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DEREGULATION -- AN UPDATE

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DEREGULATION -- AN UP-DATE

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One year ago Professor Cary invited me to present a lecture for this course in Air Transportation Analysis and suggested a discussion of the U. S. experiment with airline "deregulation" and the experience of our own company, Delta Air Lines, in operating in this new environment. As a title for that presentation I chose "Deregulation--The Sword of Damocles or the Golden Fleece."

Obviously, I attempted to create an allegory which portrayed airline management under deregulation as being one of precarious balance on a razor's edge. You will recall that Damocles was a flatterer who, having extolled the happiness of a legendary Greek tyrant, was seated at a banquet beneath a sword that was suspended over his head by a single hair, the idea being to show him the perilous nature of the happiness he had extolled. On the other hand, the Golden Fleece was a prize supposedly carried away by an evil king, only to be recovered after hard pursuit by the Argonautic expedition of Jason, aided and abetted by his wife Medea. And the obvious question was whether we, in the airline business, were in danger of losing our heads if the hair snapped and the sword fell or if, on the other hand, the Golden Fleece really was at hand and available to our grasp, rather than being simply an unavailable pot of gold at the end of an unattainable rainbow.

Last year I concluded that, due to a variety of factors including economic recession, inflation, the grounding of the DC-10 and a prolonged strike at United Air Lines, the basic question could not yet be answered.

And this year, due to continuing recession, inflation and the effects of the ill-advised strike of the U. S. Air Traffic Controllers, a substantive answer to the question is still not at hand.

As I understand it, already this year you have been exposed to several lecturers who have dealt with various aspects of the deregulation question and you have also had an opportunity to review the papers which were presented last year. Accordingly, I do not propose to go into the background in any great depth, but will briefly summarize the manner in which our present situation developed.

You will recall that the Civil Aeronautics Act, later known as the Federal Aviation Act, was enacted in 1938 and economic regulation of the airlines under that law remained essentially the same until late 1975 and early 1976, when the first steps toward deregulation began.

The theory of the "old" system, which in this country had developed through the regulation of railroads, buses and trucks under the Interstate Commerce Commission, and of airlines under the Civil Aeronautics Board, was that common carrier transportation was a form of public utility or, at least, a quasi-utility. At the heart of the earlier approach was the franchising or licensing system. The old law required that the CAB encourage competition, but it also directed that the Board should foster sound economic conditions within the industry in order to assure continuation of service. In practice, the CAB did gradually build up competition in major traffic markets, but it also limited the number of carriers authorized to operate in a given market to that level which it felt could operate economically and efficiently.

In a sort of quid pro quo for this licensing system, the old law imposed firm public service responsibilities upon the carrier, including:

- a) an obligation to serve both large and small communities;
- b) imposition of CAB controls over rates and fares;
- c) extensive control over accounting methods and wide-ranging reporting system;
- d) prohibitions against unfair or anti-competitive practices; and
- e) a host of other regulatory controls affecting interlocking relationships, mergers and acquisitions, exchanges of facilities and services, and the like.

In other words, it was a balanced system -- a considerable degree of route or franchise protection in return for firm governmental control of the public service obligations.

During the early 1970's certain economists began to argue that transportation companies in general, and airlines in particular, are in no sense public utilities, as they have been viewed by most governments since before the time of Adam Smith, and would better serve the public if they operated subject to the market forces of open competition. It was argued that airlines really are just like any other business: the corner grocery store, the lumbermill, or what have you. The theory was that these other types of businesses also provide important public services, but are not governmentally controlled, and still produce those services at reasonable prices. Accordingly, the deregulation proponents concluded, air transportation would react similarly and optimum air service would result if the government simply got out of the way and let the competitive marketplace determine the

quality, quantity, price and variety of the services offered.

At the same time, the Civil Aeronautics Board's procedures in route and rate cases began to come under heavy fire because of the extremely long time it was taking to get such a case from initial petition to final decision. It was increasingly felt that bureaucratic delay was playing a major role in preventing new entrepreneurs from entering the airline field and was costing the existing industry millions of dollars in earnings simply because of the Board's procedural delays in bringing its proceedings to final decision during a time of rapidly increasing costs of labor and material.

In March 1975, under the administration of President Gerald Ford, John Robson was appointed Chairman of the CAB. Under Robson's leadership the Board began to make significant departures from the restrictive policies of previous administrations, and new route proceedings began to move forward more expeditiously, a liberalized attitude toward discount fares emerged, charter flight regulations were liberalized and, in October of 1975, the Ford Administration's proposed legislation on regulatory reform was made public. This proposal was aimed at stimulating price competition, eliminating entry barriers to new markets and otherwise altering the basic function and purpose of the Civil Aeronautics Board.

The general idea of airline deregulation was adopted as a major campaign issue by Presidential-nominee Jimmy Carter and, following his election, in June of 1977 Alfred Kahn was made CAB Chairman and the Board accelerated its move toward less regulation, granting even more latitude to experiment with discount fares, shifting the burden of proof in new route cases to the opponents

of the proposal, no longer stressing diversion of traffic from an incumbent carrier as a reason to deny a new route proposal and even stressing fare reductions as a major factor in selecting new route applicants. Soon thereafter the so-called Airline Deregulation Act of 1978 was pushed through Congress and was signed by the new President, becoming effective as of November 1, 1978.

Now quite frankly, when the deregulation idea first surfaced it was strongly opposed by my company. Why? Well, our concerns fell in several areas. We agreed that some reform was necessary, but we felt that it could be accomplished under the existing law. And we strongly disagreed with some of the thinking which underlay the proposed changes.

On the argument that freedom of entry was required to stimulate competition, we felt that the U.S. airlines were already in a very competitive business. The old Federal Aviation Act was strongly pro-competition. The federal courts had confirmed that interpretation and, in fact, about 90% of all of the traffic our industry handled was moving in markets where competition existed.

While it was true that the total number of trunk carriers had decreased somewhat over the years due to mergers and the lack of new entrants into the trunk airline field, the so-called feeder airlines had metamorphosized into local service carriers and then had grown into regional carriers, in many cases larger than the trunklines themselves had been only one or two decades before. In addition four new "industries" had been born: the all-cargo carriers, the supplemental or all-charter carriers, the commuter or taxi services and the helicopter operators. Finally, service had improved significantly, both in number of cities served and in the number of competitive carriers available in most traffic markets.

