

 **CONTINENTAL AIRLINES**



The First Fifty Years
1934 - 1984



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Continental Airlines The First Fifty Years 1934 - 1984

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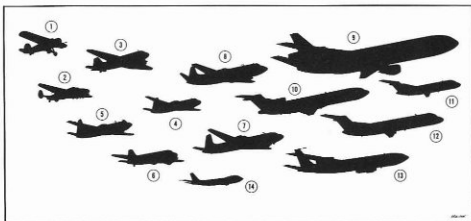
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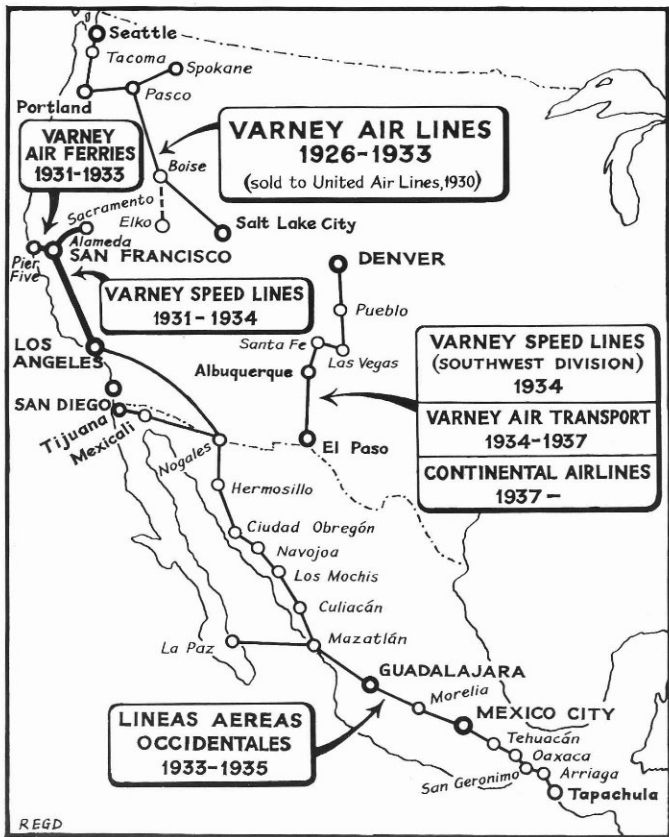


Continental Airlines —
Cover Painting Aircraft "Key"

- ① Lockheed Vega
- ② Lockheed 14
- ③ Douglas DC-3
- ④ Convair 240
- ⑤ Convair 600

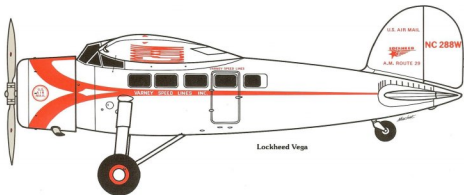
- ⑥ Douglas DC-3
- ⑦ Douglas DC-7B
- ⑧ Vickers Viscount
- ⑨ McDonnell Douglas DC-10-30

- ⑩ Boeing 727-200
- ⑪ Douglas DC-9-10
- ⑫ Douglas DC-9-30
- ⑬ Boeing 707-320C
- ⑭ Boeing 747



REGD

Walter Varney's Airlines, 1926-1937. During the early 1930s, Walter Varney started many airlines. One of these survived to become the Continental Airlines of today.



1

Varney Air Transport 1934-1937

A Doubtful Start

Possibly the most remarkable aspect of the foundation of Continental Airlines relates not to the manner in which it was born, but that it was ever born at all. For an airline to survive, it should possess good administration, a good route system, a good aircraft fleet, and good finance. On all four counts, the little airline which started service on July 15, 1934, to link Colorado with western Texas did not measure up too well.

The administration of Varney Speed Lines, Inc. (Southwestern Division) — for this was the impressive title of Continental when it was founded — was the epitome of what is sometimes known as a shoe-string outfit. There were four pilots, Avery Black, Jess Hart, John Montijo, and Earl Campbell; and of these, Black doubled up as general manager. Accountant Roy Snyder, maintenance chief Don Davies, traffic manager Fred Ward, and secretary Mrs. Idalene Coleman completed the staff under the leadership of Walter T. Varney who supplied the name, and Louis H. Mueller, who supplied the money.

The airline's survival in those early days owed much to Louis H. Mueller, whose keen business sense acted as a brake and throttle control upon the effervescent Varney, who was prepared to charge off on speculative ventures at the drop of a hat, and frequently did. Mueller, a small,

determined individual with a sharp mind, made a good foil for Varney — a role he was later to play for an equally dynamic personality.

Walter T. Varney

Varney was a man of ideas, and a man of action, typical of the pioneering breed of aviation entrepreneurs who were largely responsible for the creation of a United States airline system. But he was seldom able to settle down to a systematic course of development, preferring to give rein to his restless imagination every few years by embarking on new, though not necessarily wild schemes.

His previous aviation career had already included three different airlines between 1926 and 1934, following a period in California where he had conducted sundry air services, including a ferry service across San Francisco Bay. This was in the early Twenties when the United States was uncertain as to what use would be made of surplus warplanes. Varney himself had learned to fly in the Army at the end of World War I, and his check-out pilot had been none other than Louis Mueller, an early relationship which was later to mature into a powerful business partnership.

Walter Varney was one of those visionary aviators who foresaw a future for the airplane as a commercial transport vehicle. He came close to becoming one of the great legendary figures of aviation, but he never quite settled down to one project for a long enough period to become established. The nearest he got to attaining steady respectability was when, early in 1926, he founded Varney Air Lines. This was in direct response to the provisions of the Contract Air Mail Act, passed on February 2, 1925, for the specific purpose of transferring the task of carrying United States air mail from the post office to independent air carriers, who were invited to bid for contracts covering designated intercity routes.

Varney Air Lines won the contract to carry the air mail between Elko, Nevada, and Pasco, Washington, and began permanent service on June 6, 1926, after a false start three months earlier. The choice of this pair of points, at first glance of negligible traffic potential, was typical of Varney's lively imagination. He discerned that the establishment of a northern transcontinental route through the Dakotas and Montana, to reach the Pacific Northwest (and thence to Alaska) was still many years away; and that the logical connection from the east to Seattle, Portland, and Puget Sound would be by a branch line from the already-established air mail route linking Chicago with San Francisco. In fact, Pasco was an important junction for both the Northern Pacific and the Union Pacific Railroads where they came face to face with the Columbia River and diverged to serve Seattle and Portland.

After changing the line's southern terminus in 1927 to the more populous Salt Lake City, and extending it northwards to Spokane and Seattle in 1929, Varney sold the entire outfit to Boeing Air Transport, the largest division of United Air Lines, in 1930. By this time, former flight instructor, Louis Mueller, had become Varney's lawyer and right hand, and he was instrumental in raising United's bid for the route, whose strategic importance was now realized, from one to two million dollars.

Varney used the money to start another airline in California, the Varney Air Service Ltd., also known as Varney Speed Lines. He began flying from Alameda, on San Francisco Bay, to Los Angeles in January 1932, on a

1 hour 58 minute schedule, using the fast new Lockheed Vegas, whose trim lines and aerodynamic efficiency had demonstrated a clear improvement on the Swallows and Stearman which he had used on the air mail route in the Northwest. The connection across the Bay to downtown San Francisco was made by Varney Air Ferries, using single-engined Sikorsky S-39 amphibians for the 6-minute hop. With a flair for publicity, Varney offered a dollar to each passenger for every minute that the San Francisco-Los Angeles flight was late, a tribute both to the Lockheed design and to the reliability of the single Pratt & Whitney Wasp engine.

By 1933, however, he had abandoned the intra-California service, and had ventured into the international arena, seeking what appeared to be a great opportunity to secure a lucrative air route between California and Mexico. He negotiated an air mail contract with the Mexican government, established connections with some independent airlines in Mexico, and began service from Los Angeles to Mexico City early in 1933. This too was to be as short-lived as previous Varney enterprises, as he fell victim to the predatory maneuvers of another large airline corporation, Pan American Airways. Pan Am coveted the California-Mexico route, as a vital link in its master plan, and in February 1935 Walter Varney suddenly found himself without a contract.

Walter F. Brown and the Air Mail Scandal

The unpromising route from Denver to El Paso had previously been a minor pawn in the complex game being played with the air mail contracts during the 1930-1933 period. The United States was like a chess-board, with the postmaster general, Walter Folger Brown, acting as Grand Master on one side of the board, and the airlines complying with the Grand Master's game plan on the other. Western Air Express had operated the Denver-El Paso route, and when the air mail contracts were all cancelled during the political upheaval accompanying Brown's ignominious departure from office in the fall of



Avery J. Black was Varney's first chief pilot and general manager.



Louis Mueller, who financed Varney in 1934, was his former check-out pilot, and subsequently became his financial adviser and partner.



Walter Varney, co-founder of Varney Speed Lines, learned to fly at the end of World War I, and then became a vigorous promoter of air transport.



On July 15, 1934, Jess E. Hart was sworn in by El Paso postmaster, M. L. Burselson, to carry the mail. Hart then made Varney Speed Lines' first flight to Pueblo. He carried 100 letters, but no passengers.

1933, this was one of the few which actually changed hands.

The creation of Varney Speed Lines as a north-south operator in the sparsely populated Rocky Mountain area could thus be attributed to political opportunism, or more accurately, private enterprise taking advantage of a political opportunity. Without the Air Mail Scandal of 1933-34, when President Roosevelt abruptly cancelled all air mail contracts on February 9, 1934, and then authorized Postmaster General James Farley to call for new bids on April 20, 1934, the Southwestern Division of Varney Speed Lines, later to become Continental Airlines, would never have existed.

Walter F. Brown had exercised his powers as postmaster general by awarding lucrative air mail contracts to those companies which met his criteria for qualification. In general, these latter appeared to be possessed only by rich, powerful corporations such as United Aircraft, the Aviation Corporation, and General Motors, whose well-equipped aviation subsidiaries and associates accounted for 91 percent of the U.S. domestic mail in 1933. Brown manipulated the provisions of the Third Amendment of the Air Mail Act (better known as the McNary-Watres, or simply Watres Act), approved by Congress on April 29, 1930, to fashion an air mail route

network which became the foundation of the system that we know today. But to do so, he did more than apply the letter of the law. He circumvented its intent by a succession of route awards — for this is what the air mail contracts amounted to — whose Machiavellian complexities led to questions as to his integrity being asked in high circles, especially when it was revealed that many of the best contracts had been distributed under questionable circumstances after what became known as the Spoils Conferences in Washington. The lion's share had all gone to Brown's favorite corporations, while the "little guys" had often gone begging.

When the dust of a congressional inquiry had settled, with Brown banished to obscurity, the post office was ready to go back to a new chess game, following tremendous public pressure resulting from a sad interlude during which the Army had carried the mail, and several pilots had been killed in the process. Ironically, most of the big contracts were reissued by the Democratic administration to the former giants who had dominated the industry during Republican days, but just a few, consisting almost entirely of routes of low air mail traffic potential — the crumbs from the master's table — became available under a tightly scrutinized competitive bidding process.

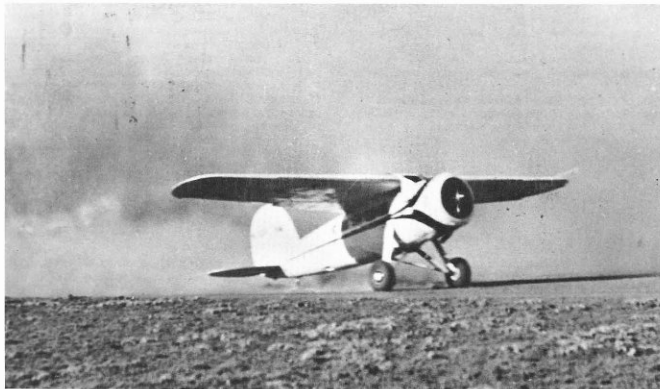
The First Route

And so Walter T. Varney, who provided the name and the know-how, and Louis H. Mueller, who provided the finance, made their bid for Route Number 29, one of the minor items in the list of 32 routes designated by the postmaster general when 45 airlines gathered together in a room of the Post Office Department in Washington on April 20, 1934. In terms of length, the 530-mile Pueblo-El Paso route did not measure up to the extensive awards to the Big Four — United, T.W.A., American, and Eastern; nor, for that matter, to others, exceeding 1,000 miles in length, awarded to Northwest, Delta, Hanford, or Long and Harmon; or even to those approaching that distance, awarded to Braniff, General (Western), Pacific Seaboard, or Wyoming Air Service. True, it was not the shortest; but most of the other short routes included at least one large city in the contract.

In the context of Varney's other ambitions, however, the diminutive route linking Colorado's second city, Pueblo, with the fifth city of Texas, El Paso, had some merit, with a deeper significance than might be perceived at first sight. For El Paso was directly across the Rio Grande from Ciudad Juárez, the northern terminus of the central trunk route, sometimes known as the Aztec Trail, leading directly to Mexico City, via several important cities. Already possessing the Mexican mail contract for the Mexico City-Los Angeles route, via the Pacific Coast, Varney and Mueller perhaps had in mind the idea of some link between the Southwestern Division of Varney Speed Lines and his big route, possibly at first by a link from El Paso/Juárez to Nogales.

In 1934, Varney had probably not realized the power of Pan American in Mexico. The instrument chosen for the developing foreign air routes by the resourceful and dictatorial Walter F. Brown had been Pan American. Every single U.S. foreign air mail contract, except those to Canada, had been awarded to Pan Am or its associates; and the chosen instrument policy was tacitly retained by the Democrats even after the Air Mail Scandals. Pan American had secured its position in Mexico in 1929 by buying the largest Mexican airline, C.M.A. (now Mexicana), and when Varney attempted to intrude in its territory, it moved quickly, exerting political pressure to withdraw the latter's Mexican mail contract. Additionally, Pan American secured the central route between Ciudad Juárez (and thereby El Paso) and Mexico City by setting up a subsidiary, Aerovias Centrales (Central Airways); although later, for obscure reasons, this was allowed to pass to an airline formed by Gordon Barry, a friend of Varney's who had sometimes hitched a ride to California from his local operating base in Mazatlán.

Such strategic speculation was of little worth, however, when Varney Speed Lines (Southwestern Division), with its base at Denver, began service between Denver and El Paso on July 15, 1934. Mueller had judged that, even without the mail contract north of Pueblo, a single-plane service from the Colorado capital was essential to attract passenger traffic. The fact that the first segment of the mail route south of Denver was allocated to another airline was a quaint survival of the old system. Wyoming Air Service won the contract on a Cheyenne-Pueblo route, with the important city of Denver only an en route stop; and it took a few years to straighten up this awkward arrangement.



The little Lockheed Vega kicks up the dust on the gravel runway at Sante Fe, New Mexico.



Varney operated from modest ground facilities. This was the airport at Pueblo in 1935.

July 15, 1934

VARNEY SPEED LINES, INC.
(Southwestern Division)

ROUTE - BULLETIN
and
GENERAL INFORMATION

Covering the
NEW AND FASTER AIR SERVICE
between
DENVER and EL PASO

Daily Schedules
(Mountain Time)

7:20 A.M. De.	Denver	Ar.	1:00 P.M.
8:20 A.M. De.	Denver	Ar.	2:10 P.M.
10:00 A.M. De.	San Yago	Ar.	12:30 P.M.
11:30 A.M. De.	San Yago	Ar.	1:00 P.M.
11:00 A.M. Ar.	Albuquerque	De.	11:00 A.M.
11:10 A.M. De.	Albuquerque	Ar.	11:15 A.M.
12:30 P.M. Ar.	El Paso	De.	9:40 A.M.

Connections at Denver for Cheyenne and all points
SALT, WFO, and BOSTON.

Connections at EL PASO for MEXICO and all points
SAN ANTONIO, and BOSTON.

Short schedules subject to change without notice.

Carrying PASSENGERS and AIR MAIL under U.S. Government contract,
the Lockheed Vega transport flies at 150 miles per hour, offering
the travelling public the fastest air transportation ever
experienced in this territory. All planes are radio equipped
for regular weather reports. Capacity - five passengers.

July 15, 1934

VARNEY SPEED LINES, INC.
(Southwestern Division)
Denver (headquarters) Airport
1401 W. 10TH ST.
Airtel EL PASO, (Vice President) - In charge
of Operations.

July 15, 1934

VARNER SPEED LINES, INC.
(Southwestern Division) - Cont'd

CLASSIFICATION of Route Trip	FARES				
	Albuquerque	Denver	El Paso	San Yago	Pueblo
Round Trip					
Albuquerque	56.35	27.97	15.70	56.35	8.35
Denver	37.64	22.52	11.35	37.64	48.85
El Paso	17.78	45.40	47.56	76.32	47.32
San Yago	8.70	32.92	33.40	38.66	7.34
Pueblo	25.64	41.40	15.58	26.60	26.60
San Yago	4.64	27.00	23.40	4.08	31.00

See Key Pages below diagonal line - Round Trip Fares above

GENERAL INFORMATION

AIR MAIL - Carried on between Pueblo and El Paso. Rate 4¢ per ounce.
Baggage - 20¢ free of charge. Excess 2¢ of 1¢ of free. Volume charge 25¢.
Baggage weighing in excess of 50 lb must be arranged for in advance.
CHILDREN - 2 yrs. old carried in same fare.
UNDECK PASSENGERS - No airport available at all intermediate passenger stops.
PASSENGER - Reservation by Passenger - Passenger reserves the right to cancel bookings before departure of an aircraft at any time with notice as deemed advisable and necessary. In all cases the passenger's air reserve shall be the property of Varney Speed Lines.
PASSENGER - Reservation by Passenger - To secure refund, ticket must be surrendered at operating office or authorized agent at least 720 hours before scheduled departure.
REFUND - Made at CALL OFFICE of OPERATOR at DENVER, COLO.
RESERVATIONS - All seats reserved. Reservations also may open payment of fare.
RETURN CHECK - Made at the destination. Return limit 60 days.
STOP OVERS - Allowed for 25 days at any point on the route.
TICKET FARE - All published schedules show the times at which planes may be expected to arrive or depart, but their arrival and departure at the time stated is not guaranteed. The Company is not responsible for missed connections.
NOTES - We LOCAL PASSENGERS CANNOT BE SEEN THROUGH AND RETURN

Exhibit A. Varney Speed Lines timetable, July 15, 1934.

The first Varney air route was thus Denver-Pueblo-Las Vegas (New Mexico)-Santa Fe-Albuquerque-El Paso, carrying passengers, mail, and express, but restricted to passengers and express only between Denver and Pueblo. The aircraft selected for this operation was the Lockheed Vega, capable of carrying six passengers; but with space allocated for mail, each of the four Varney planes had only four seats. The aircraft were by no means the largest available, but they were matched to the meager demand. At least, taking some liberties with the exact truth (T.W.A. had just introduced the Douglas DC-2) the Lockheeds were advertised as "America's Fastest."

The Vegas were almost the last of a generation of single-engine aircraft which could be reasonably used as airliners during the formative years of air transport in the U.S. But "reasonably" is an inexact term. Today's jet passengers would not take too kindly to being served a box lunch (from the cockpit) in a cardboard box, while squeezed not too comfortably into the narrow cabin of the Vega. Nor would today's crews be too happy over the idea of having to wear fur-lined jackets to keep warm or of having to plug cracks in the cockpit with chewing gum to keep out the drafts.

In terms of mail traffic, which in 1934 was essential for survival because it accounted for a substantial percentage of the total revenue, Varney was reputed to be a past master in devising ways of augmenting the revenue. In the former days of Varney Air Lines, under the terms of the old Kelly Act, when mail payments were made according to the weight carried, Varney staff were reported to have been sending carefully wrapped bricks

to each other along the Elko-Pasco route. Now, on the Pueblo-El Paso route, Varney promoted the air mail by designing special Christmas cards which were calculated to augment the mail receipts.

On September 1, 1934, Varney Speed Lines moved its base from Denver to El Paso, and effective September 20, curtailed the northern terminus of the line to Pueblo, with Wyoming Air Service providing an immediate connection to Denver via Colorado Springs. No doubt this move was precipitated by the sluggish passenger response. Only nine people were carried during the first two weeks, and competition from both the Wyoming Air Service and the Santa Fe Railroad eliminated the need for a third carrier. At this time, a minor change appears to have been made to the airline title, "Southwestern" becoming "Southwest." Also, the slogan "The Trail of the Conquistadores," accompanied by an attractive insignia reflecting the theme, was adopted. Diminutive Varney Speed Lines may not have received a very large crumb from the postmaster general's table; but it certainly tried to make the best out of the offering.


Varney Air Transport

Towards the end of 1934, Walter Varney spent most of his time organizing, promoting, and trying to preserve *Lineas Aereas Occidentales (L.A.O.)* which was the name under which his California-Mexico City route was operated, using the faster Lockheed Orions, developed from the Vega. He was soon to terminate the service, as has been described earlier in this chapter, but he fought



Communications in the early days left something to be desired, as shown by the station interior at Pueblo.


EFFECTIVE SEPTEMBER 20, 1934



Varney

Speed Lines

(SOUTHWEST DIVISION)



THE TRAIL OF THE
CONQUISTADORES

EL PASO

ALBUQUERQUE

SANTA FE

LAS VEGAS

PUEBLO


DIRECT CONNECTION AT PUEBLO VIA
WYOMING AIR SERVICE TO AND FROM

COLORADO SPRINGS


and

DENVER

CORRECTED TO OCTOBER 1, 1935



Varney



THE TRAIL OF THE
CONQUISTADORES

EL PASO

ALBUQUERQUE

SANTA FE

LAS VEGAS

TRINIDAD

PUEBLO

DIRECT CONNECTION AT PUEBLO VIA
WYOMING AIR SERVICE TO AND FROM

COLORADO SPRINGS

and

DENVER

Exhibit B. Timetables showing name change from Varney Speed Lines to Varney Air Transport.

hard in a battle that he must have felt that he had some chance in winning. In any event, he appeared to lose interest in the Southwest Division of Varney Speed Lines, and on December 17, 1934, it was reorganized under the modified name Varney Air Transport, Inc., under the sole direction of Louis Mueller.

During the next two years progress was hardly spectacular. Trinidad, Colorado, was added as a stop early in 1935, as was Raton, New Mexico, in 1936; but these changes were noteworthy only in the eyes of those local communities, and certainly not calculated to augment the impact of Varney Air Transport on the commercial aviation scene of the United States as a whole.

More important was the realization that, however neat they may have looked on the map, routes from north to south in the more sparsely populated areas of the U.S., such as the Rocky Mountains, were not likely to generate much traffic. Accordingly, in defiance of possible satirical comment, Varney's promotion during 1935 included references to a "9 hr. 50 m. Denver-Los

Angeles" service, in which the passenger was invited to sample the amenities offered by Wyoming Air Service, Varney Air Transport, and T.W.A. Varney supplied only the route segment between Pueblo and Albuquerque, whence T.W.A. took over with its Douglas DC-2s, to offer a scenic ride via the south rim of the Grand Canyon. Varney offered a similar promotion between Denver and Dallas, via El Paso, in cooperation with American Airlines, but the scenic promotion in this case was somewhat muted.

While such efforts displayed a sensible desire to expand the route system in the direction of major markets and to try to obtain some of the east-west traffic volumes which predominated, the only real change to the route structure during the Varney period was made on May 14, 1937. On this date, Wyoming Air Service sold its air mail contract and terminated its operations between Cheyenne and Pueblo, via the important junction point of Denver. United Air Lines purchased the Cheyenne-Denver portion, and Varney picked up the

southern section. Through service was thus reinstated from Denver to El Paso, Colorado Springs was added to the system, while Trinidad and Las Vegas were omitted.

Transcending such events, however, was an important change in both the management and the financial structure. On July 5, 1936, Robert F. Six had purchased a minority interest in Varney Air Transport. He paid Mueller \$90,000 for a 40 percent shareholding and also

gave him a promissory note for \$20,000 as a personal bonus. Mueller's judgment of the intrinsic worth of his property seems to have been as acute in 1936 as it had been in 1930, when he had pushed up United's offer for Varney Air Lines. Neither he nor Robert Six were to regret the bargain that had been struck; though in his later years, Walter T. Varney may have had some misgivings as to whether or not he had backed the wrong horse.



This was the new Lockheed Vega paint scheme when the company name changed to Varney Air Transport.



2

Birth of the Name

1937-1941

Robert Six

From the time Robert Six joined Varney Air Transport, there was little doubt as to who was thereafter going to be the driving force in the airline. His strong personality was to dominate Continental Air Lines — as Varney was soon to become — for more than four decades. Six's reign lasted 46 years, and for the majority of that time, every major decision and most of the minor decisions were taken by him. There were periods when some members of the staff almost had to ask his permission to sharpen a pencil.

His impact on Varney Air Transport in the early years is epitomized in the last two paragraphs of the first chapter. The two events, Six's arrival in July 1936 and the acquisition of a good portion of the Wyoming Air Service's route network in May 1937, were interrelated. The purchase was made on Six's initiative, for although he was theoretically hired by Mueller as an employee, his 40 percent share gave him the equivalent of executive vice-presidential status, and he quickly exercised his authority, which was confirmed on June 1, 1937. Indeed, he carried more than authority. He had, in his younger days, a persuasive charm which was not marred, as in later years, by a tendency to ride rough-shod over many of his

own staff and to acquire a reputation for a quick temper and an abrasive tongue.

Robert Forman Six was born on June 25, 1907, of rich parents who traced their ancestry back to Holland, and who owned a fair-sized collection of original Rembrandts. By the time he was 20, he had left school, left home, and left the country, spending two years at sea as an ordinary seaman. By 1927, he was working as a bill collector for the Pacific Gas and Electric Company. In 1928, he took flying lessons — no doubt one of the millions fired with aviation enthusiasm by Charles Lindbergh's epic Atlantic flight in 1927 — and departed from P.G. & E. when it was discovered that the flying lessons were done on the firm's time. In 1929, he received his pilot's certificate, purchased a Travelair biplane, and started the Valley Flying Service, offering charter flights and joy rides in the vicinity of San Francisco.

He tried to improve his qualifications by attending the Boeing flying school, with hopes of becoming an airline pilot with Boeing Air Transport; but this led to his being asked to leave because he persuaded the students in Boeing's mechanics' school to work at night on the Valley Air Service's Travelair. He was advised to seek another career when he reapplied to join the Boeing school, with a record of crash-landings in the Travelair behind him. He then went to sea again, this time as a passenger to



Robert F. Six joined Varney Air Transport in 1936 and quickly took control. This portrait was taken in 1951.

China, where he managed to persuade the China National Air Corporation (C.N.A.C.), a Pan American associate company, to allow him to fly some of their planes on test flights.

Returning to the States in 1932, and after another year in Europe, Six then worked as a delivery truck driver for the San Francisco Chronicle, a most unlikely apprenticeship for a future airline president. At this time, a big man in the physical sense — he was six feet, four inches tall — he was still drifting, and in the lower levels of the

social structure at that. But he still retained a semblance of respectability, and led a kind of double life, alternately delivering newspapers and attending smart dinners. Curiously, Six was in San Francisco at the same time as Walter T. Varney, who later gave his name to the airline which Six purchased, but who at that time was well established in the business in California (see Chapter 1).

Through his society connections, he was introduced, early in 1936, to Thomas F. Ryan III, who had just acquired control of Hanford Airlines. Tommy Ryan introduced him to influential friends, and this was to lead to Six's approach to Louis Mueller, having, almost in passing, gotten to know Jack Frye, president of T.W.A., and Robert E. Gross, a senior executive and future president of Lockheed Aircraft. By the time Robert Six girded his loins in El Paso, Texas, after a few months settling in to assess the potential of Varney Air Transport, he was already moving in the right airline circles.

Varney becomes Continental

Shortly after the deal with Wyoming Air Service which brought Varney Air Transport to Denver, the U.S. government passed a law which required all scheduled airlines to operate twin-engined aircraft, which also had to be equipped with two-way air-to-ground radio. This requirement was in line with the growing momentum of air transport during the mid-1930s, when the United States assumed world leadership, by a substantial margin, in the airline business. Concurrently with this ascendancy was its dominance in the manufacture of the finest airliners in the world, easily outstripping in technology the best that Europe could offer. Most of the airlines operating in the U.S. were equipped either with Douglas DC-2s, which went into service first with T.W.A. in 1934, or with the larger DC-3s, with which American Airlines gained the edge over T.W.A. in 1936. United was rapidly reequipping with the Douglas type after an interim period during which it had launched the world's first modern



The Lockheed 12-A was selected in 1937 as Varney Air Transport's first twin-engined airliner, shown here at El Paso.



The Lockheed 14 succeeded the Lockheed 12 in 1939. This picture, with Ralph Carr, governor of Colorado, and O.R. "Ted" Haueter, Continental's vice president of operations, shows the old "Indian Head" insignia.

airliner, the Boeing 247, in 1933, but had fallen victim to a misguided policy in which the manufacturers, then part of the same United Aircraft Corporation as United, had tried to corner the market for its own associate. The technical race which followed accelerated the development of stressed-skin, retractable-geared, aerodynamically clean metal airliners, to the extent that airlines which did not possess them were in a different, and lower, category from the industry leaders.

Varney Air Transport, along with others such as Hanford, Northwest, National, Boston-Maine, Wyoming, and National Parks, was clearly in the lower category, and the airline had little alternative but to acquire twin-engine aircraft and the radio to go with them, or go out of business. Crisis point had been reached. By the summer of 1937, Varney's fleet was reduced to one Lockheed Vega, two having crashed between 1935 and 1937 at El Paso, and two at Rattlesnake Butte, Walsenburg, Colorado. Six moved with alacrity. He and Mueller mortgaged their homes as security to put together the necessary cash for the down payment of \$5,000 on each of three Lockheed Model 12 twin-engine airliners. Each of these "Baby Electras" cost \$39,500 and, with a capacity for eight passengers, could fly at 213 m.p.h. Meanwhile, a second Vega was leased from Hanford Airlines to back up the Continental fleet of one airplane.

While not as large as the DC-2s or DC-3s, the Lockheed 12 was ideal for the relatively thin traffic between Denver and El Paso, the only route that Varney had, with little prospect as yet for acquiring any others. At least the plane was a good performer, flying about 35 m.p.h. faster than the Douglasses and Boeing 247s. As for the two-way air-to-ground radio equipment, Six was able to borrow this through his friendship with Bill Patterson, head of

United. The trunk airline supplied Six and Mueller with what they needed, on indefinite loan, the only collateral being an implied agreement to feed each other with connecting traffic.

With a certain amount of flair, Varney Air Transport introduced the Lockheed 12s on July 1, 1937. Simultaneously, Six changed the name of the airline to Continental Air Lines, and replaced the Conquistador image with the slogan "Fly the Old Santa Fe Trail." Continuing a tradition set two years previously, the newly-named airline promoted itself with pardonable exaggeration, advertising again the fastest and most scenic route from Denver to Los Angeles, together with similar inducements to fly from El Paso to all places in the eastern United States. Continental's modest contribution to this impressive service was almost hidden in the fine print.

On October 31, 1937, Six moved the headquarters of Continental Air Lines to Denver, and on February 3, 1938 he was elected president of the airline, a position which he had held in all but name since only a few months after joining the company in 1936. Six was only the 16th employee, a strong indication that Continental was still a very small link in the complex air transport web covering the United States.

During the first two years of his presidency, Six must have been a little frustrated by the limitations imposed by the rigid system under which airlines could — or to be more apt — could not expand their route systems. Unable to do anything to modify the air mail contract which designated the precise points to be served, no more, no less, as Route 29, Continental Air Lines was obliged to concentrate on improvements to the quality of its service offered to a rather restricted public.

Accordingly, on February 15, 1938, a modest increase

was made to the frequency offered between Denver and Albuquerque, over which segment there was apparently a slightly healthier demand for seats. At the same time, in an effort to promote the idea of family travel, rather than to perpetuate the convention that flying in the United States was only for businessmen, film stars, or playboys, Continental offered to carry wives free of charge during an experimental period. The timetable, meanwhile, acquired a new look by the promotion of a traditional Rocky Mountain image through the adoption of an American Pueblo Indian head as an insignia.

New Regulations, New Aircraft, New Routes

The most important aeronautical event during 1938 was the passing of the Civil Aeronautics Act, signed by President Roosevelt on June 23. Vigorously promoted by Senator McCarran and Congressman Clarence Lea, the bill, which was known by their joint names, created an independent agency to be responsible for commercial aviation. The airlines would now have their own specialized agency in Washington, able to develop procedures and regulations which specifically applied to air transport, rather than to transport generally. Most important, this Civil Aviation Authority (C.A.A.) was empowered to issue permanent route certificates, and for the first time, the post office, with its financial influence through the mail payments, took a secondary role.

All this followed a period of three years, from 1935 to 1938, during which the politicians argued out the policy to be taken in commercial aviation. At first President Roosevelt favored the idea of the airlines coming under the control of the Interstate Commerce Commission,

but he was gradually won over to the idea of a separate agency. Until the whole policy was thrashed out and decisions made, very few changes were made to the basic airline route patterns. The airlines meanwhile concentrated on improving their fleets and gradually learning their new trade.

The new route certificates, which became known as Grandfather Rights, became effective on August 22, 1938. With very few exceptions, they preserved the status quo, ensuring only that full public service had been offered by the candidate airlines — the qualifying period was six months — over the routes applied for, and that proper standards were being maintained. Continental's was signed on July 11, 1938, and made effective on November 20. In anticipation of opportunities ahead, Bob Six arranged Continental's first public financing, through a stock offering with Lehman Brothers, amounting to a \$280,000 injection into the airline's bank balance.

Six's actions, though often unexpected, were methodical. He wanted new routes. To operate new routes, he would require new aircraft. And to buy new aircraft, he would need fresh capital. Hence the new stock offering. The Civil Aviation Authority had made it clear that it would scrutinize every route application very carefully, demanding that the applicant should be "fit, willing, and able" to operate the route requested. This implied that the necessary aircraft must be available, together with adequate maintenance and operating facilities to back them up.

Bob Six and Continental Air Lines must have made a good impression on all counts. One of the few routes, indeed the only route not taken up with the Grandfather Rights awards, was that from Pueblo to Wichita, via Garden City, Kansas. The winning bid apparently had failed to meet the C.A.A.'s criteria, and Six jumped at the opportunity to provide a service whose direction was east-west, rather than north-south. True, it linked, at best, cities which could be described only as secondary — Denver-Kansas City would have been preferable — but the rules of the game in those days gave incumbent carriers almost an inalienable right to monopoly or near-monopoly authority. And all the best routes were spoken for.

Nevertheless, on July 5, 1939, after a year's litigation (suggesting at an early stage that the bureaucratic process of checks and balances could sometimes be agonizingly slow), Bob Six started his new route, designated A.M. 43 under the new system. 'Twas a small thing but his own.

Using the new funds, Continental bought two Lockheed 14 "Super-Electras," equipped with 10 seats, and put them on the Denver-El Paso route towards the end of 1939, thus releasing the Lockheed 12s for the new Pueblo-Wichita route which had been inaugurated with the last of the Lockheed Vegas. A single Lockheed 10E Electra had also been leased temporarily on May 5, 1939.

The year 1940 was quite eventful, by comparison with the relative stagnation of the previous few years, before the Wichita award. On May 14, a new service was added on an alternate route between Albuquerque and El Paso, serving the cities of Roswell, Hobbs, and Carlsbad, all in New Mexico, the last being the site of the famous Caverns and a tourist attraction of considerable note. In August, three 16-seat Lockheed Lodestars were pur-



Oscar R. "Ted" Haueter, was responsible for Continental's operations from 1938 until 1968.



By 1939, Continental's public image had improved. This picture shows the Denver ticket office at 734 17th Street.

chased, and the Lockheed 12s sold. Though the Lockheed twin-engined airliners were not as large as their Douglas twin-engined counterparts, they were all faster, and though Continental was still as yet only a small airline, it was already demonstrating a certain élan and zest for life.

Minor changes were made to the route pattern. Late in 1940, Las Vegas (N.M.) was reintroduced as a stopping point between Santa Fe and Pueblo; and La Junta, Colorado, added on the new route to Wichita. Early in 1941, Hutchinson, Kansas, was also added to the latter segment, but Trinidad and Dodge City had to await Continental service until their small grass airstrips were improved sufficiently to accommodate the Lockheed twin-engined types. For the financial year ended on June 30, 1941, Continental carried 17,232 passengers, who provided \$218,000 in revenue. Emphasizing the airline's dependence on indirect subsidy, this was less than half of the \$491,000 earned from mail payments.

By this time, Bob Six had made some drastic management changes, realizing that some of the early Varney staff were not growing in stature and ability in parallel with Continental Air Lines. Soon after he had become president of the airline in 1938, he had hired Oscar R. Haueter (always known as Ted) from T.W.A. to become his flight operations vice president. Haueter was small in stature — rather like Louis Mueller — but was large enough to stand up to Six, for all the latter's six foot-four. Haueter's ability to match Six's bluster was responsible for keeping Continental's flying routines on an even keel and up to standard — which was, in fact, the reason why Six valued his presence.

Another key executive was Stan Shatto, hired early in 1941 from Braniff Airways, to become chief of maintenance. He came on board in April, just before the new Continental maintenance hangar was built at Denver, and was in time to supervise the orderly introduction of the fleet of Lodestars. Shatto used his experience to persuade Six to standardize on this aircraft, to simplify stores and maintenance procedures, and thus save costs. Accordingly, steps were taken to dispose of the Lockheed 14s.

Although Continental Air Lines' development during this period immediately preceding the entry of the United States into World War II was not spectacular, it was following a steady course. Based on Shatto's recommendations, and armed with additional finance, Six ordered six more Lodestars. The funds came partly from a second round of public financing, through Lehman Brothers, in March 1941, worth \$170,000; and partly from a larger sum of \$425,000 borrowed from the Chase Manhattan Bank. The money was used mainly to purchase the Lodestar fleet, but also for other purposes such as improving ground facilities.

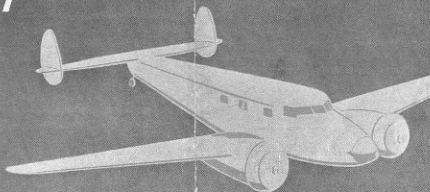
Still seeking the ideal image with which to market his airline, which for all its imposing title still served only three western states, Bob Six changed the insignia yet again. On April 27, 1941, he adopted a new, modern "Thunderbird" design, which quickly replaced the old Indian head on planes, literature, and other promotional material. This latest choice was registered at the U.S. patent office as a "Service Mark," and was probably among the first to be given such official recognition.

Perhaps the most important event in 1941, however, bearing in mind Continental's desperate need to break out of a geographical area which, in the foreseeable future, was unlikely to experience a traffic boom, was a route award by the Civil Aeronautics Board. On June 21, it authorized an extension of the Pueblo-Wichita route to the city of Tulsa, recognized as the nation's oil capital, and the location of the kind of wealth and travel potential needed to augment the Continental Lodestars' average loads.

The Tulsa service did not begin until December 15, by which time Pearl Harbor had come to symbolize more than just another U.S. naval base. Six and Continental must have known that aspirations for greater expansion would have to wait, in the face of the exigencies of war. And it was ironical that the airline's first stewardesses should have started flying the line on Christmas Day, 1941, with full hostess service on all routes starting on January 5, 1942. For by this time the United States was at war, and stewardess service could justifiably be regarded as an unnecessary luxury.

*Fly The Old
Santa Fé Trail*

**CONTINENTAL
AIR LINES**



DENVER • EL PASO
ALBUQUERQUE
SANTA FE • PUEBLO
COLORADO SPRINGS

**AIR TICKETS
AND
RESERVATIONS**
ON ALL AIRLINES

AIRLINES TICKET AGENCY
OF E. K. SMITH, Inc. — 42 E. 47th ST.
ELdorado 5-2300

Effective July 1, 1937

Exhibit C. First Continental timetable.

**CONTINENTAL
AIR LINES**

August 1, 1938

**CONTINENTAL
AIR LINES**

July 1, 1940

AMERICA'S FASTEST

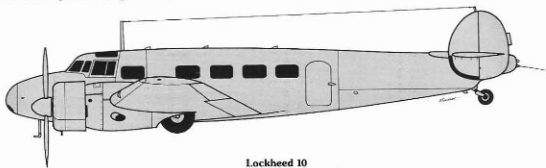
**CONTINENTAL
AIR LINES**

APRIL 27, 1941

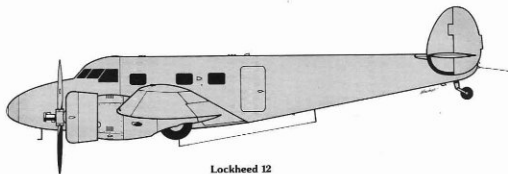
AMERICA'S FASTEST

Exhibit D. Timetables showing progression of Continental logo.

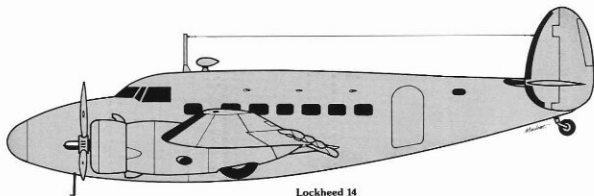
The Lockheed Family of Airplanes



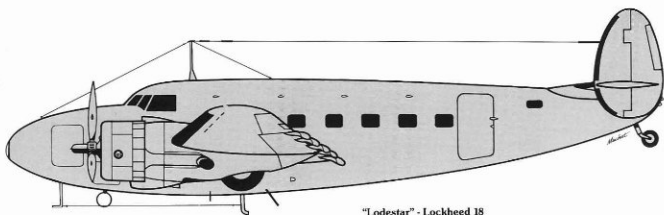
Lockheed 10



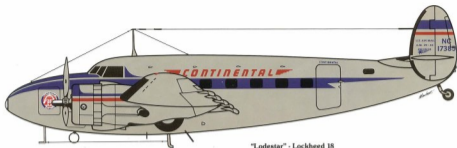
Lockheed 12



Lockheed 14



"Lodestar" - Lockheed 18



"Lodestar" - Lockheed 18

3

Wartime Activity 1941-1945

An Industry Mobilized for War

When the Japanese attacked Pearl Harbor on December 7, 1941, the United States found itself in a global war in which the two main theaters of combat were thousands of miles from its shores; on the one hand in Europe, across three thousand miles of Atlantic Ocean, on the other across twice that distance in the western Pacific. Fortunately for the armed forces, now desperately in need of a massive logistics arm, the Air Transport Association (A.T.A.), representing the airlines, had foreseen the possible crisis, and had laid down long range plans to harness the strength of the air transport industry in an emergency.

The ultimate commitment, though fortunately not proceeded with, would have demanded the termination of all airline service, with the entire fleets mobilized as a transport division of the Air Force. Some of the airlines may have feared this might happen, as their fleets were considerably depleted; but without exception, every airline managed to keep at least some of its commercial services going, albeit with shoestring fleets and over-reduced networks.

With its vast experience in overseas flying, Pan American undertook tremendous assignments, not only in providing long-range aircraft capacity across the world's

oceans, but also in building airfields throughout Africa and in Latin America. One of its greatest achievements was to set up a subsidiary, Pan American Air Ferries, Inc. on July 24, 1941. It had inaugurated scheduled service to East Africa by October, and to the Persian Gulf three weeks before Pearl Harbor.

While Pan American's wartime achievements were the best known because they were the most widespread, other airlines contributed in no small measure. TWA, with its new fleet of pressurized Boeing 307 Stratoliners, joined Pan Am on the North Atlantic; United and Northwest, introducing the new four-engine C-54s, blanketed the Pacific with supply routes, with the former specializing in the southern hemisphere and the latter in the far north, including the Aleutians. Eastern became an Atlantic operator, ferrying Curtiss C-46s across to Africa via the southern route from the northeast tip of Brazil; while Western joined Northwest in creating a logistics air bridge between Alaska and the Lower 48.

Through a combination of geographical misfortune and lack of corporate strength or fleet size, many U.S. airlines, mainly those at the secondary level such as Continental, were in practice unable to make direct contributions to the war effort in the same way that the giants such as Pan Am and TWA were able to do. A notable exception was Northeast Airlines, which won its spurs

by some remarkable work on the northeast fringes of the North American land mass. Although, like Continental, only a tiny airline by comparison with the Uniteds and Americans, Northeast no doubt staked its claim for wartime logistics honors by its operating experience in and proximity to vital airfields on the trans-Atlantic supply route, including Maine and Canada.

Continental was not so blessed. It was still a local service airline, located in the center of the country, with little to contribute either in aircraft fleet or flying experience where these were needed. By today's standards, it was only of commuter stature. Indeed, many of the airlines in that category today fly more services over more routes yet do not even qualify as regionals. Nevertheless, in 1942-1945 Continental played its part honorably and contributed more than its fair share of experience and assets to the war effort.

On February 16, 1942, the Army Air Forces Materiel Command called on Continental to modify 49 B-17 Flying Fortresses at Denver. Such modification programs were common practice during World War II, as manufacturers were unable to keep up with a steady stream of alterations, improvements, and equipment substitutions demanded by the military. To have tried to incorporate these modifications, requests for which arrived at the plants almost daily, into an accelerating production line, much less install them retroactively, would at best have been counterproductive and at worst would have produced chaos. Thus, aircraft were completed to the original specifications, and the many modifications were dealt with by a series of subcontracts. The airlines, which

were already familiar with the process, and possibly more experienced in handling large aircraft than the Army itself, were ideal to undertake the responsibility.

At first, Continental performed its tasks in an adjacent United Air Lines hangar at Denver; but by October 1, 1943, its own designated Denver Modification Center was completed. Under the direction of Stan Shatto, more than 1000 B-17s were modified there, no doubt justifying the outlay of \$5,000,000 to erect the twin 600 x 400-foot hangars. On one occasion, the Continental team was assigned to the task of improvising the installation of long-range tanks in the bombers, whose mission was later discerned to be participation in the Battle of Midway.

Subsequently, in February 1944, the Modification Center took on Boeing B-29 Super-Fortress work, converting standard aircraft into photo-reconnaissance planes. Commendable though the wartime efforts were, however, things did not always run smoothly. Not long after the B-29 contract began, labor relations became so bad that production rates were affected and a strike was threatened.

A Crisis of Leadership

Opportunity knocked at Six's door; although perhaps a fairer assessment would be to state that an opportunity occurred and Six grasped it with both hands. In September 1942, Six had joined the Army Air Transport Command. Other than C. R. Smith of American Airlines, who had been called to the colors in April of that year to take over Ferrying Command, Six was the only



The interior of the Lockheed Lodestar.



In August 1940, the Lockheed Lodestar was introduced to replace the older Lockheed aircraft.

airline president to wear uniform in World War II. He did some flying, but most of his work was in administration and logistics planning, including the selection of a site for an airfield which was to become Travis Air Force Base. He also organized the shrewd scheduling of aircraft being ferried to Africa via the Caribbean and the northeast coast of South America.

Six's health deteriorated just about the time the Denver Modification Center was having its labor pains, and thanks to the intervention of Continental's Flight Operations V.P. Ted Haueter, General "Hap" Arnold sent Six on a thirty-day leave to Denver to straighten things out. He accomplished this successfully, having to use his Air Force authority to overrule some of the former orders laid down by Shatto and the acting president, Terry Drinkwater.

Drinkwater's career with Continental lasted six years. He joined the airline in 1938 as its legal expert, and quickly learned all the fundamentals of airline administration, to the extent that Six began to rely on his advice on many other vital matters. When Six joined the army, he called upon Drinkwater to run the airline in his absence, against the wishes of some of his old colleagues. But in fact Drinkwater performed in his role of executive vice president well enough that, by the time Six came marching home after being discharged from the Air Force on June 11, 1944, he was confronted with a "palace revolt."

Drinkwater felt that his performance in running Continental during a very difficult time entitled him to a more permanent slot at the highest level of the company administration, and campaigned to share the running of the airline with Six, who, according to the plan, would have been the chairman, with Drinkwater as president. But Bob Six saw this as a humiliating demotion for Louis Mueller, with whom in the early days he had saved Continental from a rapid demise by their faith and their investment, risking personal fortunes and property to keep the company alive. He would have none of it. The ranks divided, and within weeks, Drinkwater resigned to join American Airlines as a vice president. Stan Shatto was to join Drinkwater three years later, at Western Air Lines.

Undoubtedly, Drinkwater was entitled to feel the need for recognition, having preserved and strengthened an airline for Six to come back to, and it was unfortunate that the old adage about two being company and three a crowd was only too apt in this case. The new acting president took over in September 1942, only a few months after Continental had been directed on June 1, 1942, to surrender half of its modest fleet of Lodestars for the use of Ferry Command. This came only a few weeks after the C.A.B. had increased Continental's mail rate from 38¢ to 48.5¢ per mile. This combination, although



Stan Shatto and Ted Haueter say goodbye to the Lodestar on December 5, 1945.

fortuitous (as the decisions sprang from different government agencies) seemed cynical enough. But Drinkwater and his wartime staff must have felt even more frustrated when, on December 11 of the same year, the C.A.B. awarded Continental a route from Denver to Kansas City, when it was already desperately short of planes to service its existing routes.

Quite obviously, the airline was unable to inaugurate service. In fact, there was a provision in the certificate that service could not be started until the Army and the C.A.B. agreed that there were no objections on the grounds of national defense. With a fleet of only three Lodestars and one hastily-equipped ancient Stinson as a stopgap reinforcement to carry the mail, to operate Continental's existing system became a daily triumph over adversity. On October 15, 1943, Air Transport Command did release one Lodestar, after 17 months of active service duty. Less than three months later, with one hand of the government blissfully unaware of what the other hand was doing, the C.A.B. awarded Continental a new route, from Hobbs, New Mexico, to San Antonio, Texas, on December 8.

Progress at Last

"All dressed up and nowhere to go" could well have been Continental Air Lines' slogan as it entered the New Year in 1944. But, coincidentally with great efforts being made in the Modification Center for the war effort, the next door neighbors, the operating side of the airline, under Drinkwater, began to make good progress. On March 1, 1944, it opened services on the Kansas City route, via Topeka (A.M. 60), with the Lodestars, and exactly two months later began to serve San Antonio from Hobbs, via the growing cities of Midland/Odessa, Big Spring, and San Angelo, including a direct single-plane flight between El Paso and San Antonio. Almost three years had passed since the route was first recommended by the C.A.B. Examiner on August 21, 1941.

At last, Continental Air Lines was beginning to tap some markets of substance. San Antonio was at least as important a traffic hub for southern Texas as Denver was for the Rocky Mountain area, while Kansas City was a large metropolis by comparison with any other city on the whole network. Further consolidation was to follow, when, in the summer of 1945, the C.A.B. awarded the link route from El Paso to Tulsa, via Wichita Falls, Lubbock and Oklahoma City, to add yet another fast-growing city of importance to the Continental map.

With a route system now set firmly astride the five southern midwestern states, Continental Air Lines could at last contemplate the acquisition of larger aircraft, to achieve equipment parity with most of the bigger airlines. On July 22, 1944, the first Douglas twin-engine type was received from the Army after it had announced that 21 military C-47s would be released, to be drawn for by lot, at the Douglas Santa Monica plant. Shatto's team converted and rejuvenated the C-47s into DC-3s in record time, and the first one went into service on December 22, exactly five months after delivery, and just in time for Christmas.

The DC-3s were certainly needed, if the statistics were any measure of Continental's prospects. For the financial



Terry Drinkwater took over the direction of Continental Airlines during World War II.

year ending June 30, 1944, 51,800 passengers were carried, compared with only 11,400 four years earlier. Mail carried annually had increased from 209,000 to 885,000 pounds during the same period. Far more significantly, for the first time in Continental's history, passenger revenue, at \$846,000, exceeded mail revenue, at \$687,000.

Although the C.A.B. had had a change of heart on the mail rate, halving it to 24.8¢ per mile, the prospects for Continental to earn its keep, without disproportionate dependence on the mail, were now good. The priority reservation system, introduced as a wartime measure, was eliminated on October 15, 1945. As more DC-3s were made available by Shatto's engineers for Haueter's operations, service frequencies were increased, and full advantage was taken of the variations permitted under the route certificates (for example, a nonstop Denver-Kansas City flight, and one via Topeka, opened on July 1, 1945). With eleven DC-3s to service a route pattern three times the length of the prewar network, the last Lockheed Lodestar was retired. Continental Air Lines, headed by Robert F. Six, now more authoritarian than ever after his bitter experience with the "palace revolt," prepared to meet the challenges of the postwar era.



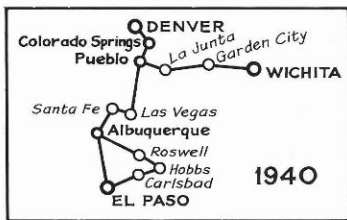
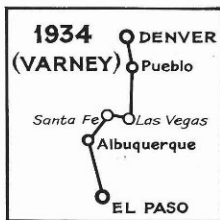
On October 1, 1943, the \$5,000,000 Modification Center was opened at Denver. Some of the B-17 Flying Fortresses that were modified are parked in front.



Line-up of B-29s at Continental's Denver Modification Center.



At the end of World War II, Continental was still very much a local service airline. Pictured are the station buildings at Hobbs, New Mexico.



Growth of Varney/Continental, 1934-1940. During the first decade of its existence, Continental was never more than a local service airline.



Continental Douglas DC-3

4

Post-War Frustration 1946-1950

Modest Route Changes

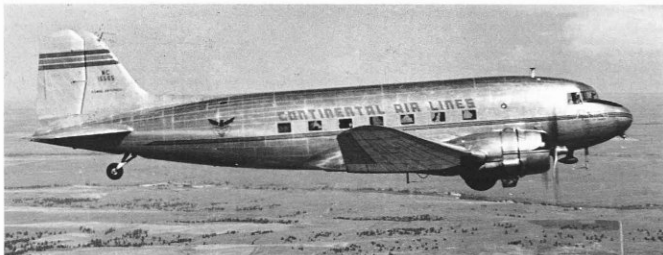
When, on March 5, 1946, Continental Air Lines began DC-3 service on the new Route 29 extension from Hobbs to Tulsa, with through service from El Paso to the latter city, it appeared that a new, expanding, route structure was developing. Oklahoma City, an important stop on this route, was also connected to Denver, by a direct through service, on July 16, 1946. Under the system of route applications which had become standard procedure under the C.A.B. administration, Bob Six, with reasonable cause for optimism, became party to a dozen route cases during the decade that followed.

During that entire period, however, the only new city of any consequence added directly to Continental's network was Houston, as a route extension from San Antonio. This was awarded on July 13, 1951, and promptly put into operation exactly two weeks later. A Tulsa-Kansas City service added on July 1, 1953, was a further logical rationalization of the route structure. True, Continental was later to embrace most of Texas through the 1955 merger with Pioneer Air Lines, but this was after the C.A.B. had refused, in the summer of 1949, to allow Continental to acquire the operating certificate of Parks Air Lines, an aspiring local service carrier. This was awarded to Ozark, at that time still being organized, and

not yet operating. The C.A.B. also turned down, on April 5, 1951, an attempt to purchase the ailing Midwest Airlines. This would have given Six access to a market in the northern midwestern states, including the important Minneapolis-St. Paul hub. Midwest did not survive for long. It ceased operations on May 16, 1952.

Other than the Houston extension, Continental had to be content with very meager fare from the C.A.B.'s table. The cities of Lawton and Fort Sill were added to the El Paso-Tulsa route on April 16, 1948; Socorro, Truth or Consequences (formerly Hot Springs), Los Cruces, and Raton were added to the Denver-El Paso route; and Manhattan, Kansas, was inserted as a stop on the Denver-Kansas City route on April 6, 1953. But such additions to the United States airline structure were hardly noticed beyond the immediate vicinity of the communities themselves. Indeed, their tenure as permanent points on a trunk airline network was precarious. All except Lawton, Fort Sill, and Raton were deleted on September 1, 1954, when Alamogordo Air Force Base — calculated to generate the special traffic which this important military center, with its key role in the nation's rocket experimental program — was substituted.

Altogether, therefore, Continental's was a small operation during the early postwar years. The combined total population of all the cities served was about 3,700,000,



The DC-3 was introduced on December 22, 1944, and was Continental's standard airliner during the early postwar years.

less than that of either Chicago or Los Angeles. By force of regulated circumstance rather than by choice, it was compelled to mark time, hoping for one of the prima donnas perhaps to falter.

During this period of frustration, Bob Six and his capable team of dedicated executives set about improving efficiency and profitability. Continental streamlined its procedures, and achieved technical parity with the larger airlines which continued to be favored by the C.A.B. in the matter of new route awards.

From DC-3 to Convair-Liner

Continental ended the year 1946 with a fleet of 14 DC-3s, (named Skystreamers as the result of an employee contest) of which one was held in reserve and was used for training. For the financial year ending on June 30, 1946, Continental carried 167,000 passengers, earning \$3,245,000 from that source. During the same period it carried 486 tons of mail, earning \$637,000, actually less than in three of the wartime years. Clearly Six's airline was no longer simply a mail carrier, carrying additional passenger accommodation only as a bonus source of revenue.

One other item in the statistics was no less significant. Just as for air express, a separate revenue item accounted for air freight, first carried by Continental on January 1,

1946. Without the pressure of competition, and the need to carry freight, it could theoretically have served its network with the trusty DC-3s. But because of the steady traffic growth, and even though the route system was stabilized, Continental was forced to upgrade its fleet.

Bob Six had to cut his coat according to the cloth. His flexibility of choice in new equipment was more limited than that of the giant airlines. The disparity of size in terms of route distances and route densities between the so-called Big Four and the smaller trunk airlines was immense. While United and American were putting four-engined DC-4s into service, and hastily preparing for 80-seat DC-6s and DC-6B's; and with TWA and Eastern setting a fast pace with Lockheed Constellations, Continental had to be content with augmenting its DC-3 fleet with pressurized twins. Four-engined equipment was out of the question.

Six and his team evaluated the new Martin 2-0-2 and the Convair 240, both 40-seat pressurized airliners of modern design, incorporating postwar technical advances such as nose-wheel gear and radar equipment. The choice was the Convair 240, of which five were ordered on August 17, 1946. Continental did not regret its decision as the Martin ran into structural problems and had to be redesigned, while the Convair-Liner was developed into several versions, to the extent that many are still flying today. It was easily the most successful postwar short-



This North American B-25, purchased in 1948, was used for training, research, and executive travel.

haul piston-engined airliner, becoming standard equipment as the successor to (but certainly not the complete replacement of) the DC-3 all over the world.

Some idea of the aforementioned disparity at this time between the size of Continental and the big trunk airlines can be deduced from the bare facts: Continental had five Convair 240s as its front-line fleet during the late 1940s, later substituting them with improved versions of the same basic type, but never owning more than seven. During the same period, American Airlines ordered — in one straight shot — 75 Convair 240s, as its second-line equipment.

Technical Excellence

And so Continental set about the task of making the best of what it had: a route network which would be regarded by the major carriers as a collection of mere feeder lines, with an aircraft fleet to match. But the small airline could not be faulted on performance, quality of service, or technical know-how. When the Convair 240 was introduced on December 15, 1948, almost four months had passed since the first aircraft was delivered on July 23. There was a good reason for this out-of-character delay.

The previous year, Robert Six had once again changed the airline image, adopting the slogan "The Blue Skyway" and adorning his aircraft appropriately as Skystreamers. The colorful promotion was backed up the following year by ensuring that Continental's CV 240s were the best in the business. The aircrew converted from DC-3s in a rigorous training schedule which recognized the special hazards of a route system which involved difficult terrain and weather. More importantly, when service began with the Convairs in December — hardly the ideal month for crews to acquire line-flying experience with a new aircraft fleet — Continental was able to claim that it was the first airline in the United States, if not the

world, to install radar equipment on every flight. For the passengers, the tricycle landing gear eliminated the uphill climb to the front seats when boarding the aircraft.

Consolidating upon this high standard of technical efficiency, on October 15, 1950, Continental became the first airline to be designated by the C.A.B. as utilizing VOR (variable omni-range) direction-finding equipment over its entire network.

The First Coach Fares

On July 15, 1949, Continental introduced Skycoach service, in an attempt to expand its passenger traffic by a promotional fare structure aimed to penetrate lower levels of the discretionary income pyramid. While the \$22.10 Denver-Kansas City fare was not the first coach fare to be offered in the U.S. — this honor went to another innovative airline, Capital — Six was among the first to recognize its potential and to make a bold experiment on an intercity route of some importance. At the same time, he was giving notice to the Big Four (including TWA, which regarded Kansas City as its home field, and United, which took the same view about Denver) that one of the lesser lights in the U.S. airline industry could glow just as brightly as the big ones.

While Continental was deservedly respected by its peers as a fine airline in spite of its junior stature, the technical and promotional flair was small consolation for the repeated rejections of attempts to expand. Ambitions to reach Chicago in the eastward direction, or California in the west had been thwarted by the C.A.B. during 1947-1948. Its efforts to grow by purchasing other airlines had equally been frustrated from the same all-powerful government agency. But the high technical performance, necessarily supported by superb maintenance standards, were to serve Continental well in the years to come when its persistence was finally rewarded and a chance to spread its wings occurred.



The pressurized Convair 240 enabled Continental to break out of the operational and marketing limitations of the DC-3. It went into service on December 15, 1948.



Convair 240

5

Breaking Out 1951-1954

A Changing Operating Environment

The postwar pattern of the United States airline network was reasonably integrated, providing the public with services throughout the country, both at first-line (trunk) and secondary (local service) levels. There were direct services between all the main cities, in almost every combination. There were at least two competitors on all the densest routes to ensure that some aspects of competition were maintained, particularly in the matter of service frequency and amenities.

But as in every well-laid scheme, there were exceptions to the general rule. Walter Brown's original grand plan of the early 1930s had been adhered to fairly closely, so that the transcontinental arteries and the main north-south links along the Atlantic and Pacific coasts, and along the Mississippi Valley, were still well served in the 1940s with frequent service, using first-line equipment. However, the C.A.B., which inherited Brown's plan, did not take into account the gradually changing population or subtle changes in the social structure. Certain areas of the United States, relatively sparsely populated in Brown's time, were now growing in importance and wealth. Thus the far northwest, with Seattle as its nucleus, and Texas, with Dallas-Fort Worth and Houston rapidly growing as large urban centers, were generating more business traf-

fic. Florida was booming as a vacation and retirement area. These and other regions created new problems for the airlines, because the rigidly-worded C.A.B. route certificates did not permit the flexibility to change quickly enough within a changing nation.

As a rule, the intercity traffic demand thus neglected by the incumbent airlines usually wished to flow along geographically diagonal lines, from northwest to southeast, or from southwest to northeast. In the fullness of time — and in those days, the C.A.B.'s time was always full, leading to exasperating delays in improving service over routes for which the existing standards were clearly inadequate — new patterns emerged, with airlines gradually taking up the slack. But until, like God, the C.A.B. worked its wonders in mysterious ways, the airlines themselves displayed some ingenuity in solving the problem by a little innovation, based on time-honored railroad practice. They introduced interchange services.

A Rose by Any Other Name

In a previous era, when the United States had spawned hundreds of railroads, large, medium, and small, the public had encountered many situations in which the geographical confines of a railroad's service pattern were a deterrent to convenient travel. The prime example of this was the absence of a single transconti-



Bob Six and Louis Mueller chat over old times in 1952.

mental railroad, so that a journey from New York to Los Angeles involved the use of at least two, and sometimes more companies. Often the change of trains was irritating, as the different railroads did not even use the same terminal at, for example, Chicago or St. Louis; but this was often overcome by the device of permitting running power by one company over the tracks of another. This allowed through train service, or at least through coaches, over many route combinations.

The airlines thus had a precedent on which to base possible plans for cooperation, in the knowledge also that they served the same airports in each city. And although there was no coordinated plan governing the whole industry, a system of interchange routes evolved between 1948 and 1955 which, in the main, proved to be of great benefit to the traveling public, because their need was apparent and real. Indeed, when they were gradually discontinued during the late 1950s and early 1960s, this was because the Civil Aeronautics Board finally made belated route awards to individual airlines to fly the identical routes.

Continental recognized its opportunity, situated as it was athwart the southern Midwest, and thus in a strategic position to make some mutually advantageous deals with other airlines which were seeking to fill some of the more obvious gaps in the C.A.B. route network. Fortunately, there was a glimmer of hope for Bob Six's long-standing ambition: to claim a portion of the east-west traffic across the U.S. In this he was aided by the growing wealth and economic strength of Texas. Service to that state by other airlines was good — provided the destination was Dallas, route hub of American, and Braniff's base. Equally, from Seattle, connections to the southern half of the U.S. were mainly via Minneapolis or Chicago, with United and Northwest in control. Accordingly, by a series of astute agreements, and with the approval of the Civil Aeronautics Board, Continental Air Lines suddenly broke out of the confines of the five southern midwestern states.

In the spring of 1951, Continental became party to a three-way agreement over an important segment of one of the great trunk routes that Walter Brown never dealt with satisfactorily in the early 1930s: the Southern Transcontinental. The city of Houston, mushrooming as a metropolis and one of the world's great oil centers, had risen considerably in importance since Brown's day; yet airline service was woefully inadequate. By linking up with American Airlines and Braniff, Continental was now able to participate in an attempt to rectify this shortcom-

ing. A new intercity trunk route emerged, from the great California cities of Los Angeles and San Francisco, via El Paso and San Antonio, to Houston. To American, solidly established as one of the three giant transcontinental airlines, this was a small addition to its existing strength; to Braniff, with its Latin American international routes and its domestic web throughout middle America, the increment was modest; but to Continental, hitherto little more than a local service carrier, it was like breaking out of a straightjacket.

Long Range Routes at Last

On February 8, 1951, the C.A.B. handed down its decision in the Southern Service to the West case, and a few months later, exploratory flights were made by the three airlines, whose initials were A-B-C, an abbreviation by which the interchange service was briefly known. American Airlines, which at first supplied the Douglas DC-6B four-engined aircraft, was responsible for the portion of the routes from California, serving San Francisco, Los Angeles, and San Diego, as well as Phoenix as an en route stop. East of El Paso, Continental took over on a nonstop segment to San Antonio. Braniff supplied the segment from San Antonio to Houston.

Braniff, however, became disenchanted with its minority share of the three-way agreement, and withdrew, even surrendering its certificated rights over the San Antonio-Houston route in favor of Continental. When the C.A.B. approved this action on July 13, 1951, and Continental opened service on July 26, on the El Paso-Houston route in its own right, as well as the American interchange, this was possibly the most important new route during its history thus far. Through service to Los Angeles began on that date, and to San Francisco on November 2, both given the title *Arrow*.

No less than twelve of the U.S. domestic trunk airlines participated in interchange routes. Continental was by no means the first (TWA and Delta joined hands on June 1, 1948). But only one other airline, Delta, was involved with more domestic interchange services than Continental, and no other airline evolved a framework in which the route mileage over the routes of its partners was as long as its own certificated mileage.

On February 1, 1952, Continental reached the Mississippi River, at St. Louis, through an interchange service with Mid-Continent Air Lines. But this was a hollow victory. Only a few months previously, on October 23, 1951, the C.A.B. had rejected what appeared to be a natural merger between the two airlines. The two route networks overlapped and could easily have been consolidated. Both airlines' DC-3s and Convair 240s could have been integrated with maximum efficiency. Continental would have been the surviving airline, and Six would have reached the two extreme ends of the Mississippi at Minneapolis and New Orleans. But on August 16, 1952, less than a year after rejecting Continental, the C.A.B. permitted Braniff to acquire Mid-Continent, after Braniff had filed for the merger on January 24 — one week before the Denver-St. Louis interchange service began. Thus, by a touch of irony, Six was now in association with an airline that had pulled the rug from under him in one of his attempts to expand.

The third interchange service began on September 15, 1953, between Continental and United Air Lines, for



The Convair 340, the "stretched" version of the CV240, went into service early in 1953.

service between Seattle and Portland, in the Northwest, and Tulsa, with Continental responsible for the Denver-Tulsa portion of the route. Once again, Six was smelling the sea air of the Pacific, albeit through the agency of another airline. Nevertheless, there was something to show for it. The neat route maps which adorned all the Continental timetables, and much of its publicity material during this period, had to be redrawn. The area covered, hitherto restricted to the five southern mid-western states, was proudly replaced by the entire region west of the Mississippi, or about two-thirds of the U.S.

Upgrading the Equipment

As mentioned above, when Continental's first interchange route, with American Airlines, started to the West Coast on July 27, 1951, the aircraft used were the latter's Douglas DC-6B's, considered by many authorities today to have been the best four piston-engined propeller commercial airliners ever built. The DC-6B may not have been the fastest — although its performance was completely competitive; or the largest — as later Douglas and Lockheed aircraft carried more people; but it was very reliable, and regarded by many of its users as a thoroughbred. For the San Francisco/Los Angeles-Houston interchange, it was ideal. Determined that his airline should never be under obligation to a larger company, and certainly to ensure that, at any bargaining table, American would not be able to claim an advantage, Robert Six ordered two 60-seat DC-6B's on October 10, 1951, less than three months after the launching of the interchange service.

These were put into service in 1953, and were retained exclusively for the California-Houston route. Neither Continental's basic network, nor the second interchange route with Mid-Continent/Braniff to St. Louis, justified four-engined types. The Convair-Liners were perfectly adequate for the segments flown, few of which could truthfully be described as more than short haul. Later, when the Continental-United interchange began, Six leased two Douglas DC-6's (the earlier version, ancestor of the DC-6B) from United.

In another equipment decision, the older Convair 240's were replaced by the improved Convair 340's, and the fleet of these latter 44-seaters increased from five to seven. The new Convairs were ordered on February 28, 1951, and went into service early in 1953.

At the other end of the equipment scale, the trusty Douglas DC-3, survivor of the prewar era, soldiered on. It rendered sterling service to all the smaller stations on that part of Continental's network where either the traffic was inadequate to fill even the Convairs, or where the airfields could not accept heavier planes with higher wheel loadings. In the 1950s, some of Continental's cities may not have boasted first-class airfields; but they were served by an airline which ranked as a trunk carrier, and the city fathers did not complain too much about the service. To summarize, by the end of 1954, Continental's fleet consisted of two Douglas DC-6B's, two DC-6s (leased), seven Convair 340s, one Convair 240 (leased), and nine DC-3s.

The End of Interchange

In general, the interchange device served the airlines well for more than a decade. Of the thirteen combination routes granted by the C.A.B. between 1948 and 1955, only two — the last two in fact — failed to last more than three years; and of the remaining eleven, none was terminated in less than seven years. Interchange may therefore fairly be judged as a successful experiment in route flexibility, and an encouraging sign that the Civil Aeronautics Board was not wholly negative in its approach to the industry under its jurisdiction. In the case of Continental, its interchange access to California, started in 1951 via American, ended only on June 11, 1961, when the far-reaching Southern Transcontinental route awards made the interchange immediately redundant. Similarly, the association with United to the Northwest, started in 1953, ended only on July 1, 1967, when Braniff was granted a route to Seattle in 1966.

The more localized interchange between Continental and Braniff, from Denver to St. Louis, first started in 1952, also continued until June 13, 1967, (coincidentally within two weeks of route suspension to the Northwest)



The DC-6B at Seattle-Tacoma on the Continental-United Interchange route.

when Frontier Airlines was granted nonstop route authority from its Denver hub to both Kansas City and St. Louis. Times had certainly changed, not to mention attitudes, in the corridors of power in Washington, D.C. Frontier was a local service airline, established in 1948 to operate local service to small communities, in fulfillment of a praiseworthy campaign in Congress after World War II to bring the benefits of commercial aviation to every small city in the U.S. The locals, as they were at first called (they later aspired to more imposing titles) were organized to provide such service as feeder lines to the trunk networks, using small aircraft. Now, Frontier, ostensibly a feeder airline, was given a route which had

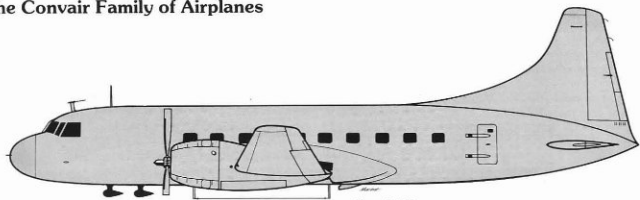
previously been denied to a trunk airline, Continental, which had been forced to operate only by the interchange device.

By this time, however, such a decision, which in the 1950s would have brought Robert Six hot-foot to Washington armed with lawyers, documentation, and explosives, caused hardly a ripple at Continental's headquarters, now located in Los Angeles. By 1967, Continental had at last gained considerable ground on all the three fronts on which it wished to expand; merger negotiations, beneficial route awards, and front-line equipment. These were of such far-reaching consequence that each of the three justifies a separate chapter in this book.

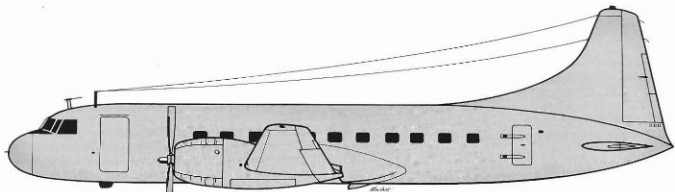
Interchange Routes, 1948-1952. Continental's first chance to break away from its local service environment came with the opportunity to interchange services with other airlines.



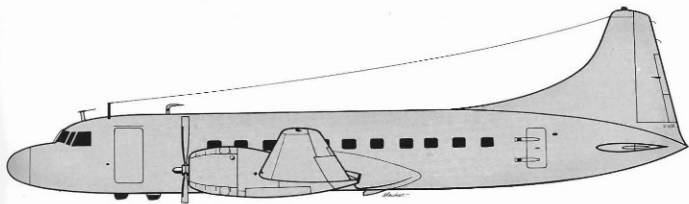
The Convair Family of Airplanes



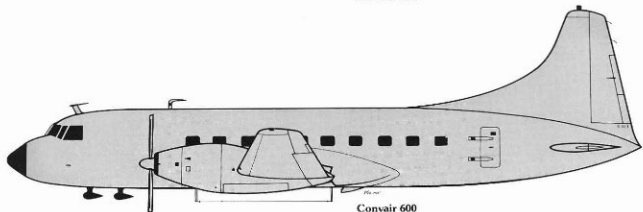
Convair 240



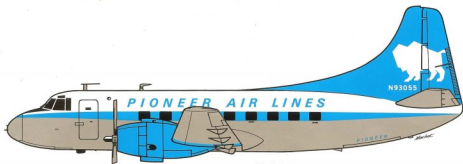
Convair 340



Convair 440



Convair 600



Martin 202

6

The Pioneer Merger 1955

Creating a Second Level

After World War II, the airlines of the United States were almost unrecognizable from the same companies which had gone to war in December 1941. At that time, the 15 certificated carriers operated 322 aircraft, of which 260 were 21-seat DC-3s, the remainder being smaller Lockheed twins, DC-2s, and Boeing 247s. By 1958, the year in which the first jet aircraft was introduced, the twelve surviving domestic trunks alone were operating 1254 aircraft, of which 743 were four-engine piston types, mostly 60-80-seaters of the Douglas DC-6/7 family, and Lockheed Constellations of similar capacity.

Quite clearly, the trunk airlines had undergone a metamorphosis. The increased air-mindedness of the American traveling public, together with the introduction of coach fares, had led to enormous increases in passenger traffic, averaging about 15 percent annually. United States passenger-mile traffic as a whole, in fact, trebled during the five years between 1945 and 1950, and then quadrupled again during the decade of the 1950s. Greater aircraft size, higher service frequency, more nonstop segments: all these factors combined to give the airlines new stature, respect, and recognition. Together they overtook the railroads as the largest inter-city common carrier group among all transport modes.

This led to a dilemma. Although all the airlines were happy to concentrate their energies and imagination to provide the most competitive service over the busiest — and therefore the most lucrative — routes, they tended to neglect the more sparsely patronized flights and services. Basic economics worked against the short routes to small cities. The costs were higher, because of the fundamental shape of the operating cost curve, rising alarmingly at the short-range end of the graph; while revenues were governed largely by formulas which did not take this into account, and which amounted closely to a pro rata mileage rate. Furthermore, because the traffic potential between the smaller cities was correspondingly smaller than that between the large urban centers, it followed that these routes were best served by smaller aircraft.

Unfortunately, this too weighed against the basic laws of airline operating economics. Large aircraft, with the same standards of technology, are invariably cheaper to operate on a unit cost basis than small ones. Although the trunk airlines often tried to compromise by replacing time-honored DC-3 flights with depreciated Convair-Liners or Martin twins, they were seldom able to do so profitably. Commendably, all the trunk airlines had their sights set on the day when they could announce that they no longer depended upon indirect subsidy, through mail

payments, or — even more pressing — direct subsidy granted and paid through the agency of the C.A.B., by whom many felt they were being patronized to the point of humiliation. An airline executive was unable to make strong demands for extended routes or improved operating authority if the C.A.B. could blandly point out that he was dependent upon government largesse, at the expense of the taxpayer, to break even on the routes he had.

Happily, both sides were able to make a reasonable accommodation in this matter, and much credit must go to the C.A.B. for recognizing the need to establish a new stratum of airline service. By authorizing airlines whose specific assigned responsibility would be to provide service to the smaller cities, the trunk airlines could be relieved of localized areas of financial embarrassment. The C.A.B., for its part, conscious of its responsibilities to the taxpayers, could isolate those areas, cities, and companies for whom a case for subsidy could be made. At the same time it could relieve the trunk airlines from ponderous accounting procedures designed to identify subsidy-eligible routes; and help them to avoid accusations of internal cross-subsidization, switching public monies to purposes for which they were not intended.

The First Feeder Airline

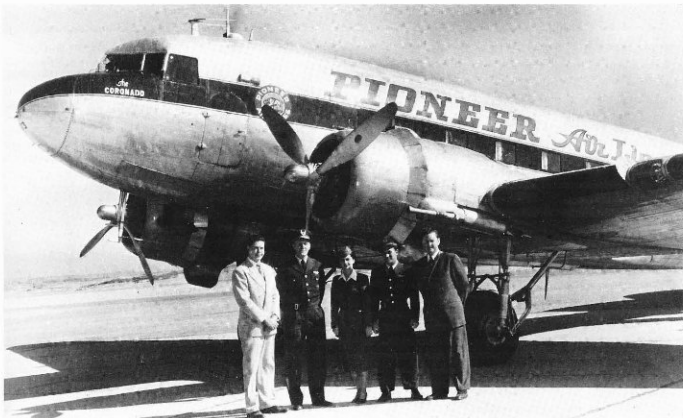
All this change did not come easily; quite the reverse. The first airline to try to establish feeder service was able to do so only for an experimental period. Even before World War II, Essair, of Houston, had been authorized to begin passenger and express service from that city

to Amarillo, via Abilene, in January 1939. But Braniff Airways, which considered itself at that time to be the only airline with any rights in Texas, protested to the C.A.B. on the grounds that Essair was intruding upon its sphere of influence as laid down by the "Grandfather Rights" implied by its certificate. And as a result, Essair's schemes were postponed.

On November 5, 1943, however, after an appeal, the board selected Essair to operate the service. The airline had been able to demonstrate that it could provide a service better adapted to local needs, with flight times related to passenger requirements, rather than to the intricacies of scheduling convenience. A trunk carrier, on the other hand, might feel inclined to fulfil its legal obligation under the terms of its route certificate by inserting the obligatory frequencies at the smaller stations only at inconvenient times, when the aircraft could be released from peak hour service on the best routes.

And so a new category of airline was born, and Essair was the first of the new breed. Under its new feeder airline classification, established by the C.A.B. on July 11, 1944, Essair began service as Essair Lines, with full official blessing, on August 1, 1945, over its original route from Houston to Amarillo, with four stops, using a fleet of three 12-seat Lockheed L10 Electras. On June 17, 1946, Essair changed its name to Pioneer Air Lines, and quickly developed an intra-Texas network, including an important segment from Houston to Abilene via Dallas and Fort Worth.

It soon introduced the ubiquitous DC-3, of which more than 200 were eventually to see service with the local service airlines, as the feeder airlines were renamed.



Pioneer's main equipment was the trusty DC-3.

**WEST TEXAS
TO THE GULF**

*Economy
Safety
Speed*

AMARILLO
LUBBOCK
ABILENE
SAN ANGELO
AUSTIN
HOUSTON

FLY
Essair

AMARILLO-LUBBOCK-ABILENE
SAN ANGELO-AUSTIN-HOUSTON

PIONEER

*the Southwest
is near when you fly*

PIONEER

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PASSENGERS • MAIL • FREIGHT • EXPRESS

Effective From April 1, 1955

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ONE
GREAT
AIRLINE

1955

Passengers—Express—Freight—Mail—Parcel Post

Exhibit E. Timetables of Essair which became Pioneer which then merged with Continental.

Many of the other airlines in the same category had used smaller types to inaugurate service, but found that the popularity of feeder routes generally justified the use of the Douglas twin, which showed no signs of senility. In certain areas, however, some of the locals found that even larger and more modern aircraft were needed to cope with the traffic demand, and also that frequent and demanding travelers looked askance at the veteran DC-3. Such an area, in keeping with its characteristic image, was Texas, where Pioneer had already started "commuter specials."

Pioneer, in fact, became the first of all the local service airlines to try to introduce postwar-designed commercial aircraft. In June 1952, it purchased nine 36-seat Martin 2-0-2s from Northwest Airlines, having sold its fleet of eleven DC-3s to the United States Air Force at a profit of \$841,000. The Martin was an unpressurized, but otherwise modern twin, designed as a direct competitor to the Convair 240. Its first flight had taken place on November 22, 1946, four months before Convair, but structural problems had been the cause of a Northwest accident in 1948. They were withdrawn from service, and returned after strengthening and re-engining, returning as 2-0-2A's (with TWA) in 1950.

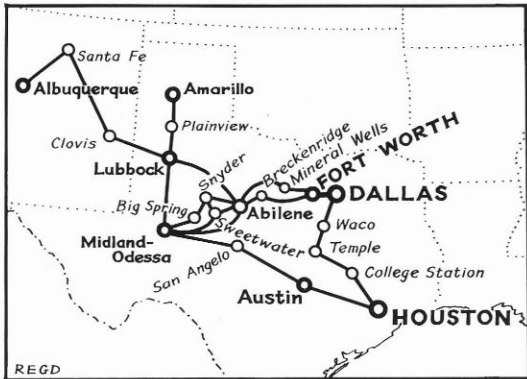
But this was not the reason why Pioneer had to go back to the DC-3. It had used the profit made on the

DC-3/Martin deal to offset losses on its mail subsidies. Unfortunately, the C.A.B. took the view that the action had been highly irregular, and inconsistent with the regulations governing subsidy. Pioneer was unable to demonstrate conclusively that the Martins were more economical to operate than the DC-3s (a problem not uncommon with other aircraft types even today); and reverted to operation of the 21-seaters in March 1953.

The Mini-Merger

When Continental Air Lines signed a merger agreement with Pioneer on December 10, 1953, the C.A.B. acted rather speedily and managed to approve it within a year, on December 7, 1954, to be exact. During the entire era of Civil Aeronautics Board regulation, all airline mergers had to be approved to ensure that such moves were, to quote the wording of the agency's charter, "in the public convenience and necessity." Compared with some others (such as Eastern-Colonial, Braniff-Mid-Continent, or Delta-Northeast) however, the Continental-Pioneer amalgamation was not one calculated to have severe repercussions on the rest of the industry.

During its ten years of active life, Pioneer had expanded modestly on its original Houston-Abilene-Amarillo route,



Pioneer Airlines, 1955. The aptly-named Pioneer gave Continental access to Dallas and Albuquerque, and reinforced its Texas network.

designated by A.M.64. By 1953, it was serving Dallas/Fort Worth, Austin, and other cities in western Texas, in the new oil region around Midland, Odessa, and Lubbock. It had also expanded further westward into New Mexico as far as Albuquerque, via Clovis (an historical transcontinental airline stop on the TWA route) and Santa Fe.

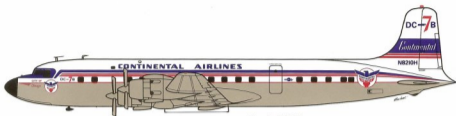
The main effect of Continental's acquisition of the feeder airline, therefore, was to consolidate its position in the Lone Star State. It now served every Texas city of more than 100,000 population, together with most of those whose growth potential would put them in that size bracket within a decade or so. With C.A.B. doubts concerning Pioneer's ability to cope with larger aircraft now irrelevant, Continental ordered a fleet of Convair 440

Metropolitans, a further development of the successful Convair-Liner family, so as to show Texas that it was there to stay.

As an incidental item in the merger, the ninth name on the list of Pioneer officers, the vice president of traffic and sales, was Harding Lawrence. Within a few years, he was to become Robert Six's right hand man; and within another few years he was to lead Six's life-long rival airline, Braniff. Lawrence's chequered and ambitious leadership was to make Braniff one of the largest and most profitable of all U.S. airlines by 1980. Paradoxically, Robert Six stayed with Continental long enough to see his airline survive while Braniff abruptly perished two years afterwards because of Lawrence's too-rapid expansion.



The CV-440 was Convair's final development of the successful twin-engine airliner. Continental introduced it on April 1, 1956.



Douglas DC-7B

7

The Denver Case 1955-1957

Improving the National Air Routes

As long as the Civil Aeronautics Board was in control of the nation's air routes, it was constantly having to review the relative merits of applications for additional segments, mainly between important cities, as the airlines strived to augment their route networks. As in many other industries, most companies seemed to adhere to the general principle that survival was only possible through growth. Decline, or even stagnation of traffic, it was firmly believed, would spell disaster and inevitable demise. At best this would be by absorption by another carrier, with the term "merger" used euphemistically to save face.

Examination of published growth statistics shows that the airlines were quite successful in enlarging their networks. Certainly traffic density on existing routes increased, thus demanding larger aircraft when the ideal frequency patterns had been achieved; but substantial increases in passenger miles or passenger boardings were often accounted for simply by route extensions and additions.

While encouraging competition within the framework of its defined mandate, the Civil Aeronautics Board was acutely aware of the inherent dangers of excessive indulgence in this direction. Indeed, many economists, inside

and outside the agency, held that the main benefits of competition, at least for the paying passenger, could be achieved with only two rival airlines on a route. Three or more could normally be justified only when the traffic was extremely heavy — the definition varied with distance — or other considerations were involved, such as connecting service.

The legislation which put this policy into effect was complex. Airlines applied for changes to their route certificates by a strictly laid-down procedure, in which the sanctity of the precise wording of the original certificate was respected with almost religious fervor. However, minor case actions were little more than a formality, as, for example, when the C.A.B. authorized Continental Air Lines to add Great Bend, Kansas, to its Pueblo-Wichita route. When authority was forthcoming on April 16, 1951, and Continental opened service on June 1 of that year, hardly anyone outside the state of Kansas was aware of the event. Similarly, when Continental suspended service at Big Spring, Texas, on November 1, 1950, Pioneer Air Lines took over to everyone's complete satisfaction — everyone, that is, who knew about it.

But there were occasions when the applications for new routes had such wide-spread implications that the C.A.B. found itself in the role of both judge and jury in complicated litigation where there were often half a dozen plaintiffs and sometimes as many defendants. In

attempts to match deeds with their self-imposed philosophy of "expand or die," airlines would apply to the C.A.B. for new routes. But because the system was already strictly parcelled out on a spheres-of-influence basis, such aspirations would be viewed by the incumbents with emotions varying from mild alarm to outright indignation.

An outstanding example was when, immediately following World War II, the C.A.B., with firm support from President Truman, broke Pan American's virtual monopoly of overseas routes by allowing a number of domestic airlines to fly the Atlantic and the Pacific, and to serve Latin America, in competition with Pan Am. This was wholly in the spirit of free enterprise, but the C.A.B. ensured that the competition did not become a free-for-all, and wisely limited the number of contestants on each individual route.

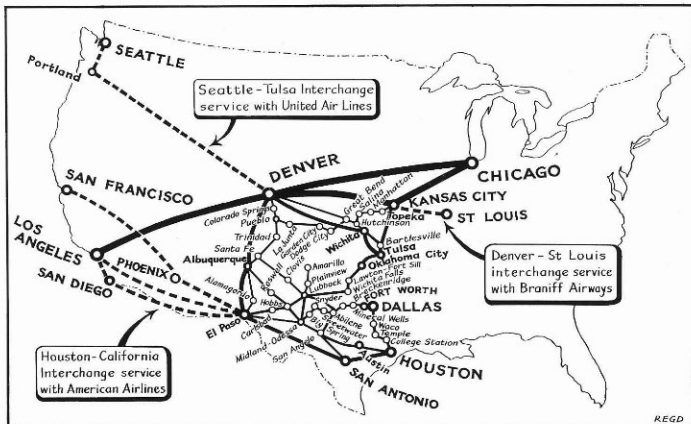
The same happened within the U.S., as almost all the airlines sought to expand during the postwar years, and the C.A.B. was faced with a bewildering multitude of claims and counter claims, all supported by equally convincing evidence and argument. Under the formalized procedure, an airline would apply to the C.A.B. for a new route, and by law, the C.A.B. would have to publish the news. Normally, other airlines had 90 days in which to file similar applications, or the incumbents could object. The C.A.B. would then ask an examiner to review the case and make recommendations to the board, based on an impartial review of the conflicting claims. The five-man board would not always accept the recommendations without modification. Sometimes it even disagreed

entirely, finding other considerations which were outside the examiner's field of interest. In foreign route cases, the president of the United States had to give his approval, which he occasionally withheld for political party reasons, as well as for considerations of the national interest, including security.

All this was a long-drawn out affair. As Western Airlines can testify, a case would drag on for years. The California carrier, based at one end of the rich California-Hawaii vacation market, had to wait ten years for permission to operate to Honolulu. The paper-work in such cases was enormous. The dossiers on the Pacific Route Case, the *cause célèbre* of the 1960s, could have filled a railroad freight car.

Continental's attempts to expand its route network by the C.A.B. procedure had, for the first twenty years of its existence, been frustrating, to put it mildly. The C.A.B. seemed to regard Continental more as a local service airline than a trunk, grudgingly permitting it to operate within five southern midwestern states, with Kansas City and Houston the largest cities served. Robert Six had been able to expand further only by the device of interchange routes, in which he was normally regarded as the junior partner; and by a merger with a genuine feeder airline, mainly to obtain access to Dallas.

In 1952, however, in yet another attempt to gain respectability among his peers, Bob Six made an ambitious application in the Denver Service Case. This was one of the most important route cases with which the C.A.B. had ever had to contend, and one which was to make sweeping changes to the competitive balance on the



The Denver Case, 1955. In one of the Civil Aeronautics Board's most far-reaching decisions, Continental gained direct access to the second and third largest cities in the United States.



The Douglas DC-7B, one of the last of the great piston-engined airliners, opened "Gold Carpet" service on the Chicago-Los Angeles route on April 28, 1957.

transcontinental air route. While the Big Three trunk airlines, United, American, and TWA, were the main litigants, other airlines aspired for a piece of the Denver cake. And at last, Bob Six and Continental Air Lines did not return from Washington empty-handed, even though they had to wait a few years for the result.

The Denver Service Case

On November 14, 1955, the Civil Aeronautics Board finally made its decision in the Denver Service Case. This was a praiseworthy solution to a problem which had long needed attention. The "Grandfather Rights" held by the three main transcontinental airlines had originally confirmed that the companies which had traditionally pioneered and developed service over certain set routes were entitled to recognize such routes (and even service to individual cities) as perpetually-allocated spheres of influence. But as time went on, and traffic increased to levels which had been beyond the imagination of the architects of the original route structure, the need for more competitive service between almost all main city pairs at each end of the coast-to-coast route was accepted as essential by the regulators and the regulated alike.

The main result of the awards was that the three geographically separated trunk routes lost their clear-cut simplicity and semi-monopoly status. Hitherto, for example, United had gained the lion's share of the traffic to San Francisco from the entire eastern half of the U.S. because it was the only one with a direct route. Also it was the only one of the three serving Denver, recognized as the most important hub between the Mississippi and the Pacific. Now, with the C.A.B.'s Denver decision, TWA was given rights into Denver, and in exchange, United was allowed access to Kansas City. American was given a direct route from Chicago to San Francisco, so that one result of the Denver award was that all three airlines were now able to offer direct or almost direct

service from New York to both San Francisco and Los Angeles. The new route structure came into effect on January 13, 1956.

Two airlines, other than the Big Three, came out well from the Denver decision. Western Airlines found itself with a direct San Francisco-Denver route, at last short-cutting a meander across the northern states. But more surprising, Continental Air Lines was granted a route from Chicago to Los Angeles, via Kansas City and Denver, with nonstop authority between all city pairs, including Chicago-Los Angeles, neither end of which route it had ever served before. Although its right to participate in this momentous route award was challenged, it was upheld by the U.S. Court of Appeals on January 17, 1957, by which time Robert Six had the bit between his teeth, and nothing short of an atom bomb could have stopped him.

To describe the Chicago-Denver route as "manna from heaven" for Continental would be an understatement. Until the decision, the largest point served by the airline was Houston, which at that time ranked as the 14th most populated city of the United States. Chicago and Los Angeles were both second only to New York, and the metropolitan areas of each one of these two conurbations housed more people, with far greater spending power, than the whole of Continental's existing network thus far.

Robert Six lost no time in preparing his airline for the surge in traffic which was bound to occur, following this red-letter day in his airline's history. In a sense, the C.A.B.'s award was a tribute to the respect that he had by now acquired throughout the industry for initiative, drive, and the ability to get things done. Although not spelled out in precise terms, the "able" portion of the phrase "fit, willing, and able," applied by the authorities in spirit if not in word to an airline aspiring for greater things, was interpreted as the possession of a fleet of aircraft able to do the job. Not by the wildest combination of scheduling, marketing, or management could Conti-

mental's twin-engined Convair 440s have operated the Los Angeles-Chicago route. But quite obviously, the C.A.B. no longer regarded Continental as a local service airline masquerading as a trunk.

Last of the Great Piston-Engined Airliners

Hardly had the airline world digested the impact of the Denver Service Case when, in December 1955, in an unprecedented burst of procurement backed by the substantial issues of new stock, Continental ordered four 118-seat Boeing 707 jet airliners, fifteen 56-seat Vickers Viscount 810-D series four-engined turboprops, and five 96-seat Douglas DC-7Bs. The total cost of the 24 planes was \$64,000,000. To put this in perspective, the value of the existing 1955 fleet was placed at about \$11,000,000.

There was a snag, in that the turboprops could not be delivered from England until 1958 and the jets could not arrive before 1959. Thus the DC-7Bs, more readily available, had to be purchased as an interim measure. The aircraft was a further development of the famous four-engined Douglas family, its fuselage lengthened from the DC-6B to accommodate more passengers, and its engines changed from the 6Bs Pratt & Whitney R-2800s to new Wright turbo-compound R-3350s. These powerplants gave the DC-7 series enough additional power to offer more payload, higher speed, and longer range than the DC-6B. It had been introduced originally by American Airlines as a nonstop transcontinental airliner to match TWA's Super Constellation. The DC-7B was a slightly improved version of the DC-7 with higher all-up weight, and Continental was one of only four airlines to order this version.

The Douglas DC-7B, almost the last of a line of great piston-engined planes, had the honor of inaugurating Continental's Los Angeles-Chicago service on April 28, 1957, both nonstop and via Denver. The Kansas City alternative routing was added on July 8. It was promoted as the *Gold Carpet Service*, and the service also offered the *Club Coach*, a novel experiment in which, for the first time, an airline offered a selection of first-class amenities at coach-class fares. Not for the first time, Robert Six and his Continental team introduced a feature which was regarded as a risky innovation at the time, but which was to become standard practice many years later.

Turboprop Flirtation

One of the most fascinating airline merger rumors going the rounds toward the end of 1957, was that Robert Six of Continental was talking to James H. "Slim" Carmichael of Capital Airlines. The whole idea seemed to have possibilities of such magnitude that the rumor was widely aired and speculated upon in the aviation press. Capital was the fifth largest airline in the United States (or in the western world, for that matter), in terms of passengers carried, and sixth in terms of passenger-miles. The outgrowth of a prewar merger of airlines operating between the Great Lakes and East Coast points, it had the advantage of serving a densely populated area with many large cities, including the federal capital. Now that Continental had benefitted so handsomely from the Denver Case, the routes of the two airlines met at Chicago.

One common denominator was the choice of the British-built turboprop Viscount. This airliner had first gone into service with British European Airways in 1953,



The Club Coach compartment of the DC-7B, showing the lounge.

and its instant success had led to a flurry of orders, the most dramatic being one from Capital which, with subsequent additions, totalled no less than 60 aircraft. When the Denver decision was made on November 14, 1955, Slim Carmichael had already introduced the smaller Viscount 700 series on July 26 of the same year. The vibration-free turbine aircraft was so successful in the highly competitive northeastern quadrant of the U.S. that Capital increased its market share on every route it operated. This impact was all the more emphatic because the gains were made at the expense of United, American, and TWA, all of whom were unused to the junior members of the trunk airline hierarchy conducting themselves in such an aggressive — at what was worse, successful — manner.

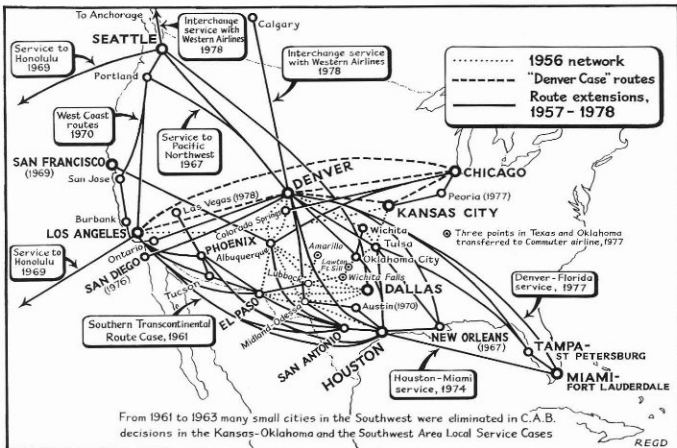
The outstanding performance of the Capital Viscounts undoubtedly affected Six's decision to buy them. He had already purchased Convair 440s, of roughly equal capacity, and although they were deficient in performance compared with the new turboprop generation, the Convair-Liner family was popular and widely accepted. But it was not too soon to bend the facts of the situation a little to describe the turboprops as jets, and gain a tremendous promotional advantage.

Whether or not the two airline leaders ever seriously contemplated, or went into the details of a possible merger, may never be known. Because of the commonality of equipment, the two route systems could have been

easily integrated. It would have presented an enormous problem to the C.A.B. to decide on the biggest merger of all time, which would simultaneously have eliminated the term Big Four. And this might have been so revolutionary a prospect for the basically evolutionary policies of the board that they would probably have rejected it, however plausible a case that could have been made.

Perhaps the biggest problem which would have faced the merged airline, however, would have been to decide who would have led it. Both Six and Carmichael were inspired innovators, seizing every opportunity, however slender, to enlarge their respective regimes. Both were dominant personalities, both were prepared to take risks in pursuing policies which they believed in. Carmichael was in control of the larger airline, and was therefore in a position of strength. But curiously, just as Six's star was in the ascendant, as the C.A.B. gave of its bounty, Carmichael suffered from procrastination from the same quarter, denying him the chance to break out of a densely traveled market area where the stage distances were on average too short to be economical.

Whether or not Six and Carmichael could ever have reached agreement remains a delightful speculation. For had they done so, the whole course of development of the trunk airline industry of the United States would have undergone a fundamental change. And — who knows? — there might never have been any need for the Airline Deregulation Act of 1978.



From the Denver Case to Deregulation, 1957-1978. After the landmark Denver Case, Continental steadily expanded during the next two decades to become a major trunk airline.



Vickers Viscount

8

Entering the Jet Age

1958-1960

More Sparring for Routes

The year 1958 was one in which Continental Airlines made progress on many fronts: new aircraft, new routes, new route applications, and changes in management. In March, the C.A.B. instituted the Southern Transcontinental Service Case, another major regulatory development, ranking with the Denver Service Case in its long-term implications. It came as no surprise to the industry that Robert Six and his team were in the forefront with an ambitious list of requested routes.

The team had been strengthened by the promotion of one of the executives of the local service airline, Pioneer, absorbed by Continental in 1955. Harding Lawrence, who had been promoted to vice president, executive administration and sales, now became executive vice president, succeeding Clarence C. West. West had been a steady and reliable administrator, without being a great innovator or strong personality in the extrovert sense; and consequently had never been among Six's closest cronies. He was no yes-man; but was not one who would challenge Six either. A reliable member of Six's cabinet before the war, and like Six, a serving officer during the conflict, there was no question of his loyalty during the Drinkwater affair. When he retired, Lawrence was the obvious man for the job, a man cast in Six's mold,

aggressive, imaginative, and authoritative.

During 1958, a subtle change was made in the airline's name, the words "Air Lines" being replaced by the single word "Airlines," at least on the aircraft and on promotional material. Official documents, however, continued to use the former style for years.

On July 22, 1958, the C.A.B. announced that, in the Dallas to the West Service Case, it had authorized Continental to operate nonstop from the Dallas-Fort Worth hub to El Paso, Lubbock, Midland-Odessa, Amarillo, Abilene, Albuquerque, and Santa Fe. This award, after the acquisition of Pioneer, gave Continental almost a complete permutation of intercity routes within Texas. Moreover, it already served every point listed on the certificate, so that when the award was confirmed on February 12, 1959, the costs at the stations in providing for the increased flights and traffic were relatively small. Nevertheless, 1958 was sluggish by Continental standards and expectations, with a poor financial result. Continental needed a shot in the arm, and it came in the following year.

The Viscount

When the Dallas award was announced, Continental had already accelerated its marketing impact to the extent that it had received its baptism of competitive fire



The British-built Vickers Viscount was the world's first turboprop airliner. Continental introduced it on May 1, 1958. This one carries the Golden Jet colors introduced in 1959.

on a big intercity route. The Douglas DC-7B had done well between Chicago and Los Angeles, and the public was talking about Continental's new Club Coach fares and amenities. American Airlines, TWA, and United had already been served notice that the new boy on the block was no novice.

Giving further emphasis to its new stature, Continental introduced the turboprop "Jet Power Viscount II" on



Clarence C. West, one of the Varney old-timers who served in World War II, became executive vice president before retiring in 1958.

May 28, 1958. While the DC-7B maintained the nonstop Chicago-Los Angeles service, the Viscount, with its shorter range, was deployed on the stopping services, Chicago-Denver-Los Angeles and Chicago-Kansas City-Denver-Los Angeles. It was an instant success. Aggressive and effective promotion for both aircraft, with the emotive word "jet" being thrown into the advertising field with gay abandon, resulted in Continental garnering almost half of the traffic on this very important group of city pairs. For an airline which a mere three years previously was regarded only as a twin-engined operator (its DC-6B's being used exclusively for interchange services) this was a modern airline re-enactment of David and Goliath.

The Viscount's inauguration was accompanied by all the promotional wizardry that Six's commercial and advertising team could muster. As well as echoing the *Gold Carpet* image started with the DC-7B's, handsome new uniforms for all flight crews and ground personnel had been introduced on May 1, 1958, to give Continental Airlines a completely new look as well as a slightly new name.

The Boeing 707

Unquestionably successful though the Viscounts were, their impact was soon overshadowed by the entry into service, on June 8, 1959, of Continental's first true jet, the Boeing 707-120. This aircraft, hailed as the *Golden Jet* and given a handsome new paint scheme to match its title, took over one of the nonstop Chicago-Los Angeles frequencies on its inauguration day, and exactly two weeks later was operating the route thrice daily. By August 15 it was serving Kansas City and Denver as well as the nonstop route, and by September 5, was offering a total of six frequencies per day between California and Chicago.

The addition of any new airline to the list of jet operators was something of an event, but Continental's case was quite remarkable. Not to labor the point too much, a mere four years previously it was only in the four-engined field at all because of interchange services, not because its own route network demanded it. Now, although still one of the smallest of the U.S. domestic trunk airlines, it became the third domestic carrier, and the sixth in the whole world, to introduce its own epoch-making Boeing 707s. Only American and TWA preceded it in America, National's aircraft having been leased from Pan American.

With the introduction of the Viscounts and 707s, Continental's fleet composition underwent a metamorphosis. Most of the piston-engined aircraft were sold, but a few DC-7Bs, DC-6Bs — even a few DC-3s — were retained. Trimming the fleet to an exact match with the requirements, two of the Viscounts were sold, but a fifth 707 was added during 1959 for a net capital gain of \$1,201,000 on the various transactions.

The strict maintenance programs, tight scheduling practices, efficient traffic handling and other disciplined procedures, forced upon Continental in the past to offset deficiencies in route structure, now paid handsome dividends. The same austerity, applied to the jets, reaped its rewards. They were, in any case, inherently far more economical to operate than the piston-engined planes, and were now efficiently deployed on longer routes. Continental's high utilization — up to 13 hours per day by 1962 — was the highest in the country by a comfortable margin. The quality of service, with Continental's flair for providing extra amenities, and backed by the

best on-time performance of all the U.S. airlines, combined to pull in record revenues. The result in 1959 was the highest operating profit in Continental's history, almost \$4 million. The net income, after taxes and interest payments on loans, was \$1.7 million, easily another record.

Pause for Breath

Continental's headlong leap into the jet age created its own momentum. Bob Six and his airline were now a force to be reckoned with, and the other airlines and the C.A.B. alike treated the once modestly-placed airline with respect, even — because of the continued demonstration of high efficiency — with an attitude approaching envy. With almost any new route case instituted by the C.A.B., both that agency and the other airlines automatically expected Continental to be a major applicant for new routes. And they were seldom disappointed.

Early in 1959, for example, when the board instituted the Trans-Pacific Route Case, the Denver airline applied for routes to Honolulu from its three main cities, Chicago, Los Angeles, and Kansas City, as well as from its base and hub at Denver, and with San Francisco thrown in for good measure. The same had happened in the spring of 1958, in the Southern Transcontinental Case. While the Pacific Case was to drag its heels interminably, and to become mixed up in national politics, the important Southern Transcontinental package of routes received the C.A.B. examiner's recommendations on



The Boeing 707-120 Golden Jets, complete with new look, projected Continental into the jet age on June 8, 1959.

CONTINENTAL
AIRLINES



Presenting the
**WORLD
PREMIERE**

OF THE
NEW

AND
INCOMPARABLE
JET POWER

VISCOUNT II

Continental Airlines Summer Timetable—May, June, July (1958)

CONTINENTAL
AIRLINES

*fly the jet
with the
golden
tail!*



STARTING JUNE 8
NON-STOP • CHICAGO • LOS ANGELES

THE **GOLDEN JET**
CONTINENTAL'S CUSTOM-BUILT
BOEING 707

Timetable effective April 26, 1959

Exhibit F. Continental timetables featuring the first turboprop and the first Golden Jet.

June 20, 1960. While Delta and National were the main beneficiaries, being slated for transcontinental authority, Continental did not come out badly either, with solid additions to its structure between California and Texas.

On July 1, 1960, the interchange service with American Airlines on the Houston-Los Angeles service was doubled, thanks to the transfer of the DC-7B's, retired from Chicago-Los Angeles and available for other work; and San Antonio was also included. But this was a marketing gesture, aimed to increase awareness of Continental's presence, and to herald the rights which were to come from the Southern Transcontinental award. In any case,

Bob Six was hedging his bets both ways.

The tremendous progress made by Continental as the result of the three-pronged injection of new strength — the Denver Case, routes to Texas, and the jets — is vividly reflected by the statistics. Progress in the three financial years from 1957, when service started on the Chicago-Los Angeles route, to 1960, when the full fleet of Boeing 707s and Viscounts were in service, was staggering. Passenger boardings rose by 61 percent, from 829,000 to 1,337,000, but even more remarkable was the passenger-mile growth of 145 percent, from 363 million to 891 million.

Not that everything in the garden was rosy for Continental in 1960. On June 30, 1960, the flight engineers went on strike, the first in the history of the airline. Possibly feeling that they deserved a bigger share of the pie now that their company was solidly in the black, negotiations went on for more than three months, and were finally settled on October 10.

More alarming, however, had been the fear that Bob Six might leave Continental. Early in 1960, Howard Hughes, the legendary owner of TWA, had stretched his financial credit too far and was deeply indebted to the financial institutions which supported his airline when it too entered the jet age with a \$300 million investment. By the end of the year Hughes was forced to surrender control to a voting trust, after he had battled to retain leadership. TWA had never had a strong president with a consistent record since Ralph Damon died in 1956, and

Hughes thought he might be able to hang on if he could hire a strong man. Such a man was Robert Six.

The offer was made, a tempting one, with three times Six's previous salary, an appropriate level in a world-wide airline which could regard Continental's recent route gains on Chicago-Los Angeles almost as a feeder route affair. Six gave the offer a great deal of thought, but turned it down. How much of his decision was based on loyalty to and love of his own company, or how much was based on the wish to be a big fish in a small sea rather than the reverse, will never be known. His subsequent substantial salary increase as Continental chairman was probably no coincidence, the Hughes offer confirming his personal market worth. In any event, Continental Airlines continued to go from strength to strength under Six's guidance for two more decades.



Continental's competitive thrust was at every level. These Golden Jet airline steps cost \$10,000, and were the widest in the industry. A gold carpet automatically unrolled as the stairs approached the side of the plane.



Boeing 707-120

9

Route and Service Strengthening 1961-1966

Another Good Route Award

Continental suffered a disappointment at the beginning of 1961 when, in January, President Eisenhower rejected the C.A.B.'s recommendations on the Trans-Pacific Route Case, but it was compensated for the setback shortly afterwards. In the Southern Transcontinental Service Case, announced on March 13, 1961, it was awarded a route from Los Angeles to Houston, via Phoenix, Tucson, El Paso, and San Antonio, with non-stop authority between all points.

When Continental began service on these new segments on June 11, 1961, it quickly became the dominant carrier in the California-Arizona-Texas market. The previous day the interchange service with American over the same route structure was terminated, having become redundant. Never believing in letting sleeping dogs lie, Six applied to the C.A.B. within two months for a batch of new routes to the East Coast, with terminals at New York and Philadelphia, and with en route points at Denver and Cleveland. His goal was a transcontinental air service and access to the affluent Northeast; but as things turned out he had to wait for the Airline Deregulation Act of 1978 before this dream came true.

End of Local Service

The early 1960s witnessed a complete transformation of Continental's route structure. The airline had pro-

jected itself into the jet age and into the world of major intercity routes with such force and rapidity that it was faced with the prospect of operating, in effect, two different airlines. On the one hand it was a trunk carrier, on routes such as Los Angeles-Chicago or Los Angeles-Houston. But it was also a local service carrier, on routes serving all the small cities in the southern Midwest and Rocky Mountain area that it had collected on its way up the scale during the first quarter-century of its existence.

Disentanglement with the latter routes and cities became a major preoccupation for Continental, as it settled in to its new role as a trunk airline of substance. In the furtherance of this objective, the C.A.B. authorized on November 2, 1960, in the Kansas-Oklahoma Local Service Case, the transfer to Central Airlines of ten cities on the Denver-Tulsa-Oklahoma route network. While Continental no longer needed them, Central was glad to have them, as it strengthened its rather sparse route structure in that area. The transfer took place almost exactly a year after the decision, on December 1, 1961.

Hardly had Continental bid farewell to local service in the Kansas-Oklahoma region, when, on November 17 of the same year, in the Southwestern Area Local Service Case, the C.A.B. examiner recommended that ten cities in Texas, New Mexico, and Colorado should be transferred to local service airlines. This became a slightly more protracted affair, but in the end, in a decision

handed down on February 1, 1963, the C.A.B. relieved Continental from the obligation to serve no less than 14 cities in the southwestern area. It retained Amarillo and Midland/Odessa, but surrendered seven other cities in Texas, including the capital, Austin, as well as six more cities in New Mexico, also including the capital, Santa Fe. Fourteenth on the list was Pueblo, Colorado, a detail which must have injected a certain amount of sentiment to the occasion. For this was the city which, in 1934, had become the northern terminus of Varney Speed Lines' only route, and had later become the junction point of the system when, in 1938, Continental achieved what was then the supreme luxury of possessing two route certificates from the C.A.B.

The C.A.B. order was made final on October 11, 1963, and all routes were transferred to Frontier Airlines and Trans-Texas Airways, later renamed Texas International Airlines, by November 12. One immediate result was that Continental Airlines was able to dispose of its entire DC-3 fleet, except for one single aircraft which was retained to operate a single route, Denver-Colorado Springs, a curious anachronism which prevailed for many years.

Merger Madness

When in August 1961 Robert Six applied for routes to the East Coast — tantamount to a bid for transcontinental status — this was partly a reaction to an announcement that, on June 1 of that year, United Air Lines had acquired Capital Airlines. This merger between the second largest and the fifth largest airlines in the United States resulted in a company which overtook American Airlines as the largest U.S. carrier, and indeed, measured in passenger-miles, the largest in the western world. Coming as it did within three years of the abortive Continental-Capital merger talks, Six must have won-

dered whether he had missed his chance by not pursuing the idea more diligently.

Never one to cry over spilt milk, however, he then conducted merger talks with George (Ted) Baker, head of National Airlines, and who had just come out very well from the Southern Transcontinental Service Case, gaining a transcontinental route from Miami to California — even better than Continental's Texas-California package. It would have been an intriguing amalgamation, eliminating a few parallel routes on the transcontinental system, but mainly joining two airlines which operated in completely separate regions of the United States. The addition of the two would, as with Continental-Capital, have created another large airline to match in size the likes of American, United, TWA, or Eastern. Six's interest may have been enlivened by rumors that Northeast Airlines, which for so many years had saved Continental from the ignominy of being the smallest trunk carrier of them all, was the target for a take-over bid.

Robert Six and George Baker made a joint announcement on December 12, 1961 that the two airlines had agreed to merge. But the news had hardly reached the newspapers and magazines when a subsequent announcement was made that Bud Maytag, president of Frontier Airlines, would purchase Baker's controlling interest in National. And that was the end of the Continental-National deal, as Maytag concentrated on making a success of National in its own right.

Most observers in the airline business considered that, if the clash of personalities in the former Continental-Capital proposal — Robert Six v. Slim Carmichael — was potentially explosive, that of Six v. Ted Baker was equivalent to nuclear fission. Both were known as vigorous free spirits, liable to risk unorthodox policies and procedures for the betterment of their respective airlines. Every bit as sharp as Six, Baker however was devious, as witnessed by his maneuvering with Six and



The Boeing 720B, a smaller version of the B-707, was equipped with fanjet engines, and went into service on June 3, 1962.

Maytag simultaneously. Both were well known for their outspokenness and intemperate language, though Six had the better reputation as a man of his word, whatever his other shortcomings may have been. His big problem was that he was used to leading, and he would have been psychologically incapable of serving in any capacity under another man. One essential element in any merger in which Continental was involved was that Robert Six would be the boss.

During the next two years, two other merger proposals of giant magnitude, but not involving Continental, were floated. Predictably, each was vigorously opposed by Six. When, in August 1962, American and Eastern, two of the Big Four, asked the C.A.B. for permission to merge, the word "predatory" was used in Continental's opposing submission, and this was probably the mildest adjective used by Six in private. That the C.A.B. would ever have agreed to an amalgamation of such enormous size is unlikely. As it was, the examiner recommended disapproval in November, and this was confirmed by the board in the summer of 1963.

Unbelievably, another merger of, if anything, even greater consequence, was in the wind in 1963. Pan American Airways and TWA discussed the possibility of creating an airline which would have come close to creating a monopoly of overseas routes, at least on the North Atlantic, and which would have fulfilled Juan Trippe's ambition for domestic trunk routes, not only for their own sake, but to link Pan Am's overseas gateways. In this case, however, the two sides did not get very far, and the proceedings in Washington were dismissed at the two carriers' request.

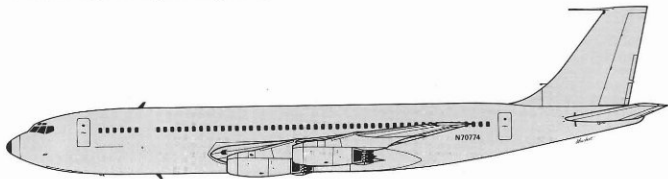
Good Housekeeping

Determined to maintain maximum profitability, Continental Airlines kept a tight control both on revenues and expenditures, at the same time seeking innovative methods and promoting new ideas in its efforts to improve both. In the former case, the revenue side of the economic equation, Continental began to acquire a reputation for challenging the basic procedures and time-

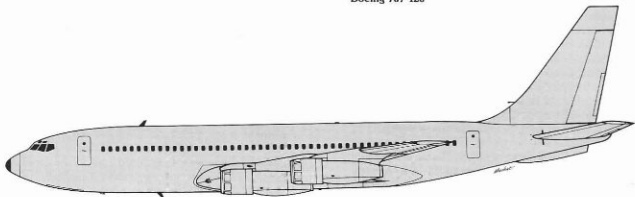


Aerial view of Stapleton Field, Denver, about 1960. Continental's hangars, formerly the wartime Modification Center, are the large ones on the right.

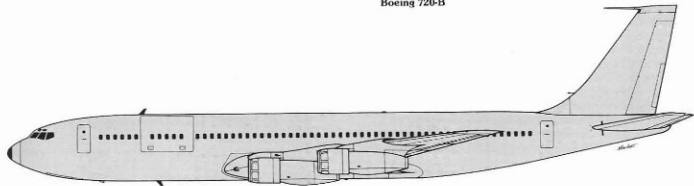
The Boeing Family of Airplanes



Boeing 707-120



Boeing 720-B



Boeing 707-320C

honored traditions of fare levels and fare setting, as practiced since time immemorial.

It had always been in the forefront in promoting low fares, having introduced coach class as early as December 1948, only a month after Capital Airlines had pioneered this startling experiment. Then there had been the controversial Club Coach Fare of 1957, the first time an airline had ever offered first-class features in coach class. Now, on December 1, 1961, Continental came up with economy class. At fare levels set at about 25 percent below coach class, passengers could choose a "no-frills" standard of on-board service on all *Golden Jet* flights. The economy fare between Los Angeles and Chicago, for example, was only \$77.00, compared with \$102.30 coach. A discriminating passenger, in the thrifty

sense of the term, could, by interchanging with Continental at Chicago, fly coast-to-coast for \$119.40.

In August 1962, the economy fare structure was rationalized to provide a three-tier service, with jet economy coach, business class, and first class. After a trial period, this was later extended by the C.A.B. to October 26, 1963. Although the three-class fare structure did not gain wide popularity during the early 1960s, passenger acceptance gradually changed, so that, twenty years later, the business-class section became almost standard practice by many airlines on their main routes. Once again Robert Six and his airline had been ahead of the pack.

On the cost side, Continental continued to strengthen its strict control over every item and to find ways to save unnecessary expenditure. The already commendable

annual *Golden Jet* utilization figure of about 13 hours revenue flying per day was increased even further to an impressive level of almost 15 hours per day. This was equivalent to spending about 40 minutes out of every hour in the air, and only 20 minutes on the ground, round the clock, every day of the year.

This unprecedented development was achieved by instituting a new maintenance procedure, at first called "perpetual maintenance." Previously, airlines had always taken aircraft out of service for mandatory maintenance and overhaul, according to a rigid timetable of check periods, varying from a few hours for frequent inspections, replacements, and replenishments of small items, to several days, or even weeks, for major overhaul of engines and airframes. This not only took aircraft out of revenue-earning service; but required spare aircraft to be kept in reserve as temporary replacements.

Whole fleets of aircraft were formerly carefully integrated so that individual planes fitted into a cyclic pattern. The larger the fleet, the less wastage of revenue hours lost on the ground, because a spare plane could be worked into a large pattern far more easily and economically than with a small fleet. Now, Continental, which had never enjoyed the luxury of possessing a large number of any single type, went one better, and revolutionized the whole system.

In cooperation with the aircraft and engine manufacturers, it devised a maintenance program in which the entire cyclic schedule of mandatory checks was broken down into self-contained periods. The work in each one could be performed in a few hours, without affecting the work in the other periods. Certain hydraulic systems and functions, for example, could be checked, serviced or replaced on one day, electrics the next, controls and instruments the next, and so on. The mandatory maintenance was thus more evenly spread over the whole operating life of the aircraft.

The basic principle was simple and sound. Almost all the work could be broken down into periods not exceeding about eight hours, which meant that the whole program, with certain exceptions involving major compo-

nent changes, could be undertaken during the hours of night. This released the maximum time for the planes to earn their keep during the average working day, which occupied about 16 out of the 24.

Continental introduced the system, which was later called "progressive maintenance," to the whole airline industry, which quickly recognized its worth, and — imitation being the sincerest form of flattery — thereupon copied it.

New Planes, New Colors

Other than the consolidation of routes between California and Texas, Continental did not receive any further routes from the C.A.B. during the first few years of the 1960s. It campaigned strongly for authority between Los Angeles and San Francisco, the busiest air travel corridor in the world; and was bitterly disappointed when, in the Pacific Southwest Local Service Case, the nod went to TWA, which had long felt deprived of an adequate share of the transcontinental traffic to the Bay Area.

Nevertheless, Continental's traffic was so buoyant during the period, as it quickly became established as a popular trunk airline on an equal footing with the big trunks in every market it served, that it added to its jet fleet. In June 1981, it ordered four of the Boeing 720B version of the 701, with shortened fuselage, and able to carry 108 passengers in a typical three-class seating layout. The aircraft cost \$27,500,000 — a figure which would have appeared horrifying, even to Robert Six, ten years previously — and went into service on the main routes on June 3, 1962. The 720B was equipped with the latest fan jet engines, that is, engines in which a large proportion of the intake air was carried around the combustion chambers, to rejoin and augment the main jet thrust. This gave the engines a much better fuel economy, which was reflected in lower aircraft operating costs.

By the time the 720B joined its sister ships, the 701-120s, Continental Airlines had, in the spring of 1962, adopted a new paint scheme for its entire turbine-



Continental's last DC-3, retained to operate the shuttle service from Denver to Colorado Springs, was finally retired in April 1966.



(1965) Continental Douglas DC-9-10

engined fleet. This was a handsome black, white, and gold, giving the aircraft a striking appearance that caught the eyes of potential clients at all the airports it served and made a distinct contrast with some of the more conservative color schemes of its competitors. Only the few DC-7B's and DC-6B's, used on interchange services, and the lone DC-3, still working between Denver and Colorado Springs, retained the old markings.

A Time for Reflection

During the early 1960s, Continental marked up two more "firsts" but these left little cause for satisfaction. When, on August 3, 1961, a Boeing 701, commanded by Capt. Byron Rickards, was hijacked on a Los Angeles-Houston flight, this was the first such incident to involve a U.S. jet airliner. Two men held the crew and four hostages at gun-point at El Paso where the plane had landed after the captain insisted that he would have to refuel to reach Havana, the hijackers' selected destination. Winning time by insisting on deplaning the other passengers to lighten the load, and after much procrasti-

nation by the ground crews, the aircraft was prevented from taking off by FBI sharpshooters who shot out the tires. Well-coordinated action by the FBI, the crew, and two of the hostages resulted in the capture of the gunmen. The aircraft returned to service within three days.

Less than a year later, on May 22, 1962, Continental's 25-year safety record came to an end. Its last fatal accident had been in 1937, when two passengers were killed in a Vega crash. Now the very same 707 which had been hijacked took off from Chicago's newly-opened (January 15) O'Hare Airport and crashed at Unionville, Missouri — at least, that is where most of the wreckage was found. At first, the presumption was that the captain, Fred Gray, had flown into a thunderstorm, and had crashed out of control, a theory which was even voiced by the F.A.A. administrator, Najeeb Halaby. Subsequent detailed technical investigation, however, revealed that the probable cause of the crash was a bomb explosion in one of the lavatories. Far from crashing out of control, Gray had somehow managed, by superb airmanship, to bring the plane down in a semblance of a glide, with no tail, and with the engines torn off. The crew had gone



The DC-9-10C was a version of the Douglas twin jet, equipped with a large cargo door. It could quickly be converted from passenger to freight configuration. It entered service on April 10, 1966, replacing the Viscounts.



Bob Six had great hopes for a supersonic airliner, but such designs as this never got off the drawing board.

through emergency procedures, there was no fire, and such was the skill of the pilot that one man was found still alive, in the severely damaged fuselage section, although he died shortly afterwards. The incident was a great shock to everyone at Continental. The FBI was never able to identify the perpetrator of the outrage, although there was a mass of circumstantial evidence against one of the suspected passengers.

Supersonic Digression

Less sensible, and undoubtedly motivated by emotion rather than by sound technical evaluation or business judgment, was Robert Six's preoccupation, amounting almost to an obsession, with supersonic airliners. Having taken a big gamble with the turboprops and jets, and won handsomely, he now took the plunge again, in a bigger gamble, and with much higher stakes. The odds, in the absence of potential supersonic routes, not to mention proof that a supersonic airliner could ever be profitable, were heavily against him; and although he escaped from

the predicament with not too much harm done, the episode revealed that his judgment could sometimes be faulted.

This was another example of Six's intuition rather than cold-blooded analysis of the facts ruling his decisions. To be fair, he was not the only one to be mesmerized by the grandiose claims of the supersonic supporters, who managed to perpetrate the myth that passengers would always wish to fly faster, at whatever cost. This totally ignored the problems of bringing operating expenses, not to mention manufacturing costs, down to a level which were economically feasible; and even worse the supersonic protagonists managed to convince airlines, governments, and public alike that the engineers and designers would somehow find a way to eliminate the sonic boom, a fundamental physical phenomenon, and one not likely to be surrendered easily by Mother Nature.

Nobody listened to the airline economists, who were skeptical from the start, and were proven right after billions of dollars had been spent on both sides of the Atlantic in a politically-charged rivalry for the elusive supersonic formula. The first project to be put into

serious development was the Anglo-French Concorde, first designed as a 140-seat aircraft to fly at 1450 mph at 60,000 feet, at which height the sonic boom was claimed to be acceptable to people on the surface of the earth. As it turned out, it was not. When the Concorde eventually went into scheduled service, flying only for the national airlines of the two countries which built it, its route pattern was restricted to over-water, or over-desert flying, over which, it must be stated, its technical performance was impeccable. But the sonic boom was ruled to be totally unacceptable over populated areas.

But while the dream lasted, Robert Six was enraptured by it. In July 1963 he made a deposit of \$505,000 on three Concorde, and Continental would have been the first United States domestic supersonic operator, had the aircraft overcome its operational handicaps. Only the British Overseas Airways Corporation, Air France, and Pan American Airways were ahead of Continental in the provisional order book list. Each of these flag carriers ordered six, while Continental ordered three — ahead of TWA, which at least had overwater routes, and American Airlines, hitherto always in the forefront when a new airliner made its appearance.

At the time Six placed his order, the cost of each Concorde was estimated to be about \$10 million, which was hopelessly optimistic; and delivery was forecast for 1971. But the enormous technical problems led to much higher costs, and the aircraft did not make its first flight until 1969; so that Six would have been faced with introducing a much costlier and smaller (100 seats) aircraft much later, in a period when the accent throughout America was to bring fares down, so as to expand the air travel market into lower income levels. Even if the sonic boom problem had been resolved, Six could never have operated the Concorde. He would have had to cover its impossibly high operating costs by charging impossibly high fares, in the region of \$1,000 one way from Los Angeles to Chicago or Houston. And this kind of super-luxury class fare structure could never have been sustained beyond a brief introductory period of a week or two when some people would have flown simply for the novelty.

Continental had a field day, however, with supersonic publicity. Flight times of 98 minutes from Chicago to Los Angeles, or 82 minutes from Houston or Kansas City to Los Angeles were confidently predicted — although no reference was made to the fare structure. But the Concorde order never materialized and the down-payments were refunded, with interest.

Six's determination to lead the United States into the supersonic era led him also, in 1966, to reserve delivery positions for the United States SST (as supersonic airliners were called), even before the contract had been placed with a manufacturer by the Federal Aviation Administration (F.A.A.) which was charged with the responsibility of producing for the U.S. a bigger, better, and faster SST than the Europeans. Continental's initial deposit was \$600,000 and on January 12, 1968, a further \$1,500,000 was contributed towards the delivery costs. Fortunately for Six, there was little penalty attached to reserving U.S. SST delivery positions (the contract was won by Boeing) as he got his money back. Other sundry expenditures could be written off as being well spent for promotional and image-building purposes.



In 1963, Continental introduced a handsome and dignified new uniform for its flight attendants. The string of pearls was the idea of Audrey Meadows, Bob Six's wife.

Business As Usual

Thankfully, memories of such tragedies as the fatal accidents and aberrations such as the SST are short. Both the industry and the public it serves keep the safety record in perspective, subconsciously, if not by statistical analysis, recognizing that air transport is as safe as any other mode of travel, and a great deal safer than driving a car or walking the streets at night in a big city. Airline life has to go on, and in the case of Continental, the accidents and the hallucinations had to be consigned to memory while the management concentrated on other important issues.

One of these was to move the corporate headquarters to Los Angeles. This took place on July 15, 1963, as a logical step in Continental's development. Denver was in the middle of its network, and although something of a hub, was not among the leading generators of traffic, nor the origin point of many of its flights. To transfer the administration and the engineering base to a main traffic hub, which was at the same time the terminus of most of the trunk services, was simply common sense. Also, Los Angeles was right on the Pacific Ocean, and therefore a good launching pad for any sorties in that direction which might be contemplated.

During the mid-1960s there were two important changes in the senior management. Harding Lawrence, an executive of Pioneer who had joined Six when that airline was taken over by Continental in 1955, and who had risen rapidly in the ranks, resigned at the end of 1964. During a period when Six was spending a great deal of time away from the airline, reaping some leisurely rewards for having run the airline almost single-handedly for many years, Lawrence had taken control. Continental had prospered under his guidance, which was no less dynamic than Six's, and Lawrence aspired to the presidency. But he felt that Six would never make room for him at the top and move over to the conventional nonactive and honorary position of chairman of the board, an accepted procedure in many large and successful U.S. corporations. Lawrence left to become president of Braniff International Airways on April 5, 1965 — and that is another story of the rise and fall of a dynamic leader.

On February 28, 1966, Louis H. Mueller, the veteran financier from San Francisco, who had once partnered Walter Varney in giving aerial joyrides in 1919, resigned as chairman of the board. Six continued without a chairman, retaining leadership as president. Hitherto, Continental's annual reports had seldom given credit to the efforts of any members of the staff, however senior, although each report, a model of its kind in every other way, customarily began with a picture of Six himself on the title page. But although he would never have admitted it, he was now beginning to feel the need for administrative support. The industry had expanded into new areas of control and management, each segment of which was demanding full-time attention in the modern world of complex financial management and exploding computer technology, both in the air and on the ground.

Rather in the nature of certain political parties in Great Britain, where a leader emerges in some mysterious process of human selection, a successor to Lawrence surfaced from the wealth of qualified talent which had been responsible for one of the smallest U.S. airlines conducting itself like one of the biggest. Alexander Damm had joined Continental from TWA at the time when Hughes was trying to tempt Six to join TWA. Damm had proved his ability by managing TWA's finances and turning in the largest profits in that airline's history. And he was to be no less responsible for Continental's powerful financial record in the 1960s. Damm effectively succeeded Lawrence as senior vice president and general manager of Continental Airlines.

Short Haul Jets

While debates on supersonics were attracting headlines and inspiring considerable promotional activity at Continental, the management had to attend to more practical matters. While the Viscounts had performed well, and for a few years at least had held the competitive edge over piston-engined types, the airliner manufacturers had refined their designing capability so as to produce twin-engined jet aircraft, able to compete economically in short-haul markets. The French Caravelle, followed by the British BAC-One-Eleven, had been the first twin jet airliners. Then the Douglas Aircraft Company produced the DC-9, and it was to that manufacturer at Long Beach, California, almost on its home doorstep, that Continental went for its next aircraft acquisition.

In March 1965, it ordered twelve DC-9C convertible cargo versions, with an option on six more. They went into service on April 10, 1966, first replacing Viscounts on the Dallas-Lubbock-El Paso and Dallas-Albuquerque routes, and quickly expanding to most of the shorter-haul segments of the network. Oddly enough, the DC-9s were never used in the all-cargo configuration; and in fact Douglas's sales of the type were never substantial. Six had been swept along by an intuitive, rather than an analytical judgment of the potential market for air freight. Continental again misjudged the market, but the Douglas plane provided sterling passenger-carrying service nevertheless.

Simultaneously, the last DC-3, unobtrusively shuttling back and forth between Denver and Colorado Springs, was finally retired. By this time also Continental had contracted in November 1965 to sell its fleet of Viscounts to Channel Airways, a local U.K. operator, run by another cavalier, Jack Jones, who flitted across the airline scene in Great Britain by ambitious (though less successful) policies similar to Six's. But such domestic equipment maneuvers did not occupy prime time in the deliberations at board level at Continental. Even visions of a transcontinental route were set to one side as, from his new vantage point on the shores of the Pacific, Bob Six cast his eyes westward in search of the means by which he could turn Continental into an intercontinental operator.



Boeing 707-320C

10

Oriental Reconnaissance

1964-1968

Military Air Charters

Transcending all other developments during the 1960s was Continental's entry into the international, indeed the intercontinental airline arena. It achieved this long-desired goal ingeniously — its critics would claim almost craftily — by a combination of three methods of penetration into the area. None was by the normal C.A.B. process of extending its existing network. One was a trans-Pacific military charter service; another a military contract support company in the Orient; and a third was a commercial subsidiary established in a U.S. Trust Territory, thousands of miles from the continental U.S. To emphasize the difficulties of breaking into new airspace by orthodox procedures, in November 1963 the long-awaited Trans-Pacific Route Case was concluded, and all applications, including Continentals', were denied, even for Mainland-Hawaii service.

Luck favored the brave. Shortly afterwards, in response to the demand by the U.S. Armed Forces for an enormous airlift of men and supplies across the Pacific in support of the Vietnam War, Continental Airlines was quick off the mark and was awarded a contract by the Military Airlift Command (MAC) in May 1964. Equipped with two Boeing 707-324C long-range fan-jets, Continental immediately launched itself wholeheartedly into the

Pacific arena, and injected its own personality into the operation. The military personnel were to discover that, when flights began on September 4, 1964, from the war theaters to other oriental cities and to the U.S., the on-board amenities of the 165-seat Boeings, including good food and gracious stewardess service, were fully up to U.S. domestic airline standards and superior by far to the average military airlift expectations.

The route network was a staggering departure for Continental, hitherto denied even a transcontinental route. Flying the Pacific was as great an undertaking as flying to the East Coast and across the Atlantic combined. Predictably, Continental performed in fine style. Mainly from Travis Air Force Base, near San Francisco (the very one which Bob Six had once surveyed while in the Air Force during World War II) and Norton and El Toro Air Force bases near Los Angeles, Continentals' Boeings flew via Honolulu and Anchorage to every vital airport in the western Pacific. Tokyo, Okinawa, Taipei, Clark Air Force Base in the Philippines, and several new names, including Saigon, Danang, Bangkok, and Cam Ranh Bay, were added to the Continental map on the Asiatic mainland.

The operation expanded mightily, with flights also from McGuire AFB, New Jersey, and Kelly AFB, Texas. The demand for additional capacity was promptly met,



The Boeing 707-320C began trans-Pacific charter service for the Military Airlift Command on September 4, 1964.

by continued repeat orders for long-range Boeing 707s. By the end of 1967, Continental was operating ten aircraft, with more on order, and during that year completed no less than 1,323 round trip flights across the Pacific, approaching an average of four per day. This was no small achievement, especially as a schedule reliability of 95 percent was maintained. Astonishing utilization levels were attained, peaking incredibly at almost 17 hours per day in 1966.

Some idea of the impact of the military charter business on Continental, and one which must have had a deep impression on everyone in the airline, can be deduced from the cold statistics. In 1967, only the third full year of the MAC Airlift, international (contract and charter) revenue passenger miles flown stood at more than three billion, more than 50 percent higher than the figure for the whole domestic system. Cargo ton miles, which peaked in 1969 in the Pacific operation, at close to 100 million, were more than double the domestic total.

By the time the Vietnam War came to its end, and the need for the trans-Pacific airlift declined, Continental Airlines had acquired all the transoceanic flying experience it needed. During the busy years of the airlift, it ranked as the fourth largest United States international airline, with only Pan American, TWA, and Northwest Orient ahead of it.

The impact on Continental's finances was wholly beneficial. During 1965-1968, the four busiest years of the trans-Pacific operation, one third of Continental's total revenues was accounted for by "all other revenues," most of which stemmed from the military work. Expenditures, on the other hand, were low, with aircraft operating long stages at maximum efficiency, and many of the ground services provided free or at minimum cost. In 1966, Continental's earnings, after payment of income

tax, totaled more than \$17 million, or an unprecedented 11 percent of total operating revenues.

The MAC contract charter service was finally terminated in April 1973. With wide-bodied aircraft already well into service by that time, all the Boeing 707-320C aircraft were sold, and an important chapter in Continental Airline's history came to an end.

The Charter Fallout

One of the fortuitous results of acquiring a fleet of long-range jets for the trans-Pacific military contracts was that any surplus capacity could be used elsewhere. In particular, this gave Continental the flexibility to participate in the thriving trans-Atlantic passenger charter market, specializing in packaged tours. These were normally contracted by travel agencies or travel clubs which took care of the ticket reservations, hotel bookings, and ground arrangements. All the contracted airline had to do was to supply the aircraft and to fly it after winning the contract by competitive bidding.

As a scheduled carrier, Continental was permitted to perform nonscheduled flying on a limited scale, the maximum allowable under C.A.B. regulations being 2 percent of the annual scheduled miles flown. By the late 1960s, the board had legitimized charter flying after a long and weary battle by the hardy survivors of the postwar buccaneers, the large irregular carriers. It formed a new category of airline, the supplementals, and although airlines such as Pan American campaigned bitterly against the nonskids, as they were familiarly called, they were forced to accept the challenge of this new breed of low-fare airlines.

The scheduled airlines, having previously condemned nonscheduled flying as the "eighth deadly sin," cynically

entered the market. For an airline the size of Pan American, 2 percent of its considerable annual mileage comprised a handsome slice of the trans-Atlantic charter market.

Had his career developed differently, concentration on nonscheduled flying would have been meat and drink to Robert Six. He was never happier than when engaged in a bitter competition for routes, aircraft, or any kind of contract. Low fares, disciplined operations, overheads cut to the bone; all these ingredients for a successful charter operation were subjects well understood by Six and his staff. As it was, Continental was able to fit in more than 50 charter flights to Europe in 1965, to destinations such as London, Frankfurt, Rome, Copenhagen, and Paris, all direct from California.

Continental Air Services

The second string to Continental's Pacific bow was a wholly-owned subsidiary, Continental Air Services (C.A.S.). This was founded on September 1, 1965, with its operating base at Vientiane, Laos, the small Indo-Chinese country of little more than two million people, and an unwilling participant in the conflict that was raging in neighboring Vietnam. Continental purchased the company from William Bird & Son, a construction contractor for the Agency for International Development (AID), which had welcomed the injection of a little free enterprise competition with Air America, thereby keeping costs down.

Bird had purchased the operation from R. L. "Dutch" Brongersma, who had spent 25 years in the Far East, and who, in 1956, had acquired several small aircraft to fly supply missions into the mountainous areas of Vietnam for the authorities in the region. Brongersma was retained by Bird, and thereafter by C.A.S.



The Swiss-built Pilatus Porter was a versatile little plane specially designed to land on very short, unprepared strips. Continental Air Services used them in Laos during the latter 1960s.

Continental Air Services operated an extraordinary mixture of aircraft. Thirteen or fourteen different types were represented in the fleet, which numbered between 40 and 50 aircraft during the latter 1960s. There were five or six each of the well-tried Curtiss C-46 and Douglas C-47 transport planes which are always to be found in remote places all over the world, hauling supplies into airstrips which few other modern aircraft of their size can use. For the primitive strips which presented problems even to the DC-3, C.A.S. used specialized STOL (Short Take-off and Land) types: six Dornier D-28s, three Scottish Aviation Pioneers, and twelve Pilatus Porters, the Swiss-built plane designed to land on the proverbial postage stamp. C.A.S.'s fleet of this last remarkable plane



This Laotian airstrip was typical of those served by Continental Air Services.

was the largest in the world. Sundry small Cessnas, Pipers, helicopters, and other planes made up the remainder of the fleet.

Every month, during the period of emergency of the Vietnam War, with this rag-tag assortment of flying machines, Continental Air Services flew about 4,000 hours, carrying an average of about 20,000 passengers and 6,000 tons of assorted cargo. Operating in rugged terrain, frequently under severe conditions (a mild understatement to cover typhoons, attacks by enemy warplanes, and ground fire) the C.A.S. crews became expert in mastering short take-off and landing techniques, and altogether acquired a vast experience in flying skills which would have been impossible to simulate anywhere else.

One disappointment was the inability to use three Lockheed C-130d Hercules transports, which turned out to be too big for the complex pattern of supply missions in the jungle areas, where the individual aircraft loads were too small to permit their efficient distribution in large transports. Some of the supply missions were carried out by the use of "kickers," recruited mainly from

Thailand, who pushed loaded pallets out of the open cargo doors of the C-46s and C-47s. Each pallet, destined for a village or community cut off by surface routes from normal supply sources, would typically be loaded with almost half a ton of rice. Up to seven pallets could be carried in each plane.

As the Continental Air Service organization developed, its work divided itself naturally into several parts, each quite distinct from and independent of the trans-Pacific Continental Airlines B-707 military supply line. First, in Laos, where C.A.S. had originally taken over the operational base of William Bird, it was entirely under contract to the AID programme and the Laotian government. In this activity, it operated side by side with Air America, the division of Civil Air Transport (C.A.T.) of Taipei, Taiwan, and known to one and all as a branch of the C.I.A. Additionally, C.A.S. provided two C-47s for the use of the Laotian government, to carry troops and officials from Vientiane to provincial points.

Second, C.A.S. was subcontracted to Air Vietnam, the civil airline of South Vietnam, whose resources were unable to cope with the dual responsibility to maintain a



This load of cargo being discharged at Bangkok was typical of the massive trans-Pacific airlift performed by Continental during the Vietnam War.



The Lockheed C-130 Hercules was a good load carrier, but could not use the small strips in the Laotian jungles.

commercial operation and at the same time undertake work for the Vietnamese government. C.A.S. signed an extensive contract with the vast American RMK-BRJ construction consortium, carrying supplies to assist in building docks, airports, roads, and other badly-needed facilities in the war-stricken country.

In April 1968, C.A.S. became involved in a third country, Thailand. In cooperation with a group of Thai businessmen, it formed Bira Air Transport, Ltd., to perform air taxi work and other commercial air services in Thailand. Finally, in October 1970, it organized Air Alliance, Inc. as a subsidiary company to provide aircraft, crew, and maintenance to Khmer Akas (Cambodia Air) which had been established by Cambodians in Phnom Penh to carry out air transport work. It made its first flight on October 21 from the capital to Battambang, and, for the short period before that unfortunate country was engulfed in a dreadful holocaust, was the only airline in Cambodia.

Continental Air Services employed a work force which at times exceeded 800 very specialized and very talented aviation people. As the Vietnam War drew to its close and demands for support services changed, so did C.A.S. In the early Seventies, for example, C.A.S. planes, nominally under the ownership of Air Alliance, cooperated with a Thai company to provide a service between Singapore and southern Thailand in support of drilling operations by two large U.S. oil companies.

Continental Air Services, Inc., was finally wound up and all operations terminated on December 19, 1975, as the Communist forces took over the entire region of southeast Asia, including Vietnam, Cambodia, and Laos. And of course the Military Airlift Command trans-Pacific contracts also came to an end.

Apprenticeship Complete

Meanwhile, however, all these activities — and there were more to come — in the Pacific region served

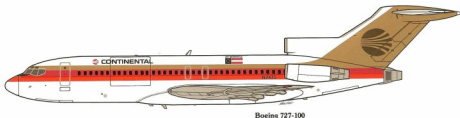
Robert Six and Continental Airlines well in the campaign to obtain permanent certification for scheduled service to the Orient and to Australia. Through the combination of long-distance, transoceanic experience in fanjet aircraft gained from the MAC contracts, and the conduct of affairs in the oriental environment gained from its Continental Air Services activity, the parent company was fully equipped to challenge all rivals in a legal presentation to the Civil Aeronautics Board. In addition to the experience, it possessed a fine fleet of Boeing 707 aircraft, ideal for the mission, and was fortuitously in good financial health, partly because of its lucrative contracts over the Pacific.

Late in November 1966, 18 airlines filed exhibits with the C.A.B. in support of applications for routes in the

reopened Transpacific Route Investigation. The Transpacific case was probably the largest ever heard before the board. Continental had every reason to believe that its case was among the strongest that would come before that agency. But to strengthen its position, and to ensure that its image was no longer simply confined to that of a U.S. domestic carrier with restricted horizons, Continental then proceeded to intensify its campaign. Already holding two trump cards, the MAC trans-Pacific contract and Continental Air Services, it proceeded to play a third. It formed Air Micronesia, a local service airline serving the islands of the central Pacific, with a route network extending over a distance greater than the width of the contiguous United States.



Scene at Vietiane, Laos, during the late 1960s, as supplies are unloaded from a Continental plane.



Boeing 727-100

11

Air Micronesia 1968-

A Unique Problem of Local Service

The islands of the western Pacific Ocean, now known as Micronesia, have been under the control of many different foreign powers during the 20th century. Consisting of the Mariana, Caroline, and Marshall island groups, the 2,000 tiny specks of land and coral atolls together cover an area no bigger than Rhode Island. Yet they extend over an area of about 3 million square miles, roughly that covered by the United States, without Alaska. During the past half century their population, confined to about 4 percent of the islands, has increased from about 50,000 to 100,000, all of whom could be accommodated in the Rose Bowl!

Originally part of the Spanish empire after their discovery by Magellan in the 16th century, they were purchased by Germany in 1899, after the Spanish-American War. Guam, in the Marianas, however, was annexed by the U.S. With the defeat of the Central Powers in World War I, the islands came under Japanese jurisdiction under a mandate of the League of Nations until 1945, when the Axis Powers were defeated in World War II, and they passed to the United States, under a mandate of the United Nations.

Late in 1949, the U.S. Department of the Interior took over the administration of the islands from the United

States Navy, and among other development projects, set about the task of providing a transport service between the more important of the 84 inhabited islands. This was no mean task, as these were spread out over a distance of almost 3,000 miles from east to west, greater than from New York to Los Angeles. Nevertheless, early in 1950, several air and sea carriers were invited to participate in a survey, accompanied by naval personnel and representatives of the Civil Aeronautics Board.

Among the carriers was Transocean Airlines, one of the free-wheeling nonscheduled airlines which arose after World War II. Founded by Orvis Nelson — who would have hailed Robert Six as a fellow traveler — its speciality was undertaking unusual air transport missions throughout the world. Often he established airlines in association with the governments of countries which needed airline service but did not have the technical knowledge or resources to undertake the task alone. Late in 1950, bids to operate an air service in the Trust Territory of the Pacific, as the islands under mandate had become known, were called for by the Department of the Interior. Transocean, with its record of difficult assignments behind it, won the contract, setting up headquarters in Guam.

On July 1, 1951, Transocean began inter-island air service with four Consolidated PB5Y-5-A amphibians, modi-

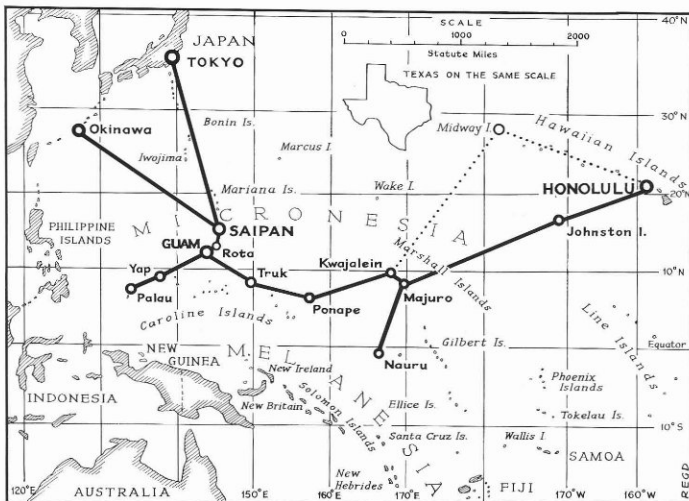
fied to carry ten passengers, plus cargo. The aircraft were supplied by the Navy, while maintenance, spares, fuel, crews, and administration were supplied by Transocean. Regular flights were made from Guam to the main islands, Truk, Ponape, Majuro, Saipan, Yap, and Koror. The service was entirely for the benefit of the islanders and administrators, as the Trust Territory was not yet open to tourists, for whom, in any case, there were absolutely no facilities. Transocean operated the service for nine years, until it went bankrupt on July 11, 1960, and Pan American Airways was asked to take over the responsibility.

The world's most experienced airline allocated for the service one ancient Douglas DC-4, to operate to the few islands which boasted primitive airstrips, and two venerable Grumman SA-16 Albatross amphibians to serve Ponape. During the seven years under Pan Am, the Trust Territory Air Service was never completely satisfactory. Breakdowns were commonplace, as the supply and maintenance of adequate spares holdings were expensive and presented a considerable logistics problem. Comfort standards were poor, and the islanders may have felt that Pan Am's canvas seats implied that they were second-class citizens. No hot meals were served, and cold box lunches for a five-hour DC-4 flight led to frequent adverse comment.

As a consequence, in the late 1960s, the Department of the Interior invited proposals for improved service, and received bids from Pan American, the incumbent; Northwest Orient Airlines, the second U.S. trans-Pacific scheduled airline; Hawaiian Airlines, based a mere 2,300 miles away from the easternmost island of Micronesia; and a newly-formed airline, promoted by Continental, whose Pacific experience was restricted to transoceanic military charter work and a nonscheduled operation in southeast Asia.

Air Micronesia is Born

In making his bid for a permanent Pacific foothold to succeed a temporary one, Robert Six could not have orchestrated his campaign more shrewdly if he had hired a team of campaign tacticians. The key to the strategy was the formation of the United Micronesia Development Association (UMDA), in which Continental Airlines held a 32 percent interest, with the balance held locally. Its objectives were to further the occupational development of the Micronesian islands, including the creation of a tourist industry as a source of wealth. UMDA was the largest shareholder in the formation of Air Micronesia,



Air Micronesia, 1968. By a remarkable feat of political negotiation, Robert Six established Continental's presence in the Pacific.

holding initially 49 percent of the shares, with Continental Airlines holding 31 percent and Aloha Airlines, of Hawaii, 20 percent.

The terms allowed for the progressive purchase of additional shares by UMDA, at 2 percent per year, up to a maximum of 60 percent. With Continental's own shareholding, together with its approximately one-third share of UMDA, the whole operation was transparently a Continental affair.

In its petition for permanent certification, Continental made three pledges. First, it would fly jet aircraft, specifically Boeing 727-100s, just as soon as airfields could be prepared to accept them. Even though turboprop Lockheed Electras (which presumably would have been used by Northwest, if successful in its bid) were better than Pan Am's DC-4, Air Micronesia thus went one better, and could not be faulted from a technical standpoint. Hawaiian did not own aircraft with sufficient range.

Second, Continental undertook to train Micronesians to become an integral and significant part of Air Micronesia's work force.

Third, it pledged itself to create a tourism industry in Micronesia, to help revitalize its stagnant economy, by building six modern resort hotels, one in each of the Trust Territory's six political divisions.

Such a combination made Air Micronesia's case almost unassailable by its rivals. On January 17, 1968, it signed a five-year contract with the government of the Trust Territory, and thereby acquired instant legal status. Nevertheless, knowing that only one battle had been won and that the war was still ahead, Air Micronesia lost no time in taking every possible step to consolidate its precarious foothold in the Pacific.

Dominic P. Renda, senior vice president, legal, & corporate secretary of Western Airlines, was hired as president of the embryo airline, based at Saipan. His first task was to launch a crash program of airfield improvement and construction so that the promise of jet service in the immediate future would not be seen as an idle boast or a confidence trick. Interim service was quickly provided to those islands with airfields by one of Continental's Douglas DC-6B's which was now superfluous to the interchange operation with United. Affectionately nick-named *Granny Goose*, it replaced the unpressurized DC-4 over the old Pan Am network. The amphibian route from Truk to Ponape was continued with the Grumman Albatrosses, leased from Pan American.

Air Micronesia's big day was May 16, 1968, when the Boeing 727-100 *Ju Ju* left Saipan and flew to Honolulu, a distance of 4,300 miles, with seven stops. A jet connection was also made from Saipan to Okinawa, still at that time under U.S. administration, but the branch line from Guam to Yap and Koror was continued with the DC-6B; and the connection from Truk to Ponape was still maintained by the veteran Albatross.

Little change was made to this basic network. Johnston Island was added as an intermediate stop between Honolulu and Majuro, for traffic authorized by the military command, on June 18, 1969. But this was short-lived, as in January 1971, the storage there of chemical warfare — nerve-gas — supplies, removed from other parts of the western Pacific, led Air Micronesia to suspend service to that island. The Micronesia-Hawaii connection was preserved by routing the planes via Midway Island, with



Dominic Renda, previously with Western Airlines, was Air Micronesia's first president.

Kwajalein as the first port of call. Although this led to higher costs, because of the circuitous route with no extra revenue, the main objective of preserving Micronesia as an integral part of the aerial highways of the North Pacific was preserved.

On December 4, 1969, a branch line was opened from Majuro to the tiny island republic of Nauru, formerly a British colony, but now independent and comfortably wealthy because of its enormous deposits of guano, the basic ingredient for a thriving phosphate industry. But this service was suspended after little more than a year, at the same time as the suspension at Johnston Island. Oddly, this little Air Micronesia feeder line was Continental's first commercially scheduled international air route. Though not sustained, perceptive observers may have perceived it as analogous to the biblical cloud no bigger than a man's hand.

Air Micronesia fulfilled all the promises made in its three-cornered program of development. On February 9, 1970, it began Boeing 727 jet service to Ponape, when the new 7,000-foot runway was opened. The two leased SA-16 Albatrosses were consequently retired, and the first pledge was thus honored to the full. Since the summer of 1968, the second pledge had been faithfully kept, when the first six Micronesians began a mechanics' training course. To employ local personnel to work for the airline was obviously a popular development. Radio communications were improved — installed would perhaps be a more correct term as none existed on most islands — and local personnel trained in their operation. To support the third pledge, the Department of the Interior eased the entry regulations for the Trust Territory, so as to



Air Micronesia's first Boeing 727-100 Ju-Ju awaits passenger boarding at Truk.

permit tourists, and the first new Continental Hotel was opened in June 1970, at Guam, to be followed by others at regular intervals.

Permanency in the Pacific

Gaining permanent recognition for the Micronesian service was a long struggle. The C.A.B. examiner had recommended Air Micronesia, but in July 1970, the board recommended that Pan American should operate it. At first, the White House referred the matter back to the C.A.B., but Trust Territory officials strongly supported Air Micronesia, even threatening to impound Pan Am planes if they landed. Eventually, on August 11, 1971, the Civil Aeronautics Board granted permanent authority to Continental/Air Micronesia for routes in the U.S. Trust Territory. Additionally, a new segment was added, though never flown, linking Okinawa with U.S. Samoa, via the Gilbert and Ellice Islands, thus expanding the line by another couple of thousand miles or so. The only reservation was that the Okinawa certificate's duration was limited to five years after May 15, 1972, in anticipation of the eventual transfer of that island back to Japanese sovereignty.

Bob Six and Continental knew that they would still have to fight every inch of the way to obtain final White House approval for this vital route. The president always had to approve any C.A.B. foreign route award, ostensibly for security and defense reasons. But the privilege was often abused for political party reasons, and from reaction to powerful lobbying groups; and so it was with President Nixon. Twice he sent the opinion back to the board, clearly favoring Pan American Airways, and twice the C.A.B. provided additional logic for its choice. The president was on dangerous ground. He ran the risk of undermining the integrity of an agency whose implied judicial rulings as well as its statutory regulatory functions were supposed to be politically impartial. He also risked alienating Micronesian officials, who could not fail to be completely satisfied with the methodical and comprehensive way in which Continental Airlines had kept all its promises.

The president eventually conceded the point, and on October 5, 1971 approved the permanent certificate for Air Micronesia. At last Continental had a permanent foothold in the Pacific Ocean.

For the next five years it consolidated its position, not

by any new spectacular events, but by steady, reliable service, matched to the islanders' needs, and to the growing demand for tourism which it had itself stimulated. On December 15, 1972, a second Boeing 727-100 was added to the Air Micronesia fleet, permitting jet service to Yap and Palau, and allowing the old DC-6B to be honorably retired. A new teletype system was introduced, linking all six Trust Territory districts, and no doubt providing communication also for matters other than directly airline-related ones. On March 15, 1974, the Saipan Continental Hotel was opened, the largest of the hotel chain, and calculated to attract a new wave of tourism from Japan, whose links with the island remained very strong, not only from its prewar League of Nations mandated tenure, but also because of sentimental ties as a legacy of World War II.

There was a political change. In 1976, the Northern Marianas, i.e. Saipan and the neighboring islands, voted to separate from the Trust Territory, and to become a Commonwealth of the United States. The new government was elected in January 1978. Also, on January 1, 1977, Kusaie Island, at the extreme eastern end of the Carolines, was designated as a new district of the Trust Territory. But these events did not affect Air Micronesia.

Expanding the Beachhead

The service to Nauru marking Continental's first cautious scheduled service footing on foreign soil, had been

a modest and temporary episode. But Air Micronesia's importance was out of proportion to the size of its modest two-aircraft fleet. And so history was to repeat itself, when in the mid-1970s, Air Micronesia gained access, not to a tiny island republic, but to Japan, one of the world's great powers, and an international air travel generator of the first magnitude.

Like all previous steps forward in its route expansion, Continental's route to Tokyo did not come easily. The idea had first surfaced in April 1972, when the Civil Aeronautics Board instituted a proceeding to consider United States flag service between Saipan and points in Japan. The bilateral agreement between the two countries had already been in effect since 1969, authorizing each country to select a carrier to operate the service.

The case dragged on through oral arguments during 1973, but before a decision was made, it was reopened in 1974 for a second hearing, and further submissions were heard before the board in 1975. The C.A.B. sent a unanimous recommendation to the president in August of that year to award the routes to Continental/Air Micronesia, with the restriction that it could not operate single-plane service between Guam and Tokyo. This was returned, with presidential doubts as to whether the route could be financially viable, but the board held its ground, albeit with much procrastination, and returned the recommendation to the president on May 10, 1976. Eventually, President Ford gave his full approval for the route, but with the Guam restriction retained, and the



Air Micronesia's 727 loads up at Guam from one of the airline's jitneys.

award became effective on August 28, 1976.

Shortly afterwards, on July 17 of that year, Saipan International Airport was opened, providing the necessary standards for the largest wide-body aircraft, and foreshadowing considerable Japanese potential tourist traffic. Almost as if to protect Air Micronesia from financial embarrassment (as the little airline lost money during its early years, and had to struggle to break even at the best of times), Continental sold a Boeing 727-100 to its associate on March 1, 1977, and simultaneously leased it back for twelve years. This assured "Air Mike," as Air Micronesia was now called by its many friends, of permanent income from a source that would not be affected by fluctuating economic or traffic trends in the western Pacific.

After further negotiations with the Japanese government, service was inaugurated between Saipan and Tokyo on October 1, 1977. Thus by its visionary promotion of Air Micronesia, in a gamble which had its roots in endless submissions to an apathetic Civil Aeronautics

Board, and the experience of transoceanic charter service during a military emergency, Continental Airlines finally became an international airline. Patience and perseverance eventually received their just reward.

By this time, as will be described in the next chapter, Continental had already extended domestic service as far as Hawaii, so that theoretically Bob Six had also achieved his ambition of becoming a trans-Pacific operator. A passenger could leave California, change from Continental to Air Micronesia at Honolulu, and reach Japan via the island chain, with Saipan as the last stop.

Though this was a somewhat ponderous operation, the die was cast. Continental could just as well have been renamed Intercontinental. From this time on, there was no turning back, no loss of momentum, and the airline, stimulated by the prospects for widely expanded service throughout the Pacific region, took on a new lease of vigorous life. By the end of 1983, Air Micronesia's fleet had increased to four Boeing 727s, and was operating to Manila and Nagoya as well as to Tokyo.

PLAN A REUNION IN HAWAII

The next best thing to having your serviceman come home is to visit him. Now that we serve Hawaii, Continental Airlines makes it easier than ever for you to join your serviceman on R & R. You'll save money too -- with a special air fare discount available to the families of servicemen on R & R Leave or Combat Duty Convalescence. In addition, Continental will gladly furnish helpful information for other official R & R Leave sites outside the United States.

REQUIREMENTS AND I.D. FORMS

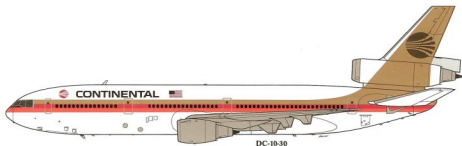
No passports, visas or health certificates are necessary for U. S. citizens traveling to our 50th State of Hawaii. However, for travel to other official R & R locations (Bangkok, Hong Kong, Tokyo, Peasang, Kuala Lumpur, Taipei, Manila, Singapore and Australia), valid passports and specific visas and health documents are required. Continental or your Travel Agent can give you all the data you need on the requirements of each country, as well as connecting flight information. We can also supply helpful tips on proper wardrobe, lightweight packing, currencies and customs. In order for you to be eligible for low travel fares, the following procedures are necessary:



The serviceman overseas is required to obtain two copies of Department of Defense Form DD 1580. Along with these copies, he will receive a list of instructions. Usually, DD Form 1580 and these instructions are printed on the reverse side of his orders. After filling out the two copies, he forwards them to his wife or parents. The ticket agent who issues the ticket to the traveler will retain one copy. The other copy must remain in the possession of the traveler and displayed upon request of the carrier. In order to purchase a ticket, wives of U. S. military personnel should have a Department of Defense Form 1178 (Uniformed Services Identification and Privilege Card). Parents may use any of the following forms of identity: a passport, birth certificate, driver's license, or voting registration card.



Exhibit G. Continental's R&R leaflet, aimed at Vietnam War servicemen and their families.



12

Trans-Pacific Conquest

1967-1978

Sparring for Advantage

The acknowledged success of Continental's ventures into the Pacific arena led to serious and systematic plans in furthering of the cause for permanent certification of a route to Asia. But there were also many things to attend to on the domestic front. These were individually less spectacular than a 7,000-mile route to Tokyo, but collectively they contributed to the ultimate goal. Each step forward in the consolidation and expansion of the route network helped to reinforce Continental's airline stature as viewed by the C.A.B., the public, and its rival airlines alike.

In 1966, the route mileage covered by all the Continental claims in the various investigations before the board exceeded that of its existing domestic system. This was no unusual circumstance for Robert Six, who seemed to approach the C.A.B. much in the same way that a wily souvenir seller would approach an inexperienced tourist: to ask for three times what was expected, and if the deal was made for half the asking price, he was ahead. Thus, Continental's negotiators in Washington took in their stride a flurry of widely separated cases: Pacific Northwest-Southwest, Los Angeles/Chicago-Toronto, Central Airlines Route 81, Twin Cities-California, and the Gulf States-Midwest Points Service Investigations. And with

the huge reopened Trans-Pacific Case almost a permanent fixture on the calendar, others were added to the list so that by 1968, the airline was involved in no less than 13 cases.

Simultaneously it kept Continental's name constantly before the public eye by supportive promotion with a direct appeal, such as by introducing the "Proud Bird With the Golden Tail" slogan. While this led to a few ribald remarks, the airline was one of the more talked about in aviation circles, and by the traveling public, which also took advantage of the special *Discover America* fares launched in March 1967. Continental backed up the outside paint schemes with something tangible inside the planes: in 1968 it introduced five abreast seating as standard in its Boeing 707s and 720s, without charging a higher fare than the six-abreast offered by its competitors. For several years, Robert Six had a running battle with the C.A.B. over this issue. The agency claimed that for such an improvement, under the generally accepted basis that fares varied according to comfort standards, Continental should charge more. But with an average break-even load factor of 31 percent in 1967, the airline could justly claim that it could afford to offer the public better service as a direct result of its own efficient methods and procedures; and that the C.A.B. was thereby penalizing good housekeeping. The issue was debated

for many years, and another airline based in Los Angeles echoed Continental's basic principles by offering more generous legroom with its six-abreast seating. Ultimately the C.A.B. had to give way to a defiant pair of airlines which demonstrated their faith in common sense, and which were supported by public opinion. In a small way, such action by the board's bureaucrats served to sow the seeds of dissatisfaction with unnecessarily rigid regulations, and ultimately led to legislation which brought about the downfall of the C.A.B. itself.

Boeing 727s to the Northwest

One of Continental's many route applications met with success when the C.A.B. awarded Continental a route to the northwestern states in April 1967. It was important not only because it added new territory to its marketing area, but because — as on previous occasions — it served to create the demand for and the selection of another aircraft type. Continental service began on June 13 from New Orleans to Portland and Seattle, via Houston, Tulsa, and Wichita, and the now redundant interchange service with Braniff was suspended on the same day. That with United also ended on July 1.

At first, Continental leased a Boeing 727-100 from the manufacturer, and operated it until it took delivery of its own 727-224s in May 1968. The stage distances involved in the various combinations of segments flown over the

new routes to the Northwest encouraged Six to move up from the Douglas DC-9, which seemed too small for such a route, but at the same time to choose a plane which was more suited to the medium-range distances than the 707; hence the choice of the three-engined 727, in its "stretched" version, to take care of the expected traffic demand. Having disposed of its piston-engined fleet, and earlier versions of its jet aircraft, and never at a loss to find a reason for publicity, Continental was able to claim, in 1967, that it was the only — and therefore the first — all-fanjet airline in the United States.

During 1968, several events combined to provide cause for celebration. There were modest changes to the system, such as the inclusion of Austin in the mainstream of routes across Texas, and direct service to Colorado Springs from both Chicago and Los Angeles. A new paint scheme was adopted, designed by the noted designer, Saul Bass. Replacing the already handsome black and gold fuselage was a striking combination of orange, red, and gold horizontal stripes, with the golden tail retained (to stay with the slogan) and a new, modern insignia to supersede the old Thunderbird. In June 1968, what was claimed to be the world's largest air cargo building was opened at Chicago's O'Hare Airport, although this turned out to be one of Six's misjudgments, as air cargo did not grow as sharply as some experts had predicted. More fully utilized was the new SONIC computerized reservation service, introduced during 1968, as



As a prelude to scheduled trans-Pacific operations, Continental expanded its domestic routes to the Pacific Northwest, using the Boeing 727-200.



The Boeing 747 was used by Continental during the early 1970s, before the DC-10 became standard equipment.

Continental joined in the quiet revolution which was going on behind the counters and the agents' ticketing desks.

A Cat and Mouse Game for the Pacific

The inauguration of jet service in Micronesia in May 1968, related in the previous chapter, was a major event for the year. But transcending all else, coming as an apparently well-timed Christmas present on December 19, 1968, was the president's decision in the TransPacific Route Case. The C.A.B. had recommended Eastern Air Lines for the route to Australia and this seemed an odd choice as the airline was identified with the eastern states. But in fact this was an important facet of the reasoning behind the selection. Nevertheless, Lyndon Johnson overturned the decision in favor of Continental. Not only that, the presidential recommendation was positively lavish. The islands of Fiji and Samoa were predictably included as en route points to Australia and New Zealand; but full provision was made also for connecting routes through the U.S. Trust Territory (Micronesia) to Guam and Okinawa. This was treasure indeed, and seemed too good to be true. And it was.

Before disaster struck, however, there was more good news, in the shape of a New Years gift, on January 4, 1969. The Hawaii Route Award gave Continental access to Honolulu from Chicago, Kansas City, Phoenix, and Los Angeles/Ontario/Long Beach, to be effective from February 13, and to embrace full connections between Hawaii and both Micronesia and U.S. Samoa. Continental's cup seemed to have runneth over. And it had.

On January 24, 1969, in one of his first acts on assuming office after his victory in the election, President Nixon

deferred the international phase of the Pacific and Hawaii awards, and even postponed the Hawaii routes until April 14. The president made his position quite clear on February 11, by directing the C.A.B. to vacate all certificates previously awarded. Warming to his work, on April 11 Nixon disallowed a second new South Pacific carrier (the first being American) on the grounds that the second one should bypass California. Why this should have disqualified Continental is not quite clear, as Robert Six would have been perfectly prepared, even eager, to bypass California if that was all that was needed to gain access to the Pacific. Other decisions affecting Continental were the further deferment of the Samoa-Okinawa route, pending the Pacific Islands Local Service Investigation, and the disapproval of the use of satellite airfields, for example Long Beach and Ontario.

How much of all this was the result of impartial economic analysis, and how much the result of partisan politics (Nixon was Republican, Six was Democrat), not only in the choice of airline, but also in choice of alternate airports in the sensitive Republican strongholds of southern California, will never be known. Politics apart, the use of satellite fields such as Ontario would have been a daring experiment in diluting traffic from the congested Los Angeles gateway, and one which had been fully justified by the new route combinations which had been successfully launched by intrastate carriers such as P.S.A. and Air California.

Hawaii Service at Last

After all the bickering, however, Continental Airlines finally reached Hawaii, on a permanent basis and with generous route authority. In the C.A.B.'s definitive award

CONTINENTAL RAPS ABOUT 1972'S GREAT HAWAIIAN TRIP. AND THE YOUTH MOVEMENT.



Exhibit H. A leaflet used to market Continental's Hawaii trips.

on July 22, 1969, Continental retained all the points listed in the original recommendation to the president on January 4, and received additional authority to serve Honolulu from Seattle and Portland because it was prepared to offer coach fares and its competitors were not so flexible.

The first Continental Mainland-Hawaii service started on September 9, 1969. It originated in Chicago and was routed via Los Angeles, using a Boeing 707-320. On October 1, further service was added from Denver, Seattle, Portland, and Houston, and on November 1, a nonstop Chicago-Honolulu schedule consolidated the Hawaiian route structure.

Quite obviously, these routes constituted a major breakthrough for Continental, not only because of its access to a vacation market with enormous growth potential, but because (as has been discussed in the previous chapter) Mainland-Hawaii was a vital link in the chain of routes which was eventually to culminate in a trans-Pacific service. And as if to emphasize its confidence, Continental followed its own established custom and marked the acquisition of an important new market with the deployment of yet another new aircraft type.

Wide Bodied Aircraft

Fortunately for Robert Six, his infatuation with supersonic airliners had not deflected his attention from the course of mainstream airliner development. Never accustomed to selling himself short, he quickly joined the ranks of customers for the new product from the formidable Boeing production line. Boeing and Pan American Airways had astonished the world — almost in a repeat performance of the former Pan Am 707/DC-8 order — by announcing the purchase, on April 13, 1966, of 25 Boeing 747s. Each of these huge airliners could carry between 360 and 450 passengers (even more in strict economy class) and was 80 percent larger than the biggest commercial jet then in service, the DC-8-63. Pan American, as was its custom, was the first to enter service with the new giant, on January 22, 1970, but Continental was not far behind.

On June 26, 1970, the big new Proud Bird with the Golden Tail made its appearance on the Chicago-Los Angeles-Honolulu route. At first equipped with 355 seats, this was later reduced to 290, which for an aircraft the size of the 747 was truly luxurious. Logically, the service combined Continental's two best routes, the Chicago-Los Angeles domestic connection, linking the U.S.'s second and third largest cities; and Los Angeles-Honolulu, the busiest link to Hawaii. By 1972, Continental had become the second largest passenger carrier in the latter market, such was its competitive impact against Pan American, United, American, Western, and others.

The decor in the Continental Boeing 747s was possibly the most attractive of any of the world's leading airlines which rushed to operate "Jumbo-Jets", as they were quickly called by the popular media. (Boeing is reputed to disapprove of this term, but no doubt prefers it to the "Big Ugly" nomenclature adopted by a certain aircraft manufacturer south of Seattle.) The different classes of service were allocated cabins with color combinations reminiscent of the Pacific-related locales served — plus luxurious amenities: Diamond Head Lounge in first class, Polynesian Pub in coach, and Ponape Lounge in economy. By the spring of 1972, four Boeing 747s were in service, promoted with all the flair for which Continental had become known. Much of the credit for a cabin decor which was the envy of every other U.S. airline must go to Audrey Meadows, the former actress who had become Robert Six's third wife.

One advantage of operating the large aircraft was the considerable volume of freight capacity made available, and this was particularly timely, as during 1971 and 1972 a longshoremen's strike on the West Coast forced many shippers to and from the Hawaiian islands to make use of air freight. And of course, Continental was only too happy to oblige with its 747s.

As if to trump its own ace, Continental ordered more wide-bodied aircraft almost as soon as the first one went into service. In July 1970, still basking in the aura of the 747's inauguration, it ordered eight McDonnell-Douglas DC-10s. This was the Long Beach manufacturer's entry into the wide-bodied category of airliner, which differed from the Boeing 747 by having only three engines instead of four. Correspondingly, it had about three-quarters of the Boeing's capacity, and, in its earlier version, about three-quarters of the range. Later versions increased the range almost to equal the 747's, but the basic aircraft size and capacity did not change. Continental's first eight DC-10s were the type designed for transcontinental, but not trans-Atlantic routes. The second eight were the -10CF version, with provision for convertibility to freight haulage.

The DC-10 went into service for Continental on June 1, 1972. The first route was Los Angeles-Denver-Chicago, but the versatility of this aircraft, able to carry 345 passengers in an all-economy configuration, was such that it was quickly deployed on most of the longer routes of the Continental system, including those to Honolulu. The distance from California to Hawaii was about 2,500 miles, or roughly the same as the transcontinental flights, so that the so-called domestic version of the DC-10 was able to take this part of the Pacific Ocean in its stride. In fact, the Los Angeles-Honolulu segment is the critical stage

on the trans-Pacific operation, so that this was also a good baptism for the Pacific route generally. Following the precedent set with the 747s, the DC-10 boasted a Californian Room in the economy class cabin. Once again Audrey Six was responsible for the eye-catching — and traffic generating — decor, which even included framed pictures in the toilets.

The early 1970s were marked by a world-wide economic development which had far-reaching effects on the airline industry. The international price of fuel, including aviation kerosene, rocketed as the direct result of cartel action by the oil producers, led by the countries of the Middle East. Airlines suddenly found themselves paying about four times as much per gallon as during the 1960s and the percentage of the operating costs accounted for by the fuel bills rose to alarming heights.

Resulting from this development, but possibly also because the bookkeeping results as a whole of the Boeing 747s were proving to be less attractive than was at first predicted, Continental showed its preference by taking an option on four more DC-10s on April 24, 1972. These were converted to firm orders on September 20, with the agreement that the total DC-10 order would be 16, of which eight would be the -10CF version. Within 16 months of this announcement, the Boeing 747s were removed from service, on January 10, 1974, one having been retired as early as September 15, 1973. The



With the advent of wide-bodied jets, Continental's onboard service excelled itself.

company stated that their temporary storage at Roswell, New Mexico, would save 19 million gallons of jet fuel per year. In a tribute to the DC-10, Continental cited its lower fuel consumption, lower costs generally, and, most important to the economists, lower break-even passenger load.

During the same period, a far-reaching policy decision was made regarding the Continental fleet as a whole. It was decided to standardize on two types, the DC-10 and the Boeing 727-200, for which latter aircraft additional orders were being placed fairly regularly almost every year. The exception was for the two 727-100s required for Air Micronesia (and until the new airfield was built at Ponape, the solitary DC-6B). During 1972 and 1973, in the furtherance of this objective, no less than 35 aircraft were sold, including all the Boeing 707-320Cs, most of the 720Bs, and all 18 DC-9s. At the same time, full advantage was taken of a financial agreement with a group of investment banks, concluded in June 1971, amounting to an injection of a record \$125 million of additional loan capital.

While all this was going on, Continental was vigorously promoting its fine service in a highly competitive environment, which was further intensified by the fuel price increase. In May 1971 it launched a strong appeal against the C.A.B.'s proposal of an 8.5 percent surcharge on its five-abreast seating on what were now called narrow-bodied aircraft, to distinguish them from the 747s and the DC-10s. The C.A.B. finally capitulated to a strong tide of public opinion, and reversed its position on May 31, 1972.

In other ways, with movies — "Pub'n Pictures at no extra cost" — and disco bars in the economy sections of some aircraft, Continental lived up to its reputation of cabin service *par excellence*. When Miss Dottie Lee won the Miss Airlines International title in 1974, she was the fourth Continental flight attendant in a row to gain the honor. The new slogan "We Really Move Our Tail for You" attracted as many remarks, and more, as did the "Proud Bird" motto, but its touch of bravado was characteristic of the airline, and there was no doubt as to who was setting the pace on the Hawaiian routes.

New Routes Galore

Not so many years previously, Continental had had to claw its way, almost inch by inch, into the mainstream of trunk airline activity in the United States. Now it seemed to enjoy an almost permissive attitude from the C.A.B. During this period, the early and mid-1970s, it experienced a transformation in its route structure, particularly in long range markets. The accomplishment of a trans-Pacific connection was, of course, the most spectacular addition to the map which adorned almost every Continental publication, even though the actual connection from the U.S. mainland to Asia was not exactly by the most direct route. But this obscured other real victories won through the regulatory process.

After long-drawn-out litigation with the C.A.B., Continental at last reached the Atlantic Ocean, when on February 1, 1974, it opened Boeing 720B service between Houston and Miami. This was the result of the final decision in the Southern Tier Case, announced in February 1973. Continental now had its transcontinental route, but Bob Six had even further ambitions in the eastward direction. In September 1973, he applied for

trans-Atlantic authority, with routes from Dallas and Houston to London and Frankfurt, together with another connection from Miami to Madrid and Rome. The C.A.B. was showing signs of relaxing its previously austere attitude to the entry of new carriers into territories regarded hitherto as the private preserves of well-established airlines, and with the surging traffic on the North Atlantic, Six entertained high hopes. But these were dashed when, in January 1975, the C.A.B. announced that no new carriers should be certificated for service to Europe.

However, things were moving along nicely in other directions. In July 1973, Continental and Western Airlines had applied jointly for a new interchange service between Texas and Alaska, to take full advantage of the community of interest between the new major oil producing region in the 49th state and the traditional heart of the oil industry in Texas. The momentum of the North Slope oil boom seemed to have had some effect in Washington too, for the application was quickly approved and service started on the route to Anchorage, with the interchange point at Seattle, on June 1, 1974.

By the end of 1974, with a route network covering a fair portion of the northern hemisphere, from Okinawa to Miami, and from Alaska to Texas, Continental had good reason to feel well pleased with itself. The fleet was trimmed efficiently to 12 DC-10s and 33 727-200s (and two 727-100s for Air Micronesia). The only other aircraft were two 720Bs, up for sale, and three DC-9s, on lease.

Further good news was round the corner. Within two years, from mid-1976 to mid-1978, important new segments had been added to the network. On May 21, 1976, after litigation which had begun in 1968, Continental was authorized to fly nonstop from Denver to San Diego. This, the southernmost city of California, once known only as a naval base, was now the third most populous urban center in the state, and an important traffic generator in its own right. And Denver was growing as a vacation center, serving the ski resorts of Colorado.

Peoria was added as a stop on the route to Chicago on February 28, 1977, an action which perhaps did not receive too much protest from rival airlines. More important was the result of the Denver-Southeast Route Case, whereby Continental was granted a parcel of city pairs between Denver and Florida, with terminals at both Miami/Fort Lauderdale and Tampa/St. Petersburg. In addition to Denver, two other cities, Tulsa and Wichita, were also given direct service to Florida. Then on June 1, 1978, a second interchange service with Western Airlines linked Calgary, Canada, with Houston, via Denver — another oil industry connection. On October 1, of the same year, a Phoenix - Las Vegas (Nevada) route put the "Entertainment Capital of the World" on the Continental map. The airline was now really moving its tail.

Direct Trans-Pacific Service At Last

Transcontinental service, access to Alaska, transborder to Canada, puddle-jumping to Okinawa: these were commendable achievements. But they all paled into insignificance compared with the final and irrevocable conquest of the Pacific Ocean, by direct scheduled service, which was accomplished during the latter 1970s. There had been a slight hiatus in affairs across the



The McDonnell-Douglas DC-10 became Continental's flagship during the 1970s.

ocean, when the Vietnam War drew to its close in 1975. The trans-Pacific military airlift had ended in 1973 and Continental Air Services was wound up at the end of 1975. Other attempts to retain connections with Southeast Asia had been less than visionary. Special relationships during 1974 with Air Siam and Air Vietnam for interline ticketing and maintenance were doomed from the start; the former because its precarious existence was short-lived due to misjudged commercial risk-taking in the face of the complex and adverse political climate in Thailand, the latter because it was a victim in the downfall of South Vietnam.

A shot in the arm came from an unexpected direction. By an extraordinary turn of fate, American Airlines, which had been granted the South Pacific in the great Route Case, decided to abandon it. In a kind of gentleman's agreement, American transferred to Pan American its authority from midwestern and eastern U.S. terminals to Hawaii and the South Pacific. Pan Am, for its part, conceded some of its authority in the Caribbean to American. This was a neat exchange which received the full approval of the C.A.B., which, however, reopened its investigation of the South Pacific to determine if Pan American should retain the monopoly which it had now regained.

This was in July 1975. Almost exactly two years later, after the usual tedious claims and counter-claims with the board, President Carter, who apparently did not share Richard Nixon's grave doubts about Robert Six's competence, approved a new Continental Airlines route from Los Angeles to New Zealand and Australia, via Honolulu, U.S. Samoa, and Fiji. With the Air Micronesia route to Tokyo (see the previous chapter) beginning on October 1 of the same year, the trans-Pacific dream at last came true.

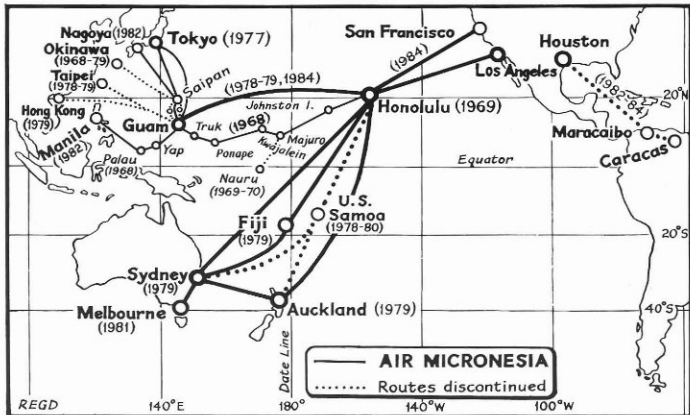
Such setbacks as the first major strike in Continental's history, when the Air Line Pilots Association (ALPA) virtually grounded the airline from October 23 to November 17, 1976, were forgotten in the heady excitement

of embracing the largest ocean in the globe. The loss of a DC-10, damaged in an accident beyond economical repair on March 1, 1978, was equally overlooked as the airline introduced *Chickenfeed* fares two months later; its contribution to the deep discount fare war which was sweeping the country.

To cap everything, on October 13, 1978, only six weeks after the authority was granted, Continental opened the longest route in its entire history, when DC-10 service started from Los Angeles to Taipei, Taiwan, with authorized stops only at Honolulu and Guam. This put an end to the rather artificial appearance of trans-Pacific capability on Continental's maps; for very few people, other than staff employees, had ever actually flown end to end from California to Okinawa via the islands of Micronesia.

Within a few more months, on May 1, 1979, South Pacific service started to all the points authorized on the certificate. One route, to Auckland and Sydney was routed from Los Angeles via Honolulu and U.S. Samoa; the other reached Sydney with stops only at Honolulu and Fiji. Then on July 18, 1979, taking full advantage now of the convertibility of the DC-10, a full freighter service, with 121,000 pounds (60 tons) of freight capacity, was substituted on the Taipei service, where presumably Continental's containers were well utilized in the expanding Taiwanese export trade.

This heady success of suddenly becoming a full-scale operator on both the North and South Pacific routes had come only after years of frustration, hard work, special pleading, a little luck, and endless litigation with the regulatory authority. The culmination of all the struggles, by the inauguration of the two intercontinental routes, had ironically coincided with the abandonment of the time-honored procedures, with their agonizing delays, irritations, frustrations, and denials which had caused so much blood, sweat, and profanity. For on October 24, 1978, President Carter signed the Airline Deregulation Act, and nothing was ever the same again.



Continental Goes Intercontinental, 1978-.... Continental's involvement with Air Micronesia and its substantial contribution to the trans-Pacific military airlift helped to support its claims for permanent authority for routes to the West and South Pacific.

13

Deregulation

1978-1981

Almost a Merger

Only two of the certified trunk airlines of the United States were ever based in the West: Continental and Western Air Lines. Neither was ever large, by comparison with the Big Four and Pan American, which had been big almost from birth; nor did they become big, like Northwest and Braniff which benefited from lucrative foreign air route awards after World War II; nor like Delta, which grew with the thriving economy of the Southeast, and enjoyed favor from the C.A.B. both in transcontinental awards and for permission to merge with two trunk airlines. But in its later years, with its Pacific expansion, Continental suddenly acquired new stature, while its fellow westerner, although expanding to Alaska and Hawaii, did not experience such explosive growth.

In December 1970, American Airlines and Western had formally applied to the C.A.B. for permission to merge. This was after Kirk Kerkorian, one of the more successful of the supplemental airline promoters, had gained control of Western, and taken over the reins from none other than Terry Drinkwater. The latter had left Continental under a cloud in 1944, and his presence no doubt added vehemence to Robert Six's opposition to almost anything that Western wanted to do. Although apparently Kerkorian and Drinkwater did not get along

either, and Drinkwater left, the Western-American merger proposal was pursued by Kerkorian until the end of 1971, when the C.A.B. hearing examiner made it clear that he would not support it. Subsequently, Six's opposition, among others, was supported by the Department of Justice and by the board's own staff of expert advisers, and the merger did not go through.

Later on, Six was to report that a merger between Continental and Western "had been considered logical and desirable" at that time, and as soon as the American Airlines threat was removed, the two western airlines were visibly more friendly. Two interchange services, connecting the Texas area (served by Continental) to Alaska and western Canada (both served by Western) in 1974 and 1978 respectively, certainly paved the way for amicable discussions towards a deeper relationship. In fact, on the very day that the Houston-Denver-Calgary interchange service started, on June 1, 1978, the two airlines announced that they were planning to merge. On July 12 the plans were made public, and on September 19 the airlines filed their joint application to the board to consolidate their operations.

For a variety of reasons, however, this 1978 merger did not receive board approval either, even though the C.A.B.'s administrative law judge recommended it, and the idea gained substantial congressional support. Both airlines were now tasting the heady success of surges of



Continental was one of the more vigorous advocates of training women for the flight deck.

revenue arising directly from two good traffic years which were the direct sequel to the introduction of heavily discounted fares. Even before the Airline Deregulation Act of 1978, the airlines had overcome regulatory misgivings as well as their own former inclination to seek higher fares, rather than introduce harsh cuts in the established structure. Everyone was discounting, passengers were flocking into the planes, load factors were high, and so were the profits.

But it was the lull before the storm. Perhaps the airlines should have waited. Perhaps they should have resisted the temptation to cut fares with no thought to the future. Not possessing the benefits of hindsight, however, they all rushed like lemmings over the cliff of almost uncontrolled financial disaster.

Thus, when Continental and Western came to the table again, when the heat and dust of deregulation had settled, there was a different tone to the discussions. Whereas before, two airlines were simply seeking to join the ranks of the super-trunks like United, American, or Delta by a mutually advantageous merger, the renewed dialogue took on a sense of urgency which had something to do with survival itself.

For the record, on August 8, 1980, the two airlines again agreed to merge, with the surviving consolidated corporation to be called Western and Continental Transportation Corporation. The proposal was submitted to the C.A.B. on September 22, and — now moving a little more rapidly under the new mood, with deregulation hanging over its head — the board's administrative law judge gave his opinion favoring the merger on February 6, 1981.

But fate intervened to prevent a merger once again. For Continental had other more important things to attend to, all of which, individually and in combination, served to turn Robert Six's airline upside down. One major reason was the effect of deregulation, against which Six had campaigned for years. The intensive assault by rival airlines to erode much of Continental's traffic now wrecked its finances, weakened its corporate strength, and exposed it to infiltration from outside interests.

Deregulation

President Carter signed the Airline Deregulation Act on October 24, 1978, and — as has been observed in the previous chapter — the airline structure of the United States underwent a complete transformation. There had been growing dissatisfaction with certain shortcomings of the C.A.B., mainly of its negative effect in restricting free competition in routes and fares, but also of its powers concerning mergers, and its restrictions on freedom of entry by new airlines into the scheduled field of operations. Added to these criticisms directed towards legislative reform, there was also widespread irritation at the inordinate time taken by the bureaucratic process, and the way in which the board itself sometimes appeared to be influenced by political lobbying.

To its credit, the C.A.B. itself had investigated its own ponderous machinery and its apparent effects on the fair interpretation of the intent, rather than the letter of the law. It had, for example, in the latter 1970s, condoned all the deep discount fares such as the *Super-Savers*, the

Peanut Fares, and other "no frills" packages. It had even helped to bring about a minor revolution on the North Atlantic by approving Sir Freddie Laker's no reservation *Skytrain* service. By the summer of 1977, there existed a free-for-all on fares, which was a complete *voile face* from the former routine of compliant C.A.B. support for interline airline protectionism which had traditionally served to keep U.S. passenger fares higher than they need have been, though consistently lower than anywhere else in the world.

The C.A.B.'s Special Staff Report on Regulatory Reform directed by Roy Pulsifer, and which had been issued on July 22, 1975, was paradoxically almost a blueprint for airline deregulation and at the same time a formula for the progressive elimination of the C.A.B. itself. Concurrently, the Advisory Committee on Procedural Reform, established within the agency on June 21, 1975, had studied the problem of rule-making procedures affecting route awards, mergers, and the freedom of entry or exit. Thus, when the president signed the act in October 1978, the C.A.B. was already fully prepared for the onslaught.

At 8:30 a.m. October 18, 1978, the airlines' representatives stood in line outside the C.A.B. offices in Washington to claim dormant nonstop route authority. Seven hundred out of an estimated 10,000 possible city-pair connections were applied for. One airline, Braniff, appeared to have taken leave of its senses, and walked away with enough routes to have alone comprised a new airline on the map, albeit with questionable viability. Continental was no slouch either. Within a year, it had added 18 new segments to its U.S. mainland route network, of which it had second thoughts on only three.

Almost immediately after the Airline Deregulation Act was passed, additional connections were made in the southern part of the Continental system, providing more nonstop service to points from El Paso and San Antonio. As the year 1979 progressed, other important new routes were added, beginning with Houston-Washington, D.C. (Dulles International Airport) on January 2; followed by an array radiating from Denver, which was deliberately chosen as a major hub. The important Denver-New York (Newark) link was made on October 1, 1979, and Houston was also given direct service to New York on October 28. On September 1, 1979, service started to Mexico. The different flights originating at Denver, and serving also Albuquerque and El Paso, diverged to La Paz/Los Cabos, Puerto Vallarta/Manzanillo, and Acapulco.

The C.A.B.'s revolutionary policy of releasing route authority almost instantaneously, instead of by prolonged hearings, had thus created rapid changes in the airline route maps. But it also brought in its wake some other changes which brought into sharp focus the arguments for and against airline deregulation.

Financial Problems

It was not well with the affairs of Continental Airlines. The new routes made good window-dressing, what with access to the U.S. capital, new routes to Mexico, inauguration of the South Pacific service, and the long-awaited connections from Houston and Denver to New York. But these obscured some ominous trends which

could be discerned by reading between the lines of the airline's annual report to its stockholders, the last written by Robert Six after 43 eventful and, until deregulation, almost entirely successful years as president and chief executive officer.

Continental Airlines incurred a net loss of \$13,185,000 in 1979, compared with net earnings of \$49,190,000 in 1978, an adverse turnaround of more than \$62,000,000. Much was made of the grounding of the DC-10 fleet by the Federal Aviation Agency, following the disastrous crash of an American Airlines plane on take-off at Chicago on June 6, 1979. All DC-10s were out of service for 38 days, and as 42 percent of Continental's total lift was accounted for by this aircraft type, the effect was considerable. But this single factor was over-emphasized and tended to sweep under the carpet other significant adverse trends.

Compared with 1978, the amounts in almost every category of operating expense rose alarmingly in 1979. Fuel alone rose from \$147 million to \$228 million or by 55 percent; personnel costs rose \$71 million, or by 24 percent; advertising by 36 percent, maintenance and repair by 21 percent, and commissions to travel agents by 59 percent. All these increases were incompatible with a revenue passenger mile increase of only 10 percent. The cost per available ton mile soared from 31.8¢ to 38.7¢; and the vital break even load factor from 56.7 percent — itself already dangerously high — to 63 percent.

Against this gloomy picture, certain steps had to be taken if Continental was to survive at all in the Pacific, the area of operation for which it had struggled so long and which held out the best hopes for high profits. On February 8, 1979, two McDonnell-Douglas DC-10-30 long-range aircraft were ordered, recognizing that, good as they were, the medium-range DC-10-10s could not compete with the Boeing 747-SPs (Special Performance) of Pan American and other competitors, which were able to omit low traffic-generating stops such as Pago Pago or Fiji, and offer spectacular nonstop flights across the Pacific.

Also, on July 18, 1979, passenger service to Taipei, which so recently had been celebrated as Continental's first genuine trans-Pacific service, was terminated, to be substituted by a freighter service. An effort to augment the freight loads on the North Pacific route was made on October 1 by adding a branch route from Guam to Hong Kong. Simultaneously, the link with Okinawa was terminated. Then both the Taipei and the Hong Kong routes ended in December 1979, leaving Saipan-Tokyo as Continental's sole tenuous link with Asia.

In an attempt to recoup some of the losses, in January 1980 four DC-10-10s were contracted to be sold to Federal Express for \$95 million. Uncharacteristically, Robert Six was not closely involved in detailed matters of routes, aircraft, mergers, or battles with the C.A.B. Following the denial of the attempted Continental-Western merger, his priorities changed and he was preoccupied with the task of finding his own successor as chief executive officer of Continental Airlines. The job, in the light of the red figures on the balance sheet, would prove to be no sinecure.

Al Feldman Inherits a Crisis

On February 1, 1980, A.L. (Al) Feldman was named president of Continental Airlines, succeeding Alexander

Damm, who had held the position since May 1976. As president and chief executive officer, Damm had relieved Robert Six of much of the top level decision-making, although the old warrior remained as chairman, and was still very much in absolute control. It is fashionable today to assert that the woes which beset most of the airlines in the U.S. were not caused by the airline deregulation process itself, but by misjudgments on the part of those airline executives who misinterpreted the effects of deregulation. But to blame Six and Damm for the deteriorating state of affairs in Continental during the latter 1970s would be to over-simplify Continental's problems.

In certain highly competitive markets, for example, in deciding whether or not to take on new routes, they were damned if they did, and damned if they didn't. For it was open season for every airline, from the regulated (the certificated carriers) to the unregulated (the former intrastate, low-overhead carriers); from the previously denied supplemental airlines to the previously restricted local service operators; from commuter airlines to complete newcomers. All these widely-differing companies, the haves and the have-nots, battled fiercely for the lion's share of the dense intercity markets of the U.S.

As mentioned previously, Continental was one of the more prodigal in opening new routes in the first flush of a deregulated environment. Its problem was simply that it seemed to have lost control of its cost structure at the very time when its revenues were put beyond its control by deregulation.

Feldman had been a successful president of Frontier Airlines, having, during the space of a single decade, been instrumental in transforming a struggling local service airline into a strong regional operator, taking second place to no one at its hub in Denver, and becoming a consistent profit-maker. Though he was a man who had been well liked by his staff, because he had guided Frontier's fortunes with a keen sense of sensitivity to its personnel, he came to Los Angeles with a heavy cross to bear. For Continental's problems could not be cured by slow and careful remedial treatment. It needed drastic surgery. With Six disassociating himself from day-to-day affairs, with Alexander Damm retiring on July 1, 1980, and with the death of his wife also in July, Feldman had to carry his cross almost single-handed, as a very lonely man.

But he attacked some of the main problems with his former zeal. On June 1, 1980, he set in motion a restructuring program of its entire U.S. domestic system. Based no doubt on a conviction born of his experience at Denver with Frontier, the main objective was to realign Continental's network to concentrate on the emerging dual hub-and-spoke operation, centered at Denver and Houston. Certain peripheral services were eliminated, including West Coast flights from San Jose to the Pacific Northwest. In contrast, on July 1, new routes were added from Denver to Casper and Grand Junction, both vacation areas.

Most drastic of the route changes was the suspension of Continental service on the Chicago-Los Angeles route. An effort to retain this route at all costs had been made on May 1, when a fare of \$111.00 one-way, nonstop, with no restrictions, had been introduced. But the sheer strength of the big airlines such as United, American, and TWA was overwhelming, and on September 8, 1980, this important segment, the cause of mighty celebra-

tion at Continental's headquarters when the Denver Case was decided in 1955, was removed from the map.

In compensation, further efforts were made to intensify the hub concept. On January 10, 1981, Houston became an international Continental gateway to the Mexican resorts on the Yucatan peninsula. Service to Cancun, Cozumel, and Mérida was accompanied by the catchy invitation to "Get a Yucatan." New routes radiated from Denver at an alarming rate; to Tucson April 1, 1981, Indianapolis and Omaha on April 26, Boston and Lincoln on June 1, Philadelphia and Milwaukee on July 1, and Minneapolis on August 1.

The wisdom of wholesale expansion in an uncertain domestic operating environment in which the protective cloak of regulation had been removed was questionable. But there was little doubt about the prudence of a change made on the Pacific route, one which, however, had been foreshadowed by an aircraft order placed almost exactly a year before Al Feldman came on board. On October 26, 1980, long-range DC-10-30s were introduced on the routes to Australia and New Zealand, with important schedule changes that permitted fewer stops. Although Fiji was retained on one through service, Pago Pago (U.S. Samoa) became a terminus of another. Some flights to both Auckland, New Zealand, and Sydney, Australia, were flown nonstop from Honolulu, thus putting Continental in a better competitive position against Pan American and the Australian flag airline, QANTAS.

The Sky Falls In

Sadly, these energetic attempts to improve the airline's public image in the "mad, mad, mad world" of postde-regulation competition all came to nought when translated into financial results. In a masterly piece of understatement, Robert Six, as chairman, and Al Feldman, as president, began their joint report to the stockholders for the year 1980 with the words "1980 was a difficult year for Continental Airlines."

The net loss was \$20,700,000, compared with \$13,185,000 the previous year. While this was serious in itself, the appalling truth was that, without certain nonrecurring credits, the loss would have been \$78,000,000. During the year, three DC-10-10CF aircraft had been sold for \$28,100,000; \$8,000,000 had been raised by selling two hotels in Guam and Saipan; \$6,100,000 had been received in insurance from the write-off of an Air Micronesia Boeing 727-100 at Yap; and \$15,100,000 was received in tax credits.

The bare figures were gloomy enough. Furthermore, relations with the staff, once the pride of the airline, had deteriorated. There had been a reduction in the work force, with 10 percent of the staff furloughed during 1980. There was a strike of flight attendants from December 5 to 20, 1980, and altogether, Continental's morale was not

as confident as in the old days of constant expansion in routes, traffic, and profits.

Underlying these financial and personnel problems, the one silver lining which had been perceived to herald a slim chance of respite from behind the dark clouds of despondency suddenly faded. The chances of both parties in the prospective Continental-Western merger evaporated abruptly in the face of other corporate maneuvers. During the early months of 1981, Texas Air Corporation, headed by Francisco (Frank) A. Lorenzo, through its subsidiary company, Texas International Airlines (TIA), began to acquire a controlling interest in Continental, simultaneously making it clear that it did not favor a merger with Western. Western Airlines found itself similarly threatened as UNC Resources, a mining company, moved to acquire or merge with it. Lorenzo was claimed to be tough in labor negotiations and such was the instinctive reaction in Los Angeles that the Continental pilots, headed by Paul Eckel, formed the Continental Employees Association (CEA) to campaign against a Lorenzo take-over.

Nothing seemed to go right for the airline for which so recently nothing had ever seemed to go wrong. On August 3, 1981, the air traffic controllers belonging to the nationwide union PATCO went on strike, but this was a relatively minor irritant compared with the fight going on for the control of the airline. In April, the existence of the Employee Stock Ownership Plan (ESOP) had been revealed. This was a call to issue enough shares to the employees of Continental to give them a controlling interest. It was transparently a device to prevent the Texas takeover, although in its proxy statement, the words used had been innocently expressed "to put the corporation in a position to take advantage of future growth opportunities"—whatever that may have meant.

As the two sides polarized their positions, the antagonism between the Continental establishment and what were regarded as Texan usurpers intensified and grew increasingly bitter. Al Feldman was identified with the ESOP plan and alleged to have been the initiator of it. But with the federal and California authorities alternately approving and rejecting the ESOP plan, the pressure grew into a war of harsh words and innuendo, often abrasive, sometimes vicious.

Looking back on his record with Continental, with its worsening finances, his staff problems, the dashing of his hopes of a merger with Western, an almost certain takeover by Texas Air, and continuing despondency over the loss of his wife a year earlier, Al Feldman's will to carry on failed him. In one of the most tragic sequels ever to the boardroom battles which have been the essence of American business, Al Feldman took his own life on August 9, 1981. The story of "a man of great integrity"—Lorenzo's words—was one of the most heartrending of all the casualties which could be traced, at least in part, to airline deregulation.



Trans-Texas Douglas DC-3

14

Texas International 1947-1982

Trans-Texas Airways

Pioneer Airlines (see Chapter 6) was not the only feeder airline in Texas. With the exception of California (which in any case had only one), the Lone Star State was unique in being able to sustain two local service operators wholly within its own borders. During the heady postwar years, that new category of certificated carrier became an integral part of the air transport scene, and all across the nation, new airlines were rapidly born. These sought to take advantage of congressional encouragement to offer the benefits of air travel to every community in the land.

One aspiring contender was Trans-Texas Airways which developed from humble beginnings to join Pioneer which, under its former name, *Essair*, had actually been the first local service airline. Pioneer was absorbed by a trunk airline named Continental; and a quarter of a century later, by a strange turn of events, Continental was itself engulfed by the other Texas local service carrier, operating under a new name and new management. Before all this took place, however, Trans-Texas Airways underwent many changes, during a sometimes hectic rags-to-riches career.

In 1940, Aviation Enterprises Ltd. was founded by a handsome young Texan, R. Earl McKaughan, who oper-

ated an aircraft sales and service business at Houston's Hobby Airport. In 1943 McKaughan filed an application with the C.A.B. to operate scheduled services, and to increase his stature, incorporated his company as Aviation Enterprises Inc. on November 14, 1944. Two years later, as a result of the Texas-Oklahoma Route Investigation, the C.A.B. awarded McKaughan five routes in Texas, the three-year certificate becoming effective on May 12, 1947. The corporate name was changed to Trans-Texas Airways (T.T.A.), and the first scheduled service, with DC-3s, was inaugurated on October 11.

The first routes were Houston-Victoria-San Antonio and Houston-Palestine-Dallas-Fort Worth-Brownwood-San Angelo. This produced three sides of a neat square, but within a few years the fourth side was completed, with routes extending westward from both San Antonio and San Angelo to El Paso. Connections were also made during 1948 southward to Brownsville and eastward to Beaumont/Port Arthur. Trans-Texas expanded further in April 1953 with extensions to cities in neighboring states — Pine Bluff, Arkansas; Shreveport, Louisiana; and Memphis, Tennessee.

In these early days the local service carriers were very much the second class citizens of the industry. The C.A.B. took its time in providing the small airlines with good credentials, and as a consequence they led a hand-

to-mouth existence, having to apply at intervals for extensions to their temporary certificates until 1955, when these were at last made permanent. Understandably, small fry such as Trans-Texas were unable to take the risk of heavy long-term investment in expensive equipment, either in aircraft or ground facilities. At least T.T.A. began with a sturdy fleet of DC-3s, which was better than many local airlines could claim; but even these attracted a certain amount of disdain from the discriminating Texas clientele who quickly dubbed T.T.A. as "Tree Top Airways" or "Tinker Toy Airways." Supplying paper fans in the unpressurized planes, and promoting the DC-3 as "the aircraft with the cool white top and the air-stair door" foiled no one.

The DC-3s were labeled *Super Starliners* in 1957, possibly as outrageous a promotion for the aging twin as has ever been perpetrated on a long-suffering public. Nevertheless these veteran aircraft continued to soldier on as T.T.A. modestly expanded its route system in April 1959 to Little Rock, Arkansas, and to New Orleans, at the same time suspending service to five low traffic-generating points. This was in response to the C.A.B.'s shrewd "Use It or Lose It" program. By agreement with the local communities directly involved, any station which gener-

ated less than five passengers per day was liable to have its heavily-subsidized air service withdrawn. The former enthusiasm to serve every city in the U.S., at whatever cost, was already under scrutiny. Progressively the original concept of local service was to be eroded until, with deregulation in 1978, it was to disappear altogether. Cities such as Palestine, Corsicana, Marfa, Beeville, Waco, and Temple were forced to come to grips with A.L. Mencken's succinct definition of life in the U.S.: "There's No Free Lunch."

T.T.A. Expands

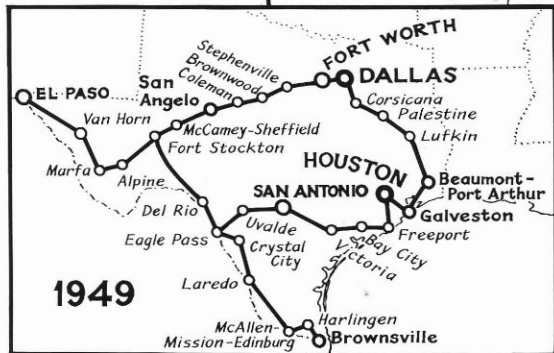
Trans-Texas felt so confident of its prospects during the 1960s that it supplemented the DC-3s with pressurized equipment. On April 1, 1961 it introduced the Convair 240, with the Dallas-Beaumont being honored with the first service. Subsequently, Earl McCaughan and his Texas team steadily expanded the route network, benefiting from sympathetic consideration from the C.A.B., which transferred some routes from California Airlines, enabling it to expand into New Mexico, to serve Albuquerque, Santa Fe, and Clovis. The agency also permitted Trans-Texas to fly nonstop between Houston and Austin, on November 12, 1963, and one week later, the

The image displays three historical Trans-Texas Airways (T.T.A.) timetables side-by-side, illustrating the airline's evolution over time.

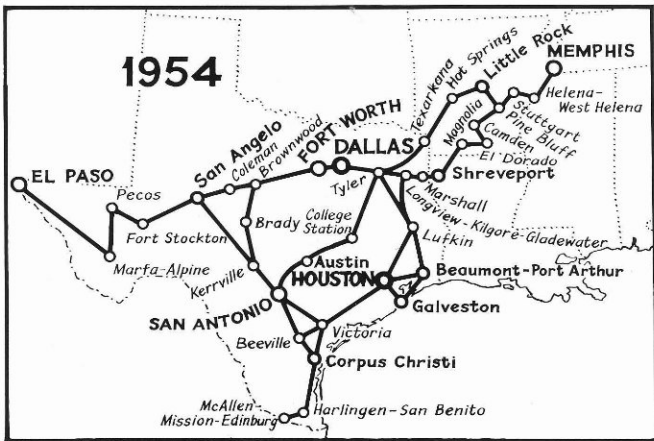
- Left Panel (1947):** Features the text "TRANS-TEXAS AIRWAYS" and "Effective DECEMBER, 1947". It includes a large white silhouette of a bird in flight against a dark background and a circular logo at the bottom with a star and the letters "T" and "A".
- Middle Panel (1964):** Dated "September 1, 1964", it features the slogan "FLY T.T.A." and "MORE CONVAIR service for the Great Southwest". It shows several Convair 240 aircraft flying in formation under a stylized arch. At the bottom, it says "go better on T.T.A. TRANS-TEXAS airways".
- Right Panel (1966):** Dated "September 1, 1966", it features the slogan "JET POWERED" and "T.T.A. Silver Cloud 600". It shows a close-up of a jet engine and the tail section of a Convair 440 aircraft.

Exhibit I. Trans-Texas timetables, 1947, 1964, and 1966.

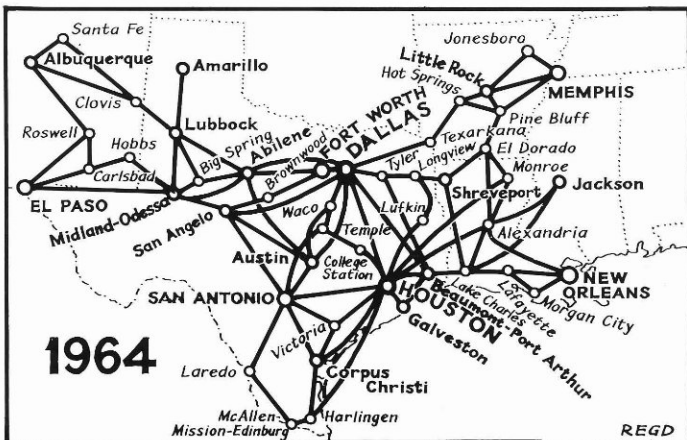
Trans-Texas Airways, 1947-1964. During the era of the local service airlines, Trans-Texas controlled the feeder route system of the Southwest.



1954



1964



Trans-Texas Airways, continued.

REGD



Trans-Texas Airways began service confidently with the ubiquitous DC-3.

airline joined the formidable ranks of the trunk airlines to enter one of the nation's busiest intercity routes, Dallas-Houston.

By this time, the Convair 240 fleet had grown to an impressive 25 aircraft. A year later, Trans-Texas recognized that, if it was to survive in the big leagues, it had to improve the standards of its equipment. Consequently, in November 1964 — just a year after entering the Dallas-Houston market — Trans-Texas announced plans to convert all 25 of its Convair 240s to turbine power. The engine selection was the well-proven Rolls-Royce Dart, which had demonstrated a fine record of reliability in many fine commercial airliners, including the Vickers Viscount and the Fokker Friendship (Fairchild F-27).

The first Convair 600, as the turbine-powered CV 240s were called, went into service on March 1, 1966, on the Houston-Beaumont-Dallas route. Once again, Beaumont had the honor of welcoming the first *Silver Cloud*, as Trans-Texas called the rejuvenated planes. By this time, the network had been considerably strengthened as 13 cities in Texas and New Mexico were transferred from other airlines in the Southwestern Area Local Service Case. Traffic was further stimulated by the withdrawal of Eastern Air Lines from the stopping route between Houston and New Orleans, leaving T.T.A. with a virtual monopoly of service in southern Louisiana.

The year 1966 was certainly a banner year. Earl McKaughan trumped his own ace by adding Douglas DC-9-10 *Pamper Jets* on October 30, 1966, thus enabling Trans-Texas to match the competition on the busy "Texas Triangle" (Dallas/Fort Worth, Houston, San Antonio). By this time, on August 17, the C.A.B. had, remarkably for a local service airline, approved a foreign route from southeastern Texas border cities to Mexico, serving Monterrey, Tampico, and Veracruz.

New Ownership

Pride came before a fall. The almost simultaneous introduction of the Convair 600 *Silver Clouds* and the DC-9 *Pamper Jets*, plus foreign service to Mexico, was expensive. The seven DC-9s ordered in November 1965 had alone cost \$51 million — no small investment for a local service airline — and the finances of T.T.A. began to decline during the late 1960s. It came as no surprise, and in some quarters was regarded with relief, when, in 1968, Minnesota Enterprises, Inc. (M.E.I.) purchased a controlling interest in the airline.

The new owners started off in fine style, by opening service to Denver, which was not only an important traffic hub, but the center of a fast-growing winter vacation area. The growing popularity of ski resorts in Colorado was attracting many Texans, weary of the long humid summers of the Gulf area. Nonstop service to Denver, from both Houston and San Antonio, started on March 1, 1969. One month later, an extension from Denver to Salt Lake City brought the number of T.T.A. cities to 70. Also, nonstop San Antonio-Dallas service was added, thus completing the "Texas Triangle."

The airline was spreading its wings, and, as if to signal a new era, the new owners changed the name of Trans-Texas Airways to the more ambitious, and strictly more representative, Texas International Airlines.

Texas International

The official date of the adoption of the new name — quite a rare occurrence in U.S. airline circles — was April 1, 1969. One of the minor reasons for the change was the expectation that the unfortunate interpretations of the T.T.A. initials would disappear. But Texas traditions die hard, and the airline still had to win its spurs. One small difficulty was that another airline, Trans International

Airways, also claimed the obvious T.I.A. abbreviation, so TXI was adopted instead and this quickly fell into common use. The new Houston Intercontinental Airport opened on June 8, 1969, and a TXI DC-9 was the first to land. This event coincided with the introduction of full meal service, an amenity which many Texans felt was long overdue.

The new owners must have been well satisfied too with the generosity of the C.A.B. in awarding to Texas International nonstop authority from Albuquerque to Los Angeles. Through service was duly inaugurated on January 15, 1970, with the newly-acquired Douglas DC-9-30s, the "stretched" version of the Douglas twin, fitted with 100 seats.

In spring of 1970, W. Lloyd Lane was appointed president of Texas International, replacing Robert Sherer. One of his innovations was to attempt to reconcile the variations in traffic density on the complex TXI network by introducing smaller aircraft. A number of stations had survived the "Use It or Lose It" test, but only by a small margin. Texas is a large state, but the proliferation of freeways everywhere across the mainly flat terrain had effectively shrunk surface journey times, and in so doing, had eroded some of the local service airlines' traffic base. TXI tried to match the diminishing demand selectively with smaller aircraft.

During 1970, a fleet of five 15-seat twin-engined Beech 99s was introduced to serve certain routes in east and central Texas, including Lufkin, Longview, Galveston, Victoria, Temple, Waco, and Bryan. The aircraft, however, were unsatisfactory and were in due course retired.

Although a nonstop Houston-Monterrey route provided direct access from the biggest city in Texas to the third largest in Mexico, the expected revitalization of the renamed Texas airline did not go according to plan. Indeed, the finances were in poor shape. TXI was openly discussed as a candidate for a take-over bid, and there was even talk of its demise.



A youthful Frank Lorenzo took over Texas International Airlines in 1972 at the age of 32. A merger with Continental Airlines 10 years later removed the "Peanuts" airline name from the skies but its place in aviation history was assured.

Photo by Walt Ferreck

Frank Lorenzo Moves In

The first stirring of activity affecting Texas International's fading fortunes was in May 1971, when William M. Wyant, Jr. and Associates, representing 30 individuals, asked the C.A.B. to approve the purchase of 40.7 percent of Texas International Airlines stock from Minnesota Enterprises, which had bought the shares in 1968. Hardly had this news been circulated when, on June 7, TXI revealed that it had accepted an offer from Jet Capital Corporation for a comprehensive refinancing program.

Jet Capital, founded in 1969, was headed by Frank A. Lorenzo and Robert J. Carney, two young ex-Harvard Business School graduates. They proposed to purchase



T.T.A.'s selection for the DC-3 successor was the Convair 600. This was basically the Convair 240, but re-engined with Rolls-Royce Dart turboprops. It is seen here in Texas International colors.



TXI Douglas DC-9-10

the complete Minnesota investment, at the same time injecting new equity capital. At the conclusion of the refinancing program, the total equity funds were calculated to approach \$40 million.

Although Hughes Airwest made a counter offer in November 1971, the formal announcement was made by TXI on December 9 that Jet Capital would invest \$1.5 million, and thereby earn the privilege of nominating the majority of members of the board. Minnesota Enterprises thereby lost control. Jet Capital formally applied to the C.A.B. on January 19, 1972, for approval of the plan. Although Hughes continued to fight a rearguard action, claiming that Lorenzo was getting too much for too little investment, the Jet Capital takeover was now almost a foregone conclusion.

On August 10, 1972, the C.A.B. approved the acquisition. By its new investment, added to the purchase of existing stock, Jet Capital assumed 59 percent of the voting control. Frank Lorenzo, aged 31, the main shareholder in Jet Capital, was appointed president, and he immediately initiated positive steps to restore order in an airline whose existence had seemed precarious in the extreme. Lorenzo's financial and managerial talents were certainly put to the test. Between 1968 and 1971, TXI's aggregate losses had totalled \$20,100,000; its working capital was minus \$18,000,000; and its net worth was a negative \$7,000,000.

During the acquisition maneuvers, nothing much happened of any great consequence in an airline that was simply trying to stay alive. Lloyd Lane resigned on May 24, 1972, after only two years at the helm. Beech 99 operations ceased on July 1, 1972. But there was some cheering news. In May, President Nixon approved a C.A.B. recommendation that Texas International should be able to improve its service to Mexico. It was permitted to add Houston and Mexico City to the existing McAllen-Monterrey-Mexico City route, with flexible authority which effectively allowed nonstop flights from Houston to Mexico City. The C.A.B. release noted that the route justified a second U.S. carrier, "in the light of serious

deficiencies in Pan American's existing services." Nonstop Houston-Mexico City service began in December 1972, twice daily with DC-9-30s. In March 1973, two more of these aircraft were ordered, the first new jet equipment to be added since 1969.

During the early 1970s, minor changes were made to the route network. The Harlingen-Tampico-Veracruz route had been temporarily suspended in 1971, but was restored on October 1, 1974, with the modification that both Mexican cities became terminal points, Tampico from Harlingen, Veracruz from McAllen. A nonstop service was opened from Denver to Houston, some connections between certain small cities were rerouted or omitted, and service was suspended at some others, including Santa Fe, Big Spring, Brownwood, Temple, Pine Bluff, Jonesboro, and Lufkin. The growing ranks of commuter airlines were only too happy to provide substitute service.

The Mouse That Roared

Frank Lorenzo and Texas International Airlines hit the headlines with considerable impact in 1978. Late in July of that year, the news broke that TXI was moving to take control of National Airlines, a trunk carrier based in Miami which was three times its size. Lorenzo had already acquired 9.2 percent of National stock, and now made it known that he was aiming to acquire a further amount to bring the Texas investment in National up to 25 percent, enough to gain control.

The idea met with a mixed reception in Miami. National's chairman, L.B. "Bud" Maytag, was less than enamored, and sought the backing of investors to beat off the attack from Houston. The employees, on the other hand, welcomed the prospect of new management. National had always been notorious for its poor employee relations. Many years previously, when under the direct control of the founder, Ted Baker, the C.A.B., in an extraordinary

display of irritation in the public interest, had threatened to close down the airline (by withdrawing its certificate) if a protracted strike was not settled. Now, the employees were disenchanted with the Maytag regime, even going to the length of publicly supporting Lorenzo's proposals in a staff newsletter with the headline "Take us, we're yours!"

The C.A.B., while moving towards more progressive and flexible policies in such matters, was nevertheless anxious that all the proprieties were properly observed. Now the concerned departments of that august body, while used to well-mannered orthodoxy and a respect for tradition, and the implied recognition that everyone in the industry should know his place, were prepared to move with the times. Formerly, the established division between trunks, locals, and commuters were rigidly followed, with the unspoken, and certainly unwritten, implication that the airline world revolved around United, American, Pan American, T.W.A., and Eastern. Now, however, when a regional airline (still a local service carrier in C.A.B. terminology) threatened to take over a trunk, it was no longer met by a display of apoplexy in Washington. In fact, the C.A.B. could be described as progressive, trying to remove legal roadblocks. True, it was mildly disturbed that the proposed setting up of a voting trust to control the share transactions would in some way violate the Federal Aviation Act of 1958. But the problem was never serious.

While the C.A.B. was ruminating over the affair, Texas International carried on with its acquisition, and paid \$14.4 million for additional National stock. By September 1978, Lorenzo controlled 20.1 percent, which was very close to a controlling interest. There was an interesting precedent set in this case. Probably nobody had ever thought of it before, or possibly the unwritten understandings among the hierarchy of the Air Transport Association had never countenanced it. But this was the first time in the history of the regulated airline industry that a certificated airline had asked the C.A.B. to approve a nonnegotiated control over another certificated carrier.

Texas International was not the only airline interested in acquiring National. Two decades previously, Pan American had toyed with the idea. The two airlines had signed an agreement on September 9, 1958, for an exchange of stock which would have given Pan Am 25 percent of National's and National 6 percent of Pan Am's. The C.A.B. decided, however, that such interlocking interests would set too dangerous a precedent and on July 15, 1960, ordered the two airlines to divest themselves of each other's stock.

Pan American's action was consistent with a long-felt frustration at being denied the right to operate domestic routes. Juan Trippe had, during the formative years of his airline, and subsequently throughout the period of intercontinental and ocean conquest during the 1930s, cherished the ambition of linking the Pan Am gateways at New York, Miami, San Francisco, Seattle, and elsewhere. His dismay at having to hand over incoming passengers to domestic airlines was balanced by his satisfaction of the transfer of outgoing ones. But there were occasions when a traveler would have to interrupt an

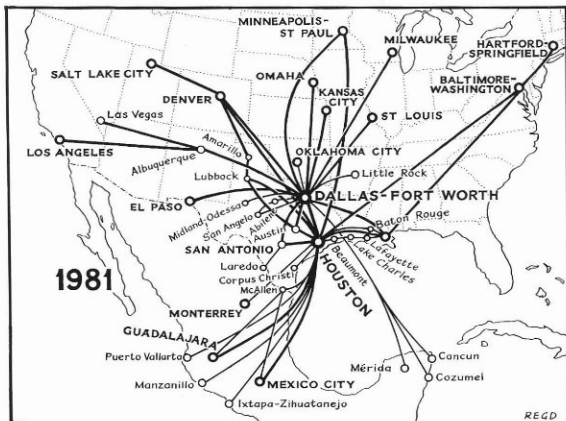
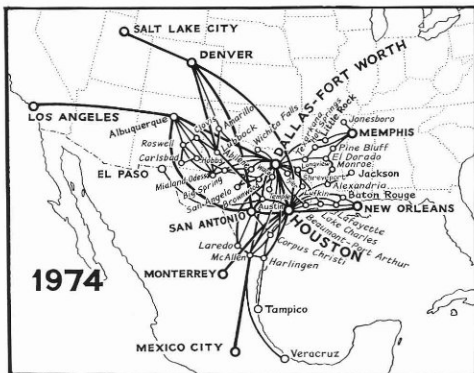
end-to-end Pan Am journey by using a connecting domestic flight in between. However, the C.A.B. took the view, as did President Roosevelt, that if Pan American was to enjoy the privilege of being the chosen instrument for U.S. overseas air transport development, such tolerance of a virtual monopoly should be reward enough. Trippe should not expect to have his cake and eat it too.

The C.A.B. rejection of a Pan Am-National affiliation in 1960 did not prevent Juan Trippe from continuing to advocate his case for domestic routes whenever the occasion arose; and the industry as a whole was well acquainted with the burning desire of Pan American to try to link its gateways, at the very least. The C.A.B., in fact, eventually modified its rigid stand, and permitted Pan Am to operate between New York and California, with the strict restriction, however, that westbound passengers on this segment must be destined for trans-Pacific travel or eastbound for trans-Atlantic, thus preserving the strict separation of Pan Am's foreign franchise.

When, therefore, in 1978, National Airlines suddenly appeared ready to be taken over, and with the Civil Aeronautics Board itself preparing for its own demise and accepting a severe erosion of its power over mergers, Pan American leapt into the fray, and made counter-offers against Texas International's. The "World's Most Experienced Airline" demonstrated remarkable naivete in its approach to the problem and failed to assess some of the more obvious drawbacks. National, for example, was a major Douglas operator, with fleets of both types of DC-10 as well as DC-8s; Pan Am, on the other hand predominantly Boeing-oriented, had selected the Lockheed Tristar as its three-engined wide-bodied jet. So there was a chronic duplication of aircraft types.

National's number one route was Miami-New York, which certainly linked two important Pan Am gateways. But with airline deregulation just across the horizon, it was open season for new entrants into one of the airline industry's most lucrative "gravity runs"; and in any case, Eastern was the dominant carrier. Furthermore, much of the need for gateway linkage had disappeared with the proliferation of nonstop and direct routes across the Atlantic and the Caribbean. Pan American's craving for National, in fact, seems to have drawn as much from emotional memories of a former ambition, made in an entirely different competitive environment, as it was from balanced business judgment and analysis.

For whatever reason, in September 1978 Pan American Airways negotiated to purchase National Airlines for \$350 million. In short order, Pan Am paid \$108 million to Texas International for 2.1 million shares. A calculation of the latter's involvement revealed that Texas International made \$46 million in pretax profits on the transaction, because of the appreciation in share value during the negotiations. This enabled Texas International to announce a 1979 net profit of \$41.4 million on revenues of \$234.2 million. Such an injection of cash was useful, to put it mildly. It gave Lorenzo the flexibility to invest in fleet and route expansion to a degree which would have been impossible if TXI had been walking the tightrope of financial viability. He could invest in new routes, new aircraft, even new airlines.



Growth of Texas International, 1974-1981. With the change of name, the Texas local service airline expanded into Mexico, suspended almost all its short routes, and, after deregulation, opened intercity routes to become a national, rather than a regional, airline.



During the 1970s, the Douglas DC-9-30 became the most popular twin-jet airliner in the United States, and was a great favorite in Texas.

Texas International Expands

Under the Airline Deregulation Act of 1978, Texas International, in company with every other airline in the United States, took the opportunity of entering markets which had been previously denied under the old C.A.B. systems. By the end of 1979, Houston and Dallas both became large hubs for TXI routes to Mobile, Baltimore, St. Louis, Kansas City, Tulsa, Oklahoma City, and Las Vegas. Dallas also received Los Angeles nonstop service. Houston became a Texas International foreign gateway to additional points in Mexico: Guadalajara, Mérida, Cozumel, and Cancun. Some of these new connections, for example, to Tulsa and Mobile, as well as older routes to Wichita Falls and Brownsville, were deleted within a few months; but such flexibility was one of the advantages of the new deregulated system. In the old days, both the additions and the deletions would have taken years to accomplish through the C.A.B. procedures. The litigation costs both to the airline and to the government agency would alone have been a deterrent.

Peanuts Fares

During the mid 1970s Texas International met with increasing competition. Although some of the certificated carriers were deserting the Texas markets, the intrastate carrier Southwest Airlines, directed by the remarkable Lamar Muse, was making a killing by saturat-

ing the heavily traveled "Texas Triangle" with low fare service.

This was an intensely local affair. Southwest Airlines operated under the jurisdiction of the Texas Aeronautics Commission. But whereas American and Braniff, for example, had many other avenues for market development, Texas International's market was concentrated in the Lone Star State.

Lorenzo moved emphatically to match the opposition, now expanding into markets outside Texas. Early in 1977 the famous *Peanuts* fares launched an air fare war conducted with considerable élan. To the amazement, and often to the amusement, of rival airlines, the *Peanuts* fares were set at about 30 percent lower than coach. There was mixed reaction. Texas International lost some revenue on routes which might have supported the coach class fare; but it claimed much more from newly-generated traffic which might otherwise have traveled by surface transport, including the automobile. One indirect effect was that it completely changed the old-fashioned T.T.A. image to that of an aggressive airline that was not afraid to make courageous marketing decisions.

Such was the success of the *Peanuts* fares that it started a new trend of low discount air fares throughout the U.S. In the past neither T.T.A. nor TXI had laid claim to any significant innovation, although it was in the forefront of re-engining the Convair twin. Now, Texas International, by launching the first of the deep discount fares,

was an innovator, and carved a place for itself in certificated airline history.

On August 8, 1980, Texas International purchased 20 McDonnell Douglas Dc-9-30s from Swissair and Austrian Airlines at a cost of \$135 million. This worked out at less than \$7 million per plane which, although possibly on the high side for an average twin-engine, depreciated jet, was nevertheless a good bargain, as the aircraft had been superbly maintained by two of the most highly respected airlines in Europe.

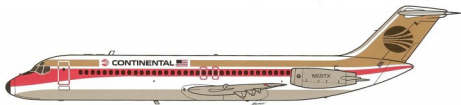
Organizational Changes

An important step affecting the corporate strength of Texas International was made early in 1980, when Texas Air Corporation was created as a holding company owning 100 percent of Texas International. Lorenzo had made overtures to the Civil Aeronautics Board to enter the New York-Washington air shuttle market. Freedom of entry of new domestic airlines was an essential feature of the Airline Deregulation Act. Accordingly, a new airline, New York Air, was formed by Texas Air. By this move, Lorenzo entered the dense intercity markets of the Northeast. New York Air opened a New York (La Guardia)-Washington (National) shuttle service on December 19, 1980, paralleling the well-established Eastern Shuttle, and later added further routes to other eastern cities.

In June 1980, Texas Air became the parent corporation of Texas International Airlines in a share-for-share exchange of stock. The year 1981 witnessed further consolidation and expansion of Texas International. Harry T.

Chandis had been appointed president and chief operating officer late in August 1980, but with Frank Lorenzo remaining as chairman and chief executive officer, as well as being president of Texas Air, there was no doubt as to who was in control of things within the whole organization. New routes continued to be added on a systematic basis. On January 31, 1981, without much ado, Dallas as well as Houston received direct service to the Yucatan resort destinations to take advantage of the booming tourist trade to the Mexican Caribbean. New services began on the same day from both Dallas and Houston to Minneapolis, while Milwaukee became a Texas International station on April 1, developments which would have been beyond anyone's imagination in prederegulation days. The airline went on to give further evidence to justify the "International" part of its name when on May 21, 1981, service began from Houston to Ixtapa/Zihuatanejo, Manzanillo and Puerto Vallarta, on the Mexican Pacific Coast.

Henceforth, however, such developments were minor items in the chronology of TXI's affairs. Within a few months of its incorporation, it had, by the end of 1980, acquired 4.24 percent of the stock of Continental Airlines. Like the proverbial cloud no bigger than a man's hand, this signaled distant storm clouds ahead. With the National Airlines affair, Frank Lorenzo had tasted the flavor of trunk airline operations, had tested the temperature of the corporate waters in that arena, and found them to his liking. He was now preparing to take his place as one of the most controversial personalities in the United States airline industry, as he embarked upon another corporate venture which shook the entire U.S. industry to its foundations.



15

Born Again

1982-

An Airline in Disarray

If Al Feldman's task in taking over the Continental presidency had been difficult in 1980, George Warde's problem was well-nigh insolvable in 1981. He took over the presidency of Continental Airlines two days after his predecessor's tragic death, and he must have known from the start that he was presiding over a company that was riding a roller coaster towards financial disaster, with those allegedly in command unsure of which control switch to throw next. Having been used to comfortable viability, sometimes propped up by regulatory protection, the airline as a whole was not accustomed to tightening its belt.

Of the 43 years of Robert Six's overlordship, Continental had made a profit in 42, a record of which almost any company, inside or outside the airline industry, would be proud. It had been achieved by "Doing What It Did Best" (to borrow a slogan from another airline) that is, to provide superb customer service. There was method in the intensity of Continental's approach in this respect. Quality of service was one of the very few airline activities over which neither the C.A.B. nor the rival airlines had any direct control.

During prederegulation days, the Civil Aeronautics Board conscientiously adhered to the principle of up-

holding the spirit of competition, and was obliged to do so within the terms of its charter, but this was something of a sham. To all intents and purposes, there had been little competition in fares. In the complex system over which the C.A.B. presided, an individual airline could seldom gain a clear advantage. By tacit consent of the Air Transport Association, the passenger paid the same fare for a given journey, irrespective of which airline he chose. Equally, there was little competition in aircraft performance, which governed journey time, punctuality, and on-time regularity. An airline might gain a temporary advantage by introducing a new, faster, or larger type; but the competitors soon matched it, much in the same way as they matched the fares. Helpless to break free of these restrictive deterrents to competition, Six and Continental made the best use of the limited freedoms open to them. These were in the fields of marketing the product, i.e. selling an airline seat, and in producing it in the most efficient manner, i.e. reducing the cost of flying that seat.

Six instinctively sought those areas of marketing where the C.A.B. could not interfere; and for many years he pulled off a series of promotional coups which sustained Continental through an era of prosperity. Few old-timers in the airline business today would deny that the old Continental was never surpassed in selling air

transport to a discerning public. Throughout its history, it pursued marketing strategies which promoted the company as the finest, if not the biggest, in the U.S. domestic industry. While not necessarily the first with a new innovation — the launching of coach fares, for example — Continental was always abreast of the leaders. Its aircraft were always the brightest and cleanest; its flight deck and cabin crews were always the smartest; the aircraft interiors were the most attractive; and the ground organization, from the reservations department to the check-in desks at the airports, were the most courteous. All these vital stages in the process of selling tickets to the public in a competitive environment were executed superbly, and they produced results.

At the same time, Continental's operational efficiency was a watchword in the industry. In this respect, it was an innovator, for it was the first to introduce the progressive maintenance system. Disciplined efficiency in vital areas of routine maintenance and overhaul, dating back to the years of Stan Shatto were translated into lower unit costs.

This combination of good revenues and low costs had served Continental well through the years. But the problem beginning in the 1970s was that the margins had become wafer-thin. In prederegulation days, the unit revenue rates earned by Continental were not substantially different from anyone else's; but the advantage which it had previously held through its aggressive promotion had been eroded, simply because the other airlines had gradually caught up by launching marketing schemes of equal effectiveness. Costs too had inched up, mainly through increases in wages and salaries and the cost of materials; and the intense loyalty which was reflected in the average longevity of the employee roster had an unfortunate effect. Continental's average pay scales were on the high side, simply because of the seniority of its staff. Furthermore, as with the commercial promotion, the rival airlines had become as efficient as Continental.

Yet Continental continued to add services to an already weak system, not so much simply to expand, but rather to build a defensible route structure around Denver and Houston while there was still time. During the latter part of 1981, seven more cities were added to the domestic network: Salt Lake City, on September 15; Pensacola, on October 1; New York (La Guardia), Louisville, and Green Bay on October 25; Tampa and Orlando on December 1. One other important destination added during the year which was potentially profitable was a second Australian city, Melbourne, on October 23. At least the revenue rates per mile on international routes, combined with the low unit operating costs of the DC-10s, held out hopes of breaking even.

Resistance to the Frank Lorenzo take-over bid ended on November 25, 1981 when, with 50.8 percent control of the stock, the Texas invasion was irrevocably complete. The Continental board of directors "concluded that it was in the best interests of the company and its stockholders to cease resistance." Continental's board elected three Texas International Airline nominees to the board. John Robson, a former C.A.B. chairman and deregulation advocate, was one of them. An objective review of the airline's position in late 1981 raises the question as to what policy, if any, the Continental directors might other-

wise have pursued except cooperation with Texas International. With costs as high, if not higher, than any airline in the industry, the staff, almost from top to bottom, were still claiming more remuneration. Yet traffic was dangerously near stagnation point, revenue rates were declining, and cash resources were seriously depleted.

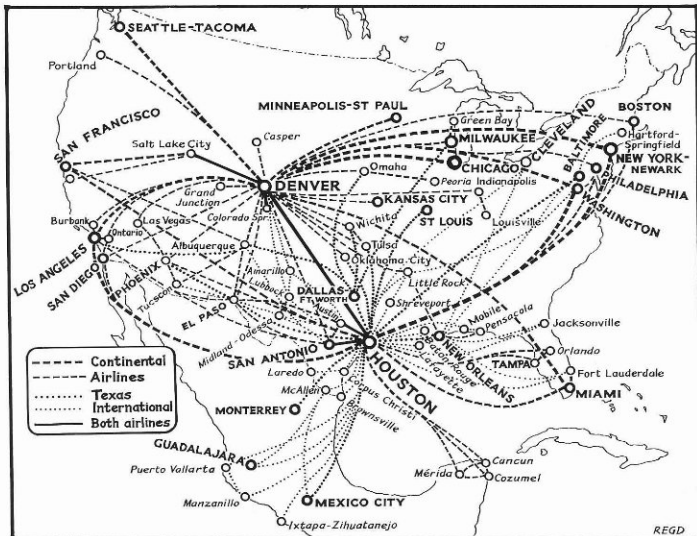
That Continental was going downhill at great velocity was frighteningly clear from the year's results. The year 1980 had been bad enough, with \$20,700,000 net loss, even after allowance for about \$58,000,000 in special gains. Now, the 1981 figures revealed a net loss of \$60,356,000, even after taking credit for \$40,000,000 in special gains.

Lorenzo's action in seeking control must have stemmed from an inborn desire to seek ever new challenges as a way of life. Having transformed one ailing airline, Texas International, from a loser to a winner, he now took on a giant problem which many thought was bigger than he or anyone else could handle. But there is little doubt that, had he not intervened, Continental would have died on its feet, overcome by the forces of competition in a ruthless deregulated struggle, with no holds barred and no quarter given. The large airlines (through the inbuilt economic advantage of sheer size) and the new airlines (through the economics of employing lower paid staff, and selectively choosing only the best routes on which to compete): both of these groups were squeezing Continental out of its protected position. Of all the trunk airlines of the prederegulated era, Continental was, in fact, the most vulnerable. It had not built a protected traffic hub, as did Delta. It had not adequately controlled costs in recent years as did Northwest. Moreover, it was not blessed with a route system in a less competitive area of the country, as was USAir. Its main traffic corridor was between California and Texas. These two states were the homes of several intra-state, low-fare airlines, and three of them, PSA, MuseAir and Southwest, moved with alacrity to usurp Continental's birthright.

Birds of a Different Feather

The King is Dead, Long Live the King! The traditional royal proclamation implying the continuity of the realm was not exactly apt in the case of the two strong personalities engaged in the transfer of power at Continental. The two men, Bob Six, retiring after 43 years at the helm at the age of 74, and Frank Lorenzo, aged 41, taking over the reins after only ten years in charge of a smaller airline, were as different as chalk and cheese.

Six was extrovert, self-confident, and aggressive. A large man in every sense of the term, his language was direct, sometimes profane. The often impulsive actions which the words inspired were similarly direct, and he had the gift of inspiring and stimulating his team at Continental. He did not suffer fools gladly, and let people know of his displeasure in no uncertain terms. He was a man of his word, but reluctant to admit mistakes. He was much respected throughout the industry, not for any profound insight, but for his often courageous stand against what he perceived to be self-serving cant by his peers. Working with the regulated system throughout his tenure of office, he was more often right than wrong. