

To a great degree this same condition appears to prevail in the Civil Aeronautics Board. For instance, at the present time the eyes of the entire industry are focused on the Air Freight Case. A pre-hearing conference report was issued in April, 1946, and a final decision has not yet, after three years and four months, been issued. I realize that this is an important decision in which complex and complicated issues are being considered, but to wait more than three years to have an application decided is far too long.

The delays, expense, and time consumed in trying such a case can lead the average citizen into financial ruin. Mr. Slick of Slick Airways, Mr. Playford of U. S. Airlines, Mr. Prescott of the Flying Tigers Airlines and Mr. Willis of Willis Air Service have all testified that it has cost them so far between $70,000 and $100,000 each to prosecute their applications in this case. I wonder how much the A.T.A. and the certificated carriers have spent in opposing them? The responsibility for completing such policy decisions as the Air Freight Case rests with the board. Perhaps it would be helpful to require the CAB to report to Congress the status of all applications periodically that are over six months old.

AIRLINE FINANCE

Many a ship has been wrecked on the rocks of unwise financial policy. Some of the airlines have failed to provide a balanced structure. This means maintenance at a reasonable ratio between debt financing and equity financing. Of course, it would be ideal if every corporation—airlines included—could finance itself primarily by the issuance of common stock. There would then be few fixed charges to meet, and stockholders, although disappointed,
could not reasonably demand that dividends be declared unless the company had earned them.

A year ago the composite debt-equity ratio of the sixteen so-called trunk airlines was 58 debt to 42 common stock. This is definitely too high. One airline's ratio is 95 debt to 5; another 75 debt to 25; and several others 85 debt to 15. On the other hand, a few of the trunk lines are in the fortunate position of having put their financial houses in order by the issuance and sale of adequate common stock when the market was absorbing such issues readily.

Since it is unrealistic to expect a new, unproved and rapidly growing industry like the airlines to finance themselves solely through the issuance of stock, the question arises: "What is a safe and proper ratio between long-term indebtedness and equity financing through preferred and common stock? No hard-and-fast rule can be laid down because the circumstances of the various carriers obviously differ. The consensus of informed opinion, however, condemns the use of long-term debt in any percentage greater than 50 percent of the dollar amount of the total capital structure.

The proposal has been made that all future issues of airline financing require a "no objection" report from CAB before being consummated. As might be expected, airline executives are unanimous in opposing such control. They point to the delays encountered in all their present contacts with the CAB, and predict that the vesting of control over security issuance in the Board would generate similar delays in this new field. Moreover, since the timing of security sales is all-important and market conditions fluctuate so rapidly, not only from month to month but from day to day, the inevitable delays incident to CAB approval would make future airline financing extremely slow, unpredictable and costly. Against these arguments stands the disagreeable fact that in the absence of such restraints a majority of the airlines have recently put themselves into a difficult and tight financial situation with the threat of bankruptcy just around the corner. From the standpoint of American business theory, and my own personal philosophy, I am reluctant to advocate further encroachment by government upon the domain of business management's normal functions, but the unpleasant facts disclosed by our inquiry cause me to favor the imposition of CAB control over security issues.

But there is another side of this problem. As a condition precedent to making a loan to an airline, the RFC now is required by law to obtain from the CAB its approval and, except for equipment loans, its certification that the borrowing airline is expected to be able to meet its fixed charges. To the average citizen this would appear to be entirely normal and proper. The CAB is a specialized aeronautical agency presumably endowed with expert knowledge concerning airline operation problems and traffic potential, including their financial requirements and the justification for borrowing additional funds. What more natural than that Congress should require such approval to enlighten the RFC in deciding whether or not to approve the loan and disburse the funds? The "joker" in the picture lies in the apparent connection between loan approvals and mail subsidies.

The implications are obvious. Civil Aeronautics Board approval is a condition precedent to an RFC loan. By law CAB has both the power and the duty to set air mail rates at figures high enough to cover the reasonable expense of airline operation under economic and efficient management. Interest on indebtedness, whether incurred through a bank or through RFC, is a legitimate item of expense, as is the gradual amortization and repayment of the principal of such a loan. Can we honestly expect the RFC—realistic and hard-headed bankers evaluating the loan application of an
airline—not to be governed by the fact that the CAB through air mail payments can fix rates sufficiently high to service and amortize any loan, even though such loan be economically unjustifiable?

In the light of these facts, can we avoid the question, has the CAB committed itself, in approving an airline's loan application to the RFC, to see that air mail rates are fixed at a sufficiently profitable level to assure the repayment of the loan? This is a grave question. The RFC has more than 70 million dollars of airline and airline equipment loan applications (or conversations preliminary to loan applications) now pending. This whole financing and refinancing problem could become quite serious.

**SAFETY**

The principal deterrent to air travel is the public's belief that it is not sufficiently safe; and the next most important deterrent is that airlines are not sufficiently punctual and reliable in meeting their schedules.

It is always annoying and sometimes disastrous for a prospective passenger to find that the scheduled flight, around which he has constructed important travel plans, has been cancelled. In 1948 a total of 11,400,000 scheduled flight miles were cancelled by domestic trunk lines. Seventy-three percent of these were cancelled in the five winter months. Lines flying northern routes are particularly vulnerable. During January 1948, one airline was forced to cancel over 26% of its scheduled mileage. On that line the odds were only 3 to 1 that a passenger during that month would have been able to complete his contemplated flight. Modern business organizations run on a tight time schedule. Unless the airlines can meet the demand for reliability of schedules they cannot hope to serve their maximum market, particularly among business travelers. A few disrupting cancellation experiences are sufficient to make many existing and potential customers change their minds in favor of the comparative reliability of railroad schedules.

Much is being done to improve regularity and safety. By far the most important attack is being sponsored by the Civil Aeronautics Administration. This is the technical safety program worked out by the Radio Technical Commission for Aviation, and known as the SC-31 program. In addition to the instrument landing system (ILS), ground controlled approach system (GCA), and precision beam radar, this expert Committee recommended the universal adoption of three new technical devices, in order to increase the reliability and safety of aircraft operations.

**ONE.** *The Omni-directional range, or omnirange.* This device enables the pilot to fly by eye instead of by ear. He holds his course by watching the movement of an indicating needle on his instrument panel.

**Two.** *Distance measuring equipment (DME).* This equipment will enable the pilot to read directly on his DME dial the exact distance in miles to or from the omnirange to which his instrument is tuned.

**THREE.** *Course line computer.* This device makes it unnecessary for the pilot to fly straight toward or directly away from the omni-range. Instead he can fly a straight course between any two selected points.

In 1948, the domestic airlines operated at a net loss of $20,702,000 prior to receiving increased retroactive mail pay. *Had the SC-31 program been functioning, even in its transitional state, the Civil Aeronautics Administration estimates that the airlines would have broken even in 1948!* No one can estimate the tremendous boost air travel will receive when these devices make air travel safe and dependable. It is encouraging and significant that in spite of the recent airline tragedies among the independent and foreign carriers, no major domestic certificated airline has had a fatal crash during the past 10 months. *Eventually air travel is likely to be the safest method of all travel.* For us in Congress, that is our hope.
FEDERAL AIRPORT PROGRAM

In 1946, Congress enacted a statute establishing a National Airport Plan for the construction or improvement of civil airports throughout the country over a period of seven years, on a matching funds basis involving an aggregate seven-year federal expenditure of five hundred million dollars. This program is well under way. These civil airports are being constructed according to the most modern plans and specifications. Including airports constructed under this program, the total number of civilian airports in this country today is approximately 6,000. A great majority of them have short runways, however, and can handle only small planes. Only about 1,000 can handle planes the size of the DC-3 or larger. Cities and towns have shown a commendable willingness to provide their share of the funds necessary to match the federal funds appropriated by Congress. . . .

REVAMPING THE AIR ROUTE PATTERN

One of the more important questions which the Board and our Committee will have to weigh is the reconstruction for revamping of the present very unsatisfactory air route pattern of this country. The domestic air route pattern has grown up like Topsy, without much rhyme or reason. It gives the impression that neither the domestic air route pattern as a whole, nor the individual systems of the 16 trunk carriers, shows evidence of a well-planned, orderly airline system designed to fit into a balanced overall transportation network.

The duplication and triplication of competing air service over many routes has led, in the opinion of such industry leaders as C. R. Smith and Eddie Rickenbacker, to "wasteful competition and low load factors and in substantial and continuing operating losses" and has left the country "with a pattern of routes and services which cannot be supported on a self-sustaining basis by the existing or probable volume of traffic."

Throughout the growth of the airline industry, the CAB has had neither format nor conception of a national route structure which would generally prove to be economically sound for carriers to operate. I believe that all business, whether it be strictly private enterprise or under government regulation, should anticipate the future with well-considered planning. There is no excuse for failure to plan in an industry which grows and expands by permission of a government agency.

Some of the trouble may be due to the illogical "grandfather" routes, which Congress perpetuated in 1938, but since the Civil Aeronautics Act, the Board has doubled the certificated domestic air routes and has greatly increased point-to-point competition. The criticism, however, cannot be dismissed that the illogical route pattern is due in part to the case-by-case method and to changing personal philosophies of CAB membership, the hotly contested struggle for new routes and "guaranteed" mail subsidies, the over-optimistic traffic and cost estimates on the part of the Government and industry alike, and last, the absence of clear standards as to what kind of an air transportation system the Congress really wanted the CAB to promote.

Our Senate Committee has been told by a segment of the industry that a route moratorium is desirable. Some of the Big Four carriers have advocated this and there would probably be unanimity in this view among the Big Four, if Eastern Air Lines did not have an application pending before the Board for an extension to the West Coast. It appears that Regional Carriers are opposed to a route moratorium. They desire to tie up loose ends of their route systems with extensions and new routes into areas where the grass looks greener. It is their ambition to grow bigger.
In the feeder experiment, it is too early to make an evaluation along this line, although one feeder certificate has been terminated and another threatened. It is not surprising to find these operators petitioning the Board for case-by-case route adjustments and extensions. *It is my hope that the CAB will adopt an overall policy in determining the extent to which the feeder line service is to be continued.*

**AIRLINE CONSOLIDATION**

Many witnesses coming before our Committee say there are too many airlines and that many of the illogical conditions in the domestic route pattern can be cured by merger or consolidation of carriers and by the elimination or transfer of separate routes and points. Reconstruction of the present domestic route pattern is both important and urgent.

Witnesses have told the Committee that over certain segments of their route system there is too much competition; that the CAB has certificated too many lines to operate between certain points or areas; that if one carrier is eliminated, the one or more remaining carriers could conduct a profitable operation and provide adequate service. *If we have excessive competition it is because the CAB authorized this competition and after once authorizing it, even though they may have erred in judgment, the situation remains to be corrected.* An airline losing money under these conditions is not too concerned because such losses are generally considered in the computation of the carrier’s mail rate.

Following his appearance as a witness, Captain Eddie Rickenbacker of Eastern Airlines made a sweeping proposal to me in a letter. He magnanimously offered to take over the entire domestic systems of five carriers operating east of the Mississippi and competing generally with Eastern, and stated he would render the same quantity of mail and passenger service presently offered, and do so without mail subsidy payments, at an estimated saving to the taxpayer of over $10 million annually. This touched off shouts of monopoly, and counter proposals by the lines which would be gobbled up.

A more fundamental question to be considered is to what extent regional monopolies such as Captain Rickenbacker suggests, can be encouraged without undue sacrifice of the quality and quantity of service obtained through competition. One must consider whether competition should be restricted to large traffic terminals which can be operated without subsidy. Before any of these decisions can be made we need to know what routes are now being subsidized and the economic potential of each route segment. *A major problem will be to determine whether a reduction in the number of individual carriers, or the transfer and elimination of specific route segments will preserve the necessary quality, service and schedules, and at the same time produce a more nearly self-sufficient system.* Not without reason, Captain Rickenbacker contends, “competition which requires subsidy is wholly unjustified.”

Changed economic conditions in the industry and now long-range flight equipment dictate drastic route pattern changes. However, before we can expect to bring substantial order out of chaos through mergers, consolidation and route transfers, it is clear that *the Congress, as well as the Board, may have to give consideration to the fundamental objectives to be achieved, and the means to be used to induce carriers to transfer routes, and to merge or consolidate on reasonable terms and in the best interest of the public.* In any event, I believe action along this line is needed now. *I urge airline management to consider carefully possible mergers, and hope that I personally may hear more of industry thinking on this important question.*
Related to this, consideration must be given the possibility of improving the revenue-expense ratio of carrier systems by increasing traffic density through various means such as:

(a) Elimination of uneconomical parallel competition.
(b) Elimination of notably uneconomical intermediate stations.
(c) Revision of company route patterns so as to promote more advantageous scheduling.
(d) Elimination of stations located at uneconomical distances from traffic centers.

The Committee expects to go into these problems in the course of its inquiry. It had hoped to receive substantial help from the Civil Aeronautics Board. More than a year ago, pursuant to recommendations of the President's Air Policy Commission and the Joint Congressional Aviation Policy Board, the Civil Aeronautics Board undertook an exhaustive study of competition and the existing route pattern which was expected to indicate the inherent weaknesses of the present route pattern and point the way to its correction. In its statement of an Economic Program for 1949, the Board stated that it expected this study would be available July 1, 1949, but I have been advised by the Chairman that we must expect further indefinite delay. In the meantime, the serious faults in the present air route structure demand correction and this Committee intends to find a way to accomplish it—this must be done if the unsatisfactory financial situation of many individual carriers and their mounting dependence upon Government financial support is to be remedied.

Furthermore, it is of the utmost importance for the Board to use all its economic and judicial wisdom in considering all factors in the granting of international routes because of the effect on our national interest. Whether we have too many U. S. flag international carriers is a problem currently being studied by the Board in the PAA-AOA merger case.

PUBLIC UTILITY OR FREE ENTERPRISE

Congress ought to make up its mind whether the airlines are to be a regulated public utility or live under the cruel law of the survival of the fittest. Today airlines are neither beast nor fowl and therefore receive support from the Public Treasury to insure competition in certain specific areas. I find keen cutthroat competition everywhere shown by excessive scheduling, luxurious passenger "extras," and extravagant promotional advertising of all kinds. To me excessive competition purchased with federal funds is ridiculous. It seems to me the present "Dr. Jekyll and Mr. Hyde" arrangement of Federal support with "limited competition" must be reexamined. I am impressed with this statement of Juan Trippe, President of Pan American Airways:

"As I see it, the Congress and the Civil Aeronautics Board must make up their minds whether or not they want to return the airline industry to its intended status as a regulated public utility. If they don't, the relevant provisions of the Civil Aeronautics Act of 1938 should be eliminated. The airlines, as unregulated businesses, would then be free to operate where business was good and to abandon service where business was bad. They would be free to make high profits or go bankrupt, as the case might be."

I have grave doubts whether the airlines can consistently resist the temptation to buy greater flight capacity at a rate faster than the commercial demand will absorb as long as the CAB is virtually obliged to cover the losses by mail pay arising from management's well-meaning optimism.

Either the industry must submit to full Government regulation with less competition or run the risk of financial failure resulting from its own mis-
takes. At the same time a way must be found to provide adequate air service to local and intermediate cities that will benefit and can reasonably support air service.

CONCLUSION

During this post-war crisis in the air transportation industry there have been plenty of justifiable criticisms of the airlines, the Civil Aeronautics Board, and the Congress. The carriers have been accused of over-expansion and inadequate cost controls, while the Board has been denounced for being too quick to authorize competitive services and too slow in determining the mail rates. The Congress has been blamed for not giving the Board sufficient guidance, power, or funds to do a job that has been too big for a comparatively small staff.

But the picture grows brighter. The airlines, more and more, are getting down to earth in their operations and planning. The Board has been functioning more proficiently, and has announced an aggressive economic program for 1949, which seems to forecast a progressive approach to some of the fundamental problems.

The air services of the United States have come a very long way since TWA made its first transcontinental flight twenty years ago, and there are tremendous opportunities ahead for further growth and improved public service. It would be impossible to try to define the limits of future expansion. But I can tell you that Congress is awake to its responsibilities as part of the three horse team, responsible for the quality and quantity of American civil aviation. Congress will do its best to help the Civil Aeronautics Board provide wise regulation. The rest, the heavy part of the load, rests squarely on the broad shoulders of the airline industry itself.

There are far more problems than answers. Nevertheless, I repeat, the airline industry, the CAB, and the CAA, and the Congress must cooperate in solving them. As Chairman of the Interstate and Foreign Commerce Committee, I want to do my full part toward this end without fear or favor, and with only the public interest in mind. I am confident that, working as a team, we can make American aviation safe, certain, and solvent.

UNITED STATES INDUSTRY VIEWS ON ICAO TECHNICAL STANDARDS

In light of the continuing interest in the International Civil Aviation Organization which has been demonstrated by United States government officials, carrier executives, manufacturers and other air transport specialists, the Editors of the JOURNAL believe that publication of the following letter and report adopted by the Industry Advisory Panel of the Air Coordinating Committee at its July 11, 1949 meeting may encourage constructive discussion and thinking on these important problems. This criticism of official policy may be significant in that it was voiced by accredited spokesmen for three major aviation groups, the Air Transport Association, the Aircraft Industries Association, and the Aircraft Owners and Pilots Association.

ON April 13, 1949 J. B. Hartranft, Jr., General Manager of the Aircraft Owners and Pilots Association, wrote the Chairman of the ACC Industry Panel:

"The fundamental issue is to bring a halt to the multiplying, detailed ICAO regulations which mitigate, we believe, against the best interests of a growing American aviation needing only flexibility and inspiration; not regulation strait-jackets—international or domestic."
An abrupt and entire change of policy with respect to promulgating ICAO regulations is essential if the interests of American aviation are not to be further harmed and hamstrung. This must be accomplished with extraordinary swiftness.

For example, ICAO should not, in our opinion, concern itself with detailed regulations concerning how many hours a pilot must fly, or a specific requirement that he must be checked out in different types of aircraft, or the number of hours an engine may be run before overhaul. In lieu thereof, and if necessary, a general regulation should be written that aircraft are to be maintained properly and in safe condition. Pilot requirements should be handled with equal simplicity according to prevailing requirements of the member state.

The dangerous drugging effect of detailed regulations—regardless of technical correctness or individual merit—cannot be overstated. Already there is evidence that smaller nations are taking ICAO regulations literally and that instead of accomplishing 'international standardization,' we are being drawn toward insurmountable barriers and general discouragement of international flying.

Unfortunately, once detailed regulations under these concepts have been introduced by an American delegation (who may not infrequently be ignorant or not responsive to industry opinion), the segments of American industry vitally concerned are effectively although perhaps inadvertently trapped and unable to raise their voice in public protest since such action might torpedo their reciprocal rights with member countries and the delicate mechanisms inherent in business dealings with foreign nationals.

Theoretically, we are told, a condition exists which permits industry opinion to seep into the thinking of the ICAO policy makers' caldron. In practice, however, we must invariably conclude that policy is set and fixed at the sub-committee level instead of at the Board level, and industry too frequently finds it has five or ten days to take exception to something which has already been ratified in Montreal. The CAB has not always been responsive to objections made by industry on these last minute or "fatal hour" occasions feeling, it appears, that since CAB staff participated during policy forming stages, that it could not or desired not to change positions after Montreal ratification.

Frequently many important segments of industry do not learn of vital issues until they are suddenly announced as being in full effect. This was true recently, for example, in the case of the sudden abandonment through ICAO action of the phonetic system of abbreviations used for years in our Notams. Without warning, pilots nationwide are now unable to read the vital safety information which Notams provide. This change has been opposed bitterly by AOPA and we understand by other industry groups.

"These conditions allow an opportunity for pet ideas or themes of government personnel to, in effect, become the policy and American position at ICAO meetings, notwithstanding industry opinion, sometimes admittedly lost in the maze of ICAO details, which may be strongly contrary. These policies about detailed regulations, decided at subcommittee level and further incubated in Montreal amid a peculiar aura of compromise proneness, then are returned for rubber stamping by the CAB.

"We believe any impartial observer will admit that, to date at least, the die has been cast on contemporary issues concurrent with ICAO ratification and the action of the CAB is a mere confirming formality. We believe also that the apparent attitude of the State Department in desiring to purge the ICAO committee of industry participation is recognized as substantially
contributory to the general feeling of industry frustration and indignation which has so long prevailed.

"It has been sheer hypocrisy on many occasions for industry groups to recommend and achieve simplification of regulations domestically only to discover simultaneous efforts to sponsor rules of greater strictness through ICAO channels, or that over-zealous backers are carrying their live coals to Montreal to seek international backing for issues already heard and defeated domestically.

"We note with approval and commendation the warm and sympathetic assistance of government agencies recently in achieving relief from a few irksome and burdening regulations. Yet, with ICAO concerning itself with ever-increasing detailed regulation, we face the almost certain assurance of rearguing issue after issue a second time on foreign soil, even though our concern may only involve domestic application.

"Categorical elimination of all detailed ICAO regulations, including the repudiation of those already passed appears to us to be the only logical, workable solution to this utter chaos in regulations which now envelops American industry like a smothering blanket.

"The United States is paying the bill for most of the world, certainly this coupled with the fact that there are more private airplanes and private pilots in the United States than in all the rest of the countries in the world combined—times ten—indicates the need for clear thinking. The "freedom of the air" success formula of the United States dictates, in our opinion, a pattern for the rest of the world to follow. We see no necessity of compromising the domestic freedom of private flyers one iota merely to satisfy the imagined requirements of foreign delegates representing countries having no private flying or only a scattered pittance of government-subsidized flying club activities.

"We have only the greatest admiration for the loyal and hard working members who comprise the ICAO staff both here and abroad—and we know of the heartaches and multiple problems they have faced. Nothing in this letter should be construed to reflect against any such individual or group."

These matters were discussed at some length at the April 14 meeting of the Industry Panel, at which time it was decided to set up a special Subcommittee. The question of ICAO standards was treated by the Subcommittee at three meetings in April, May and June before the following report was adopted:

GENERAL CONCLUSIONS ADOPTED BY ACC INDUSTRY PANEL

Representatives joined in the common opinion that industry did not object to "International Agreements" per se, but that: ICAO has frequently promulgated detailed regulations beyond the scope desired by industry; that the trend is increasing. It is particularly noticeable in the fields of Personnel Licensing, Aircraft Airworthiness, and Aircraft Operations.

It is concluded that the U.S. will be required to retract on some major ICAO regulations which are already effective. The committee recognizes that repudiation of certain ICAO Annexes may entail problems of preliminary concern to the State Department. But this unfortunate by-product must not be permitted to become a deterrent to the rapid action needed to bring relief to the aviation industry of the U.S.

Lastly, it was felt that the intent of the Chicago convention had been exceeded in many respects and particularly in the matter of applying international standards to purely domestic operations.

ICAO rules, the subcommittee feels, should be the essence of simplicity; should cover only the fundamental subjects where air safety and convenience
require international regulation. The text and form of the international standards should be such as to be generally acceptable without major revision to existing standards. They should permit freedom of rapid change to meet new requirements.

SPECIFIC CONCLUSIONS ADOPTED BY ACC INDUSTRY PANEL

Annex 1, PERSONNEL LICENSING: This is a classic example of unnecessary ICAO regulations. It is the opinion of industry that PEL requirements are unnecessary; that the present ICAO regulations in this respect should be rescinded and that each member nation should be relied upon to set practical personnel licensing standards.

Annex 2, RULES OF THE AIR: Complete confusion exists. Clarification and simplification of the ICAO regulations are absolutely necessary. It is the opinion of the aviation industry of the United States that Rules of the Air and Air Traffic Control procedures must be standardized throughout the world and that until these rules and procedures are standardized ICAO should, if need be, direct its entire regulatory process toward that end.

Annex 5, DIMENSIONAL STANDARDIZATION: No comment at this time except to observe that some industry objection does exist respecting current proposals.

Annex 6, OPERATION OF AIRCRAFT (Scheduled International Air Services): General complaint is of detailed regulations and entry of ICAO into fields of specific regulations even beyond domestic practices. This despite the fact that there is nothing in the convention that requires the adoption by ICAO of international operations standards. These are not desired by industry and this Annex should be rescinded without delay, particularly in view of its proposed effective date, January 1, 1950.

Annex 7, AIRCRAFT NATIONALITY AND REGISTRATION MARKS: The provisions of proposed Annex 7 are again too detailed and should be revised to encompass merely the principles desired to be achieved. For example: Included in the Annex are specific dimensions of the identification marks required on aircraft and the type of registration certificate (current proposal anticipates use of metal plate). New aircraft compliance date is October 1, 1949; old aircraft January 1, 1951. Aircraft in existence under U. S. registration which are not to be flown in international air traffic should be exempted from Annex 7.

Annex 8, AIRWORTHINESS STANDARDS: Because of the U. S. efforts at Chicago, the airworthiness standards proposed for international adoption quite closely paralleled our domestic civil air regulations CAR Part 4. This U. S. position was arrived at by the CAA and CAB agencies without coordination with Industry and contrary to the recommendations of the aircraft manufacturers. Whether this arbitrary decision by the government agencies will result in ultimate adversities to the Industry will be determined by the extent to which the details of ICAO standards diverge from the normal trend of our domestic regulations. On the other hand, neither the manufacturers nor the airline operators believe that international airworthiness standards are of primary significance in insuring safe reliable transportation or in eliminating unfair competition among airlines. The state-of-the-art of aircraft design and development together with improvements in operation are responsible for advances in safety and reliability which, in turn, become acknowledged in the form of new regulations.

† Note: Of the following Annexes, (1) through (5) are currently effective. Annex (6) becomes effective January 1, 1950, Annex (7) becomes effective October 1, 1949, Annex (8) comes into force October 1, 1949, Annex (9) becomes effective March 1, 1950. Annexes (9) through (13) are proposed Annexes.
There has been a serious lack of planning in the development of ICAO Annex 8 covering airworthiness, due to the absence of policies which should guide in determining the proper scope and relative merits of proposals advanced by each ICAO Member State. Neither have these policies been established domestically, but in the case of ICAO, the problem becomes acutely important due to the small minority of manufacturing nations as compared to airline operating nations. Due to this unbalanced "operational" interest there is a strong tendency for the ICAO airworthiness to become "desirable procurement specifications" rather than minimum safety standards. First, attention should therefore be devoted to the formulation of policies governing airworthiness, both domestically and internationally.

Recommendations:

1. The industry believes that the terms of the present ICAO Convention, which encompasses only international navigation, are not sufficiently adequate to justify the Annex of Airworthiness. This Annex should be recognized for the primary purposes of import and export of aircraft among Member States and it is strongly recommended that the Convention be expanded to cover this phase. Detailed arguments supporting this recommendation have previously been submitted to the ACC by the AIA.

2. At the present time ICAO Annex 8 is limited to standards and recommended practices for Transport Category A airplanes. An undue amount of time and energy has been devoted to the development of detailed airworthiness standards for other ICAO transport categories without first establishing either the need or the basis for such a series of airworthiness categories. With respect to the problem of airplane categories, our interest is limited to a passenger category and a separate cargo category both utilizing the basic airworthiness standards of Annex 8, Category A.

3. The subcommittee is opposed to any ICAO activity that would lead to the establishment of special airworthiness or operational standards for personal type airplanes. 4. We recommend, rather, that ICAO recognize domestic airworthiness certificates (issued by the country of manufacture) for any airplane of 5000 pounds or less with full permission for such aircraft to be exported or operated internationally. This is not considered an unreasonable request since a very high percentage of the aircraft in this classification are used for purely personal operation and the limited use for hire across international boundaries would not justify a special set of ICAO standards.

Annex 9, FACILITATION OF INTERNATIONAL AIR TRANSPORT: The Subcommittee has not attempted to consider the economics of international air travel but has restricted its present deliberations to the technical phases. (Other non-technical aspects are of interest and of some concern to the industry group and might provide a subject for future consideration.) Annex 9 was not given detailed study by the Subcommittee.

In regard to existing Annex 3, Aviation Meteorology, and Annex 4, Aeronautical Maps and Charts and the proposed Annexes regarding Communications (Annex 10), Navigation Aids (Annex 11), Search and Rescue (Annex 12), and Airdrome and Ground Aids (Annex 13), the U. S. aviation industry recognizes the value of these Annexes. It is important, however, that the views of the various segments of the U. S. aviation industry be recognized in preparing the U. S. position on these subjects and in presenting these subjects to ICAO for adoption.

ICAO should direct its energies toward encouraging the implementation of and/or investigation of non-implementation of the agreements reached in the final reports of the various ICAO Regional Air Navigation Meetings.
The implementation of these agreements, along with the revision of Uniform Rules of the Air and Air Traffic Control Procedures, Annex 3 on Aviation Meteorology, Annex 4 concerning Aeronautical Maps and Charts and the proposed Annexes respecting Communications, Navigation Aids, Search and Rescue, Aerodrome and Ground Aids are of paramount importance to international aviation and ICAO can provide an inestimable service to the U. S. aviation industry in pursuing these lines of endeavor.

At the same time ICAO regulatory work should be curtailed except for essential commitments on which there is industry agreement or revised as indicated in foregoing paragraphs.*

* Relevant to the same general problem is the material contributed by Mr. Alfred L. Wolf to the Report on International Air Transport Law submitted by the Committee on International Transportation to the Section of International and Comparative Law of the American Bar Association and printed in the current issue of the Journal on pp. 344, 345.