We also argued that any introduction of "freedom of entry" would have to be accompanied by "freedom of exit" since, as a matter of basic economic fairness, in a "no-franchise" society each operator would have to be free to allocate its resources and aircraft to those markets most likely to return the maximum operating profit. And this, we pointed out, might well hurt the smaller cities as the carriers transferred their services to the larger, more profitable markets.

We also felt that freedom of entry and exit could lead to domination of major markets by a few strong carriers, with a probability of further mergers; with increased competition resulting in higher fuel consumption despite the obvious energy crisis; and with unpredictable financial impact upon local airport authorities, which had issued bonds to provide monies for the construction of terminal and runway facilities for carriers which would no longer be serving their communities.

On the argument that more fare flexibility was required to encourage price competition, while we certainly favored more flexibility, we felt that fare competition was already in existence. In the first place, U. S. domestic airline fares were the lowest in the world -- generally speaking, from 30 to 35% below comparable fares in other countries. Secondly, we had in place a wide variety of discount fares, excursion fares, and the like -- indeed, some of the consumerism groups were attacking the airline industry, arguing that because we had too many different fares the public was being confused unnecessarily.

And finally, on the question of reform in other regulatory areas, while we agreed that there was a need for the elimination of regulatory lag

in route and rate cases, and for the elimination of antiquated restrictions on operating authority, we believed that all of these things could be accomplished under the existing law, given good administrative initiative and leadership by the CAB itself.

Nevertheless, the new law was passed. Under it the airlines have received almost unlimited authority to fly anywhere they wish within the continental United States, floors supporting a base for fare and rate levels have been removed, and fare increases have been granted with reasonable expedition whenever the carriers have been able to demonstrate that cost increases reasonably support such upward fare adjustments.

Under the existing law domestic route entry will be completely deregulated at the end of 1981, virtually all domestic fare regulation will be gone at the end of 1982, and the CAB itself will "sunset," or go out of existence, at the end of 1984, although certain of its existing responsibilities will be transferred to other areas of government, such as the Department of Transportation and the Department of State. In addition, a legislative movement is building to "sunset" the CAB at a still earlier date and my company strongly supports this effort.

In most other areas under the CAB's control, there has been little if any, improvement. Indeed, in the broad area of consumerism the CAB has advanced, rather than retreated, with extensive new regulatory and enforcement proceedings involving ticketing practices, overbooking penalties, baggage liability rules, the provision of no-smoking sections, and the like.

Parenthetically, let me call attention to the fact that, due to the burgeoning growth of our federal bureaucracy, the airline is caught in the



middle of a regulatory web of Gargantuan proportions. In addition to the Civil Aeronautics Board, we are subject to regulation by the Federal Aviation Administration, the Securities and Exchange Commission, the Treasury Department, the Department of Transportation, the Department of Labor, the Department of Justice, the United States Postal Service, the Interstate Commerce Commission, the Federal Communications Commission, the Equal Employment Opportunity Commission, the Department of State, the Department of Commerce, the Department of Housing and Urban Affairs, the Nuclear Regulatory Commission, the Occupational Safety and Health Administration, the Department of Defense, the Department of Agriculture, the National Transportation Safety Board, the Federal Energy Administration, the Environmental Protection Agency, the office of Federal Contract Compliance, and the Department of Defense. Add to this a host of state, county and local regulatory endeavors in a variety of overlapping areas and you will understand why we feel enmeshed in a very large web occupied by thousands of basically unfriendly spiders.

So we are far from "deregulated," although definite improvements have occurred in the route and fare areas.

Why, then, is it so hard to assess the results? Well, in early 1979, when the 1978 operating results began to be published, a sort of "deregulation

euphoria" overtook Washington. In calendar 1978 the trunk airline industry earned about \$1.1 billion, net after taxes, a record that far exceeded the earnings of any previous calendar year in airline history. And the so-called deregulation advocates immediately began to take credit for those earnings, while overlooking certain all-important facts, such as:

- a) the new act had been in effect less than two months out of the entire year;
- b) 1978 traffic had increased abnormally due to the widespread introduction of deeply discounted fares begun long before the new act was passed by Congress;
- c) 1978 had displayed peak profits from the disposal of used flight equipment; and
- d) during 1978 the airlines had achieved greatly increased capacity with only marginal cost increases by adding more high density seating and by increasing aircraft utilization. And this could not be repeated.

But there were a few warning flags flying. While the 1978 total profit figure was impressive, the operating margin achieved was not that extraordinary -- indeed, the net profits were largely tax-free due to the use of loss-carry-forward credits. Furthermore, despite the high profits reported for the year as a whole, in the fourth quarter of 1978 most airlines had reported lower earnings than in the comparable quarter in 1977 and in several cases significant losses were booked, despite the fact that 1978, generally speaking, was a boom year for the U. S. economy as a whole.

So we all entered 1979 with our fingers crossed, and 1979, of course, did not look good. For the trunk airline industry for the year as a whole the net was roughly \$260 million, down 76% from the \$1.1 billion net of 1978.

On the other hand, as I indicated at the outset, we must focus on the fact that 1979 was a completely abnormal year in major respects. In the first place, United suffered a prolonged strike that left its mark on industry earnings in many unfortunate ways. Secondly, there was the tragic

DC-10 accident at Chicago, and the subsequent temporary grounding of that aircraft, that completely undercut all revenue projections for the industry. And thirdly, and perhaps most important of all, was the completely unpredicted level of fuel price increases -- in Delta's case fuel expense increased 54% (from \$416.2 million to \$641.3 million) despite an increase of only 6% in gallons consumed (from 1.089 billion gallons to 1.156 billion gallons).

Then came 1980 and financial disaster. At the beginning of the year most industry analysts forecast relatively flat growth and an industry earnings level no better than, if as good as 1979. At the end of the year, the ten trunk-lines had posted an operating loss of \$432 million and a net loss, after taxes and special items, of \$45 million (this net figure including Pan American's net profit of \$197 million from the sale of its New York office building). Delta fortunately, had an operating profit of \$164 million and a net profit of \$130 million and, if these figures are omitted, the industry data would look much worse--something like an operating loss of \$596 million and a net loss of \$175 million.

1981 also seems headed in the wrong direction. For the first six months the twelve larger airlines, now called "Major Carriers" by the CAB, posted an operating loss of \$142 million and a net loss of \$189 million. And, here again, the picture would have been gloomier still without net profits of \$75 million by Delta, and \$31 million by U.S. Air, the latter having been added to the CAB's list of "Major Carriers" since the deregulation statute was enacted.

It should be emphasized that the non-trunk carriers have done much better than the trunks since the new law went into effect in 1978. The so-called local or regional airlines showed a group net profit of \$129 million in 1979, \$167 million in 1980 and \$72 million in the first half of 1981. These airlines are now called "National Carriers" by the CAB and currently, with Republic and U.S. Air moved up to the "Major Carrier" category, the "National Carrier" group consists of Air Florida, Frontier, Ozark, PSA,

Piedmont, Southwest and Texas International,

A number of new airlines also have entered the field. These include Air Florida with its rapid expansion from a small intrastate airline into a major regional carrier; New York Air and People Express, concentrating in the high density markets in the Northeast; Midway operating out of Chicago; and Muse Air in Texas. As these new carriers begin to fully develop their operations, the older carriers obviously will be called upon to adapt their operations and policies to the new cost structures against which they will have to compete in basically high-density, short-haul markets involving highly selective pricing policies.

On top of this came the air traffic controllers strike on August 3rd. With the airport towers and control centers staffed by a mixture of non-striking controllers, supervisors and military controllers and literally thousands of new controllers in training, the FAA understandably instituted severe flow control measures at the nation's busiest airports. While in most cases scheduled flight services have continued at the 75% level, and are expected to remain at or slightly above that figure until the late spring of 1982, the impact upon airline earnings has been severe. Through the end of August seven of the twelve Major Carriers had announced furloughs or lay-offs involving at least 15-16,000 employees, and the actual impact upon airline earnings has yet to be announced, although it is estimated that many millions of dollars will be involved.

Let me digress for a moment to comment on the possible economic effects of the PATCO strike. Many commentators have argued that the airlines will use the present crisis as an excuse to lay off unneeded employees, to sell fuel inefficient airplanes, to trim unprofitable routes and to achieve increased productivity from their personnel. In particular, emphasis has been given to the argument that by crowding more passengers into fewer flights, higher load factors will be obtained with resulting improvement in profits.

These may well be admirable goals. Let me caution, however, that they are not easily, and certainly not automatically, attained.

As to layoffs, at Delta we believe that these are to be avoided to the fullest extent possible. In the first place, lay offs result in an obviously adverse impact upon morale. Secondly, we must recognize that when people are furloughed (a) those being furloughed are our least expensive people, and (b) a certain number will not return when the recall notices go out, resulting in extra costs for training new personnel. And there still is a retraining and start-up cost factor involved when recalled personnel do report back to work after any extended furlough.

As to the sale of fuel inefficient aircraft, this is much more easily said than done. Because of the impact of the PATCO strike on planned expansion, there simply is not a strong seller's market for older used aircraft. And if the grounded aircraft cannot be sold, the operator faces difficult problems involving whether to keep the aircraft in operating condition, which means lower utilization and higher unit cost, or to ground them with all of the cost problems attendant on that option. Third, and perhaps of greatest significance, is the fact that there will continue to be great pressure to replace much of the existing fleet with the new, more quiet and more fuel efficient airplanes which will become available in the next few years, yet here reduced earnings and the inability to sell substantial numbers of the older aircraft make financing of the newer airplanes increasingly difficult.

As to routes, most of the marginal operations have been eliminated already during the first two years of so-called deregulation. There are very few obviously uneconomic route segments left which the airlines can weed out without losing competitive position in the markets concerned.

And as to higher load factors, we must recognize that reduced operations

in existing facilities immediately results in increased unit costs. For example, rentals for hangars, terminal buildings, reservations and office facilities and the like--all contracted for under long-term leasing arrangements--are not quickly eliminated. Many major airports operate on the basis that major costs are spread among all operators and as a result, when total landing fee income and concessionaire fees are reduced because of lowered flight activity, in the next fiscal review period unit costs go up automatically.

Consequently, I think that the near-term impact of the PATCO strike on the airlines and their suppliers will be severe. In the long-run, of course, improvements will be made. Before the strike there were about 17,000 controllers on the federal payroll. Today there are only 10,000 (5,700 non-striking controllers, 3,000 supervisors, 850 military personnel and 450 new employees), although they are successfully handling about 75 to 80% of the pre-strike activity, indicating that there was considerable pre-strike "redundancy." Nevertheless, the training time required for new controllers would make it appear that it will be eighteen months to two years before the former status quo is achieved and, in the meantime, while the airline industry may work its way back into profitability, I for one do not look upon the strike as having created a "bonanza" for the airlines of the United States.

As to mergers, our expressed concerns appear to have been well-placed. National has merged into Pan American and Seaboard World into Tiger International, Southern and North Central merged into Republic, which then acquired Hughes Air West. Continental and Western have been attempting merger, but Continental is now embroiled with Texas International and Air Florida is seeking control of

Western. The latest, as yet uncompleted, move is the acquisition of 8% of Piedmont's stock by the Norfolk & Western Railway, which may well be pointing toward an intermodal consolidation.

The basic question now posed by Professor Cary is how, in these turbulent times, in a period of freedom of entry, inflation, recession, and, in general trunkline losses, Delta Air Lines has managed to put black ink, rather than red, upon its books? I would submit that the response to this question can be broken down into four categories--route structure, aircraft fleet, financing and personnel. Let us focus briefly upon each of these subjects.

First, route structure. Over a period of years, and largely during a time when the CAB was still exercising rigid controls over new route expansion, Delta had built up a well-balanced route structure. The original Delta route system was east-west, from Texas via Atlanta into Georgia and the Carolinas, and in the 1940's north-south routes were added from Chicago into Florida, again via Atlanta. In the early 1950's a merger with Chicago & Southern Air Lines added routes traversing the greater Mississippi Valley from Detroit and Chicago in the Mid-west to New Orleans and Houston in the South and, in the mid-1950's routes were added from Louisiana and Texas, again via Atlanta, into the Washington-New York area. In the early '60's the east-west routes were extended through the Southwest to California and in the early '70's a merger with Northeast Airlines brought in access to New England and the Boston/New York-Florida markets. In addition, the airline serves Canada, Bermuda, the Bahamas and Puerto Rico and, in the past three years, has added non-stop service from the Atlanta gateway to London, Frankfurt, Bermuda and San Juan.

The route pattern is thus well-balanced with heavier summer traffic patterns from east to west and heavier winter patterns from north to south,

which results in increased flexibility and improved year-round equipment utilization.

The one major gap in Delta's domestic route pattern, pre-deregulation, was toward the Pacific Northwest. Here the Company moved in cautiously but steadily. Following extensive and careful planning, we first extended our services from the south into Salt Lake City and, a few months later, into Seattle/Tacoma and Portland. In addition, we utilized our new freedom of entry rights to improve our Florida coverage, adding Daytona Beach, Sarasota/Bradenton and Ft. Myers to the group of Florida cities previously served.

As an editorial in the trade magazine Aviation Week and Space Technology said at the time:

"Delta was a leading skeptic of deregulation and of the kind of rapid expansion strategy that Braniff adopted in the first phases of deregulation. Critics contended Delta, considering its financial strength, was too timid in its route strategy in the opening months of the new era of carrier freedom. As the recession deepened, Delta conversely turned more expansionary, and it expects that strategy to generate pay back as the recession eases. Delta is thus in a position to capitalize on the ill winds of both deregulation and downturn."

In any event, we have moved cautiously from a strong base, and now have a well-balanced route system serving virtually all parts of the continental United States, although we have refrained, so far, from entering any of the major east-west markets in the northern tier of states, a territory which seems to be the victim of too much competition at the present time.

Much has been written about the Delta "hub and spoke" system, centered on Atlanta. Basically, what we have done is to develop a great many relatively short-haul routes which feed into Atlanta from smaller cities in the Southeast such as Chattanooga, Columbia, Savannah, Augusta, Macon and Columbus, Ga. These services are not profitable, in and of themselves. But 70-80% of the traffic involved is not local and does not terminate in Atlanta. Rather, it goes on to major points far beyond Atlanta--New York, Washington, Detroit, Chicago,



Dallas, Houston and California cities. And by bringing this traffic into Atlanta from these smaller cities and connecting it in Atlanta to our longer non-stop flights with larger aircraft, we are able, on an overall basis, to make our services to the smaller points profitable and, at the same time, increase our schedule frequencies--and so also our competitive posture--over those highly competitive long-haul route segments beyond Atlanta. At the same time, this technique helps us to increase our equipment utilization and so results in lower unit operating costs.

We now have eleven of these major connecting complexes at Atlanta every day and we have moved as many as one million people through this one airport in a single month. But the interesting point of the hub and spoke complex is that, of those one million people, over 70% were connecting to and from cities other than Atlanta.

Under deregulation, we have also moved to build up new hub and spoke operations in some of our other major cities--specifically, Boston, Memphis, Dallas/Ft. Worth and Cincinnati--and we believe that what we have accomplished at Atlanta can be expanded successfully in these other areas as time goes by. For example, building up a new hub here in Boston, pulling traffic from several smaller New England cities and Montreal into connections with long-haul flights serving all of the Southeast and the Mid-South, has been a major factor in making our 1972 merger with Northeast Airlines an economic success.

In passing, it is worthwhile to remember that several of the former regional airlines, notably U. S. Air and Republic among the Major Carriers and Frontier among the National Carriers, have utilized deregulation to expand quite successfully. Here it is interesting to see that U.S. Air, for example, has developed an extensive hub and spoke system, based on operations at Pittsburgh and Philadelphia; Republic has such a schedule pattern based on

Atlanta and Chicago; and Frontier operates a hub and spoke pattern out of Denver.

On the other hand, the obvious distinction in the Southwest situation which must be emphasized is that Southwest did not use the "hub and spoke" approach, but rather chose to initiate competition for turn-around passengers only, in a heavily travelled local market, Houston-Dallas. Here the operation could be conducted with minimal station, reservations, baggage and other support facilities, without meal service, without interline ticketing and connecting facilities--and so no splitting of revenues with other carriers--with high utilization of aircraft and personnel, and with a unique ability to return aircraft and crews to home base each night, so eliminating crew and other layover expenses. It will be noted, of course, that New York Air and Peoples Express are now attempting the same sort of experiment in the Washington-New York area and that Muse Air is moving into competition with Southwest. In all cases, of course, these carriers also have low initial operating costs because their people have limited seniority and wage, salary and benefit levels considerably below the averages of the older airline companies,

A second major key to Delta's success has been fleet standardization and modernization. Following our company's merger with Northeast Airlines in 1972, we had a fleet that contained nine different aircraft types and utilized seven different kinds of engines. This, coupled with the push for replacement of older aircraft with newer, more quiet airplanes operating with more fuel-efficient engines, led us into a massive reequipment and fleet standardization.

For example, for the five fiscal years which ended June 30, 1981, our fleet turnover was as follows:

<u>Fiscal Year</u>	<u>Sold</u>	<u>Purchased</u>
1977	11	17
1978	14	11
1979	5	18
1980	10	13
1981	<u>12</u>	<u>12</u>
	52	71

Today we operate a fleet of 212 aircraft made up of just four basic aircraft types--the Lockheed L-1011 TriStar, the 198-passenger Douglas DC-8, the Boeing 727-200 and the Douglas DC-9-32. We have completed arrangements to re-engine the entire fleet of stretched DC-8's, giving them sharply improved fuel efficiency, we have begun to retrofit the entire DC-9 fleet with engine noise suppression kits; and we have contracted with Pratt & Whitney to provide engine modification kits for most of our 727's which will sharply improve their fuel efficiency. All in all, we have one of the youngest fleets in the airline industry, equipped with fuel efficient engines and headed toward 100% compliance with all federal noise suppression standards well ahead of the mandatory completion dates. And, in the process of standardization, we have been able to sharply reduce inventory and, at the same time, improve our maintenance and overhaul efficiency.

As to the future, at June 30, 1981, we had 9 more L-1011's on firm order for delivery in 1982 and 1983, options on another 7 such aircraft for delivery in 1984 and 1985, firm orders for 20 Boeing 767 airplanes for 1983-1985 delivery at a cost of roughly \$1.5 billion, and options for 22 more Boeing 767's for delivery from 1984 through 1987. In addition, we have ordered 60 Boeing 757 airplanes, to replace some of our DC-9's and older 727's during the last half of the 1980's at a cost of approximately \$3 billion.<sup>1/</sup> So, overall, we do have a modern standardized fleet and firm plans for keeping it modern and efficient. In addition, we have submitted to the principal aircraft and engine manufacturers proposed specifications for what we call the Delta III, a short-range 150-passenger airplane which would achieve the required fuel efficiencies necessary for the hub and spoke operations of the future.

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<sup>1/</sup> The 767 is powered with the GE-CF6-80A engine and will seat somewhat over 200 passengers. The Delta 757 will have P&W 2037 engines and will seat 180-190 passengers.

A third factor is our relatively conservative financial policies. We depreciate our airplanes rapidly--using a 10-year life and a 10% residual value. This depreciation policy, coupled with deferred taxes and reinvestment of roughly 80% of earnings, has resulted in a cash flow which will carry our new aircraft orders with minimum use of short-term loans and limited issuance of commercial paper. Our bank loans are at the prime interest rate and are unsecured. Our commercial paper has been rated by Moody's as P-1 and by Standard and Poor's as A-1.

Our current debt-equity ratio is unusually low for the airline industry--as of June 30th long-term debt, including current maturities, was \$209 million or roughly 20% of stockholder equity of \$1.04 billion. As a result our interest burden has been relatively low, which has been particularly important in our nation's current period of high interest rates.

We have had a consistent record of dividend payments, dating back to 1949. Our board's policy is to try to pay out roughly 20% of net earnings, based on a five-year moving average, and, as noted previously, to plow back about 80% of earnings into the Company's expansion programs.

Finally, and perhaps the asset which we value most highly, is our cadre of 36,000 employees whom we proudly refer to as the "Delta Professionals." Our people have a high profile of company loyalty and, we believe, are very service oriented, which is most important in an industry as highly competitive as is the airline business.

Our company has a minimum of organized labor. Our pilots are affiliated with the Air Line Pilot's Association, but relations with the Delta pilot group have always been excellent, and our flight dispatchers have their own organization which is not affiliated with any national group. The balance of our people have no union affiliation at all.

This is not a situation which just happened. Employee satisfaction, welfare and motivation are areas to which we give a great deal of attention.

In the first place, to the greatest extent possible, we hire at entry level positions. This is to say, a new employee starts as a baggage handler or a reservations clerk and works his or her way up the ladder. Wherever possible, salaries are established on merit as well as by scale, so that competition for advancement is kept alive. We also have an extensive package of company-paid benefit plans--i.e., retirement, disability, medical and dental and survivorship--and a savings plan to which the company contributes.

In addition, we have a strict policy of promotion from within. No present officer was hired as an officer--all worked their way up from the ranks--and from top to bottom the average time of our officers with the company is in excess of 26 years. Our President, for example, was hired as a reservations agent and has worked in the Marketing, Personnel and Operations Divisions. Our Senior Vice President-Technical Operations started as a mechanic. Our Senior Vice President-Marketing began as a research statistician. The result is that by the time an individual reaches the officer level, he or she has a long background of experience within the company, usually has had an exposure to the problems of more than one department or division within the organization, and is well-known to and respected by his or her peers. And, incidentally, the average tenure of all of our people is over ten years, with, for example, senior customer service agents averaging over twelve years and mechanics about fifteen.

We also have a "speak-up" or "open door" grievance system. Individuals, if they feel they are being dealt with unfairly by their immediate superiors, have an open-door access to higher-ranking managers or officers, and the ladder leads to the offices of the President and the Chairman of the Board. Indeed, it is not unusual for one of these two top officers to come into a staff meeting with the advice that they have been contacted by telephone at home or in

person at the office by an employee with a problem and, while anonymity usually is maintained, obviously some sort of corrective action is immediately forthcoming.

We also have group meetings at virtually all locations, at least once every 18 months, at which attendance is encouraged, although voluntary. These are broken down by job function--i.e., maintenance, reservations, marketing, treasury, computer operations, etc.--and the meetings are conducted by one of the company officers responsible for the group involved and Personnel Division representatives. Following presentations of a general nature covering company policies, wage and salary levels, general outlook in the industry and similar matters, the local supervisors are excused and the individuals are encouraged to ask questions or raise criticisms in all areas of their interest. These questions are logged on an anonymous basis and, if they cannot be answered on the spot, all unanswered questions are covered in bulletins from the home office to all affected personnel as soon after the meeting as possible. These meetings are quite time-consuming insofar as home office staff is concerned, but they are given a very high priority in any listing of a senior officer's responsibilities.

One other factor in good personnel relations is the company's "no lay-off" policy. There have been none in the last twenty years. As an example, during the 1973 fuel crunch the federal government ordered a 10% reduction in all airline flying. In Delta's case, this resulted in an excess of 200 pilots and 500 flight attendants. Management offered job reassignment to all affected personnel and, as a result, we had pilots handling baggage, working in terminals and making sales with marketing representatives, while flight attendants were reassigned to reservations, clerical positions, and the like. It took almost two years before normal attrition, growth and some fuel relief permitted us to get all of these people back to their regular jobs. But this accomplishment, at a time when almost 10% of the overall airline employment was on furlough, was a tremendous factor in our overall employee morale.

We are doing our best to preserve this record today, even in the face of the 15% cut-back in scheduled service dictated by the air traffic controllers strike. Although we have had to release a good many temporary or part-time people, none of our permanent staff has been furloughed and to date few, if any have been reassigned away from their regular duties.

In all candor, I probably should add a few words about cost containment. As you may know, Delta has the shortest average flight distance and the shortest average passenger trip of any trunk airline. And it is interesting that this accompanies profitability, because most airline economists will insist that the longer the passenger haul and the longer the average aircraft flight, the greater the profit potential. On the other hand, under deregulation, by and large the short-haul carriers have been able to adjust their effective fare taper to more closely match their actual cost taper.

Now as I indicated, we are firm believers in the hub and spoke theory, and obviously when many of the spokes are relatively short then the average trip length comes down, too. But we do try to offset this by operating numerous relatively long non-stop flights out of the hub and by concentrating on traffic development along the spokes that wants to move into the hub for connection to those long-haul flights.

But this will work only with good cost containment. And, at the outset, let me say that we do not operate on budgets in a traditional sense, although we do have tight cost controls.

We look hard for ways to do the job better and so save money without sacrificing service. For example, in our business fuel (32% of 1981 expense) is rapidly becoming as big an item as payroll (39%). But because of the huge investment in a standardized fleet of more fuel efficient airplanes that I mentioned previously, in fiscal 1981 we had a 5% gain in available seat miles and a 4% decrease in revenue passenger miles, while at the same time burning almost 24 million fewer gallons of jet fuel than we had utilized in the preceding fiscal year. Other things that we have done to conserve fuel

include flying our planes at 0.80 Mach rather than 0.85 Mach, meticulous cleaning of the exteriors of the airplanes to reduce drag, ground towing in lieu of taxiing with all engines running, reduced use of on-board auxiliary power units, and the like.

While these are examples of only one area of cost containment, they are representative of a company-wide effort.

So there you have the "Delta difference" in broad general outline-- a well-balanced route system, a modern aircraft fleet, conservative accounting and financing, excellent personnel relations and cost containment.

Now we are looking at a new day. Already we have reasonable freedom of route entry and exit, and fare flexibility is improving. At the end of 1981 the CAB goes out of the route business; at the end of 1982 it gives up rate and fare regulation; and at the end of 1984, or before, the Board itself "sunsetts."

With all of these continuing changes, and faced with the uncertainties of our domestic and international economies, what, then, lies ahead for U. S. civil aviation? I think that the major problems fall into five broad subject areas: pricing, the impact of increasing energy cost, the industry structure of the future, airline service to small communities and international problems. Let us address each of these briefly.

First, with respect to pricing. Edwin Colodny, Chairman of U.S. Air, recently made an address in which he presented his version of the "Ten Commandments for Airline Success." If you have not read this, I commend it to you. It was reprinted in the August 1981 edition of Air Transport World.

Mr. Colodny's Sixth Commandment was, quite simply, "Thou shalt not give it away" -- in other words, "there must be something left at the bottom line.

It was pointed out that these are days of discount fares: Flexible Flyer, Smart Stop, Peanuts Fares, Money Saver, Hop-Scotch, Family Fling, among others, and a whole host of Super Savers. Mr. Colodny noted that, while market share is important, a policy of attempting to buy market share with



below-cost fares on a broad basis will, sooner or later, produce a very sick airline and that failure to manage the revenue yield to provide a sufficient operating margin invites long-term disaster.

The problem, of course, is that because airline seat miles are produced in large batches of a hundred or more at one time, the gain or loss of a few passengers per trip is not accompanied by a change in operating cost--indeed, the marginal cost of selling an otherwise empty seat is extremely low. As Melvin Brenner pointed out in a recent article,<sup>1/</sup> confronted with this basic economic fact, the question of the appropriate level for a fully-allocated break-even fare becomes almost academic when an airline faces the real-world competitive option of either retaining traffic at a discount or losing that traffic altogether. Mr. Brenner noted that "a seat occupied by an 80% passenger is better than an empty seat providing zero revenue."

On the other hand, I well remember the lesson taught by one Junius Cooper, a former senior finance officer of Chicago & Southern Air Lines. When confronted with a Marketing Department proposal for a new discount fare he related the story of the company which manufactured a product by stamping shaped forms out of large pieces of sheet metal. They employed an efficiency expert who strolled through the factory grounds, observed large amounts of left-over and apparently useless scraps of sheet metal, and suggested that the company manufacture washers out of its otherwise unuseable scrap sheet metal. This seemed like a good idea and, after purchasing a few dies, the company began to turn out thousands of washers.

Since the company had no material cost, it priced the washers extremely low, undersold the market and picked up a tremendous position in the

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<sup>1/</sup> Airline Executive, July 1981, p. 17.

washer business. But, as demand built up, the company had to start buying fresh sheet metal from which to make washers and, as a result, in a few months it went bankrupt.

So it is with discount air fares. As long as a few otherwise empty seats are being sold, all well and good. But as soon as airplane seats are being provided in order to accommodate a burgeoning increase in discount fares, something will have to give. In other words, if too many seats are sold at too much of a discount, soon there will be too little revenue on the airplanes as a whole to cover the true full cost of operating the flights. No one can buy a \$30 million airplane on an added cost basis.

Actually Delta has been a leader in the provision of low fare services, but from an "off-peak" rather than a "deep discount" philosophy. For example, in the past we have been and I believe that we still are the world's largest operator of "night coach" services. While called "night coach," many of these services operate in the early morning hours, e.g., 6:30 - 6:50 A.M. out of the hubs such as Atlanta. These services provide a 20% or greater discount from the day coach fares but, unlike the so-called discount fares, they are completely free of advance purchase and similar restrictions and they operate on a daily basis week in and week out, year-round.

Obviously these reduced rate fares attract passengers who might not otherwise fly and are a boon to the budget-minded traveler. In addition, they are of great value to the U. S. Postal Service and commercial freight shippers. They are of benefit to Delta because they enable us to achieve significantly greater utilization of our aircraft and ground facilities and so enable us to provide reduced-rate services on a sound and efficient basis.

On the other hand, severe discounts in basic, standard coach fares run directly into the problem of the "generation/diversion ratio." Thus, whether or not it generates new traffic, a reduced or discount fare introduced by a

carrier which is already operating in a given market will attract or divert some traffic which otherwise would have traveled on that particular carrier at standard fares. When this happens, the reduced fare must generate enough new traffic to offset the loss of revenue that occurs from this diversion simply in order for the carrier to break even, and then still more new traffic must be generated if any improvement in profits is to be realized.

At one stage of its Domestic Passenger Fare Investigation the CAB developed a formula for determining the new traffic generation needed for a discount fare to satisfy this profit impact test. Applying this formula to a proposed 35% fare discount showed that a 76.9% increase in traffic (with a resulting 43/57 generation/diversion ratio) was required just to break even. The enormity of the deep discount problem thus becomes quite apparent.

Suffice it to note that, for the ten year period 1969-1978, the trunk airlines had annual average operating revenues which exceeded operating expenses by only 4%. With such a thin margin it is obvious that only a small departure from fully-allocated economics will tip the industry into red ink. In 1979 this margin dropped to 1%. In 1980 the industry fell into the red and the red ink may be even heavier in 1981.

But this is not all. As Mr. Brenner points out, at the end of 1982 virtually all fare regulation will disappear and it will no longer be illegal to grant preferential discounts to heavy purchasers of air transportation, such as large corporations or even "purchasing-cooperatives" formed by smaller firms. The government itself has pointed the way, with its contracts negotiated with the General Services Administration to secure discounts for government travelers,

As to the answer to this dilemma, Mr. Brenner says:

"Painful as it will be to the true believers in deregulation, the answer will be some form of reinstated fare regulation, monitoring minimum fare levels to prevent the industry from slashing its own wrist."

Personally, I hope that it will not go this far. I would prefer to see airline managements exercise more self-restraint (which, in all candor, does

not seem too likely based on past history) or even see the U. S. Department of Justice step in to prevent predatory pricing. But the fact remains that, up to now, the main exposure to yield erosion has been in the personal and pleasure markets. If and when such erosion moves into the business travel markets, the ultimate effect will be serious indeed.

Our company is dedicated to the policy that management of yields is the only game in town--that is to say that fares must be related to costs and deep discount fares should be used only to fill up seats that otherwise would go empty.

Our second problem is increasing energy costs which, in the past decade, have been constantly increasing, leading directly to continual increases in rate and fares. Frankly, I believe that our industry has done a commendable job in holding fares at their present level, despite the fuel cost increases which we have suffered,

Previously I mentioned some of the things that Delta has done in its fuel conservation program--flying at lower Mach numbers, cleaning up the airplane exteriors to reduce drag, ground towing in lieu of taxiing with the engines running and the like. But, in recent years, it has almost seemed as if we were going the wrong way on a moving sidewalk, running faster and faster and yet not making forward progress.

Last year, for example, we reduced our fuel consumption by 3%, yet our total fuel cost increased 51%. In the five years since 1976 our average price per gallon has gone up 231% and, since 1973 (the year the fuel crisis began) the increase has been 756% (12.03¢ per gallon in calendar 1973 and 102.96¢ in August, 1981.

Currently these prices seem to have plateaued. No doubt this respite is temporary, as most experts predict that the present oil glut will disappear after a very few years and that, after 1985, real prices for oil will increase

by 2-3% annually. Accordingly, we must plan ahead, as I doubt that within your lifetime or mine we will see nuclear or hydrogen powered commercial aircraft.

Obviously, then, we must turn to better utilization of our existing fleets and to newer aircraft operating with more fuel efficient kerosene-powered engines. Here I will only briefly summarize what I have said before. First, Delta will increase the seating capacity of all of its aircraft except the DC-9's. Second, we will modify the Boeing 727 engines with a target of increased fuel efficiency of approximately 5.5%. Third, we are re-engining our fleet of DC-8-61's, looking toward increased fuel efficiency in the neighborhood of 20%. Fourth, as our new GE-powered 767's and P&W-powered 757's come into service, we look forward to much improved fuel efficiency per aircraft seat mile operated. And we are urging the aircraft and engine manufacturers to respond to our proposed Delta III specifications, so as to provide us with a highly fuel-efficient smaller airplane for our relatively short-haul services.

Third, let us turn to industry structure. Ed Colodny's Fourth Commandment was "Thou Shalt Not Covet Other Airlines." Noting that in earlier days mergers were a way to expand, particularly for the smaller carriers, he pointed out that with route deregulation and freedom of entry there is little need for merger in order to grow. Furthermore, even if all other factors look attractive, as we have seen in the Pan American-National situation integration of personnel can be a stumbling block that eats up anticipated economies for years at a time.

The hostile take-over situation is hard to analyze. The proposed Continental-Western merger, followed by Texas International's approach to Continental, followed by Air Florida's approach to Western and the Norfolk & Western purchase of a position in Piedmont, all have led to considerable public misunderstanding, employee unrest and general uncertainty.

The growth and financial success of the so-called regional carriers, two of whom have now graduated to the CAB rank of "Major Carriers" and the balance of whom have been renamed "National Carriers," is the real success story of deregulation to date. It is an interesting development indeed.

Prior to 1979, many of the deregulation opponents felt that the regional carriers would be early victims of freedom of entry, assuming that the stronger trunk carriers would enter the regional's better markets and simply drive them out of business. But, surprisingly, almost the opposite has happened as the regionals have grown stronger and the trunks have weakened.

By hindsight, there are several reasons for this development. In the first place, many of the trunks began to abandon short-haul routes which they felt could not be operated profitably with their larger equipment. The regionals tended to promptly expand into these markets in which they could be more cost-effective with their twin-engine aircraft, such as DC-9's and Boeing 737's.

Secondly, the basically integrated route patterns of the regionals gave them a relatively strong feeder system from which to expand. Rather than simply gathering the traffic from smaller cities and feeding it into the trunk carriers at larger hubs, under deregulation the regionals began to add major new hubs, retaining the new longer-haul traffic for themselves. As noted earlier, this has typified the expansion of U. S. Air off hubs at Pittsburgh and Philadelphia, Republic at Chicago and Atlanta, and Frontier at Denver.

Third, by retaining their original regional systems in a position of only limited competition, the regionals have been less vulnerable to the deep discount price wars of the trunks and so have managed to hold their

yields at above-average levels. For example, in a listing of industry yields per passenger mile for calendar year 1980, Republic, U.S. Air, Ozark, Piedmont, Frontier and Texas International led the list of seventeen trunk and regional carriers, in that order.

Fourth, the regionals have done an excellent job in attracting fill-up traffic away from the trunk non-stops to their one or two-stop flights in major markets with their Hop-Scotch and similar fares. This is a classical discount fare situation, where basic fares are not reduced for the principal point-to-point markets being served by the flight in question, but where the long-haul passenger can be persuaded to make one or two stops in route to obtain a lower fare and so constitutes fill-up traffic for a seat that otherwise would have been flown empty.

The financial results, to date, have been encouraging. In the first half of 1981 Republic and U.S. Air showed a combined operating profit of \$57.9 million on operating revenues of \$1.21 billion, a comfortable 95.2% operating ratio. For the same period, the National Carriers (Air Florida, Frontier, Ozark, PSA, Piedmont, Southwest and Texas International) produced an operating profit of \$116.2 million on revenues of \$1.4 billion, for an operating ratio of 91.8%.

It would appear, then, that the former regional carriers are doing well under deregulation. And, if they can avoid the siren call of too-rapid expansion and expansion into overly-competitive markets, they should continue to do well.

The commuters and air taxi operators comprise an area of the industry which we cannot discuss extensively at this time. They are being severely affected by increasing fuel costs and the effects of the air traffic controllers strike, but it does appear that the financially-sound and efficiently-managed

carriers in this group will be able to carve out an increasingly important role for themselves in the Nation's air transport system.

The changes in industry structure which we have been outlining naturally impacted on the service patterns of smaller communities. Many points and markets which the trunklines concluded were too small for their service were picked up by the regional carriers using smaller airplanes. And, in turn, the regionals abandoned certain of their cities, which in turn were taken up by the commuters using still smaller, and usually propeller-driven aircraft.

Congress, of course, had recognized this probability and, in the Deregulation Act, had set up an "Essential Air Service" program directed toward maintaining vital air service patterns for the smaller cities, supported to the extent necessary by federal subsidies. Here, the CAB has worked hard with a most difficult situation and a limited budget. Many cities are quite dissatisfied with their treatment by the Board and, if there is any great danger that the Congress may move away from "deregulation" and toward "reregulation," it probably lies in this area of essential air service for smaller communities.

Here we also face a possible Congressional reaction to an increase in the subsidy bill since deregulation. In fiscal year 1979 the total was \$62.9 million, increasing to \$88.2 million in fiscal 1980. But the estimated subsidy cost for fiscal 1981 is \$116.7 million (\$96.5 under §406 for local service and \$20.2 million under §419 for small community service). What the reaction of the Congress to this situation will be, particularly in view of the Reagan Administration's fiscal policies, remains to be seen.

As to the international arena, I propose to say very little. This is for two reasons. First, my colleague Mr. Robert Reed Gray of Washington,



made an excellent presentation of our international regulatory problems to you just three months ago. I consider Mr. Gray to be an expert in this field and I do not propose to quarrel with any of his conclusions.

The current U. S. policy seems to be one of negotiating bilateral agreements containing "open sky" privileges in return for substantial pricing freedom (i.e., "country of origin" pricing). This undoubtedly is attractive to larger, well-financed foreign airlines which seek direct access to a wider variety of U. S. cities and, due to extensive route networks behind their own national gateways, feel that they are well able to meet U. S. price competition. This approach, however, has proved quite unacceptable to smaller countries--particularly those with weaker economies--which look upon their airlines as essential and necessarily to be supported by capacity controls, pooling agreements and protected pricing, all of which are contrary to U. S. policy. The outcome of these almost diametrically opposed approaches is still very much in doubt.

In the second place, from the standpoint of personal experience, my company's international operations are hardly typical. We serve Canada, Bermuda, the Bahamas, Puerto Rico, the United Kingdom and the Republic of West Germany. Yet in each case we go out from a U. S. terminal to a particular overseas destination and then turn around and come back. At the present time we do not fly through any point abroad to still another point abroad. Obviously, this is a variant of our domestic hub-and-spoke system and, to date, it has served us well.

Our relation with the other nations that we are privileged to serve are good. Certainly we do have problems with the high cost of doing business in the international field, particularly in areas involving landing fees,

terminal costs, and handling charges, which we find significantly higher in our international operations than in our domestic services. This problem, however, is not one which arises from the deregulation policies of the United States, and so is not appropriate for discussion at this time.

One cloud on the future which does not fit neatly into my package of future problems has been rushed into prominence by the perceived--though not really occurring--transportation shortages that might have resulted had the air traffic controllers' strike been a success. That is the teleconferencing business, the term for holding business meetings by wire or satellite instead of in person.

For many large companies, the travel budget has assumed awesome proportions. And it is a fact that during a time frame where airline ticket costs are increasing due to the impact of fuel costs and other inflationary pressures, communications costs are decreasing due to technological advancements.

Where this will lead is hard to predict. The initial capital investment required is high, but a group of large companies (including such giants as RCA, Western Union, GTE and Satellite Business Systems) are jockeying for position in the fight to supply satellite space for this market. In any event, completely apart from the growing use of satellites, when A.T.&T. has launched an advertising campaign aimed at the business traveler, urging him to call rather than fly, it is time for our economic forecasters and marketing people to begin to take into account these new business techniques that are going to make possible business conferences without the necessity of moving human beings from one part of the country to another.

In conclusion, then, under deregulation what lessons are we learning?

First, that we really have to manage like responsible businessmen. After all, that is what deregulation is all about.

Second, that in the coming decade productivity and cost control are the primary goals. The older carriers must reassess and reorganize their operations so as to approach the productivity achievements of the newer carriers. The newer carriers must prepare for the day when the passage of time and labor demands will require that they pay comparable wages and offer comparable benefit programs. And both groups must prepare to finance and operate the more efficient, less noisy airplanes of the immediate future.

Third, the carriers must learn to price properly. Fares must be developed which will stimulate discretionary traffic, but we must move in directions which will prevent full fare dilution to the fullest extent possible. Today's fare structure does not demonstrate a proper recognition of the need for maximizing generation while at the same time minimizing dilution.

Finally, we must work together for the achievement of real growth in our country's --and the world's--economy. After all, the best of management will face extreme difficulty in providing good service, stable employment and a fair return for the stockholder when operating in an economy characterized by economic recession and continuing inflation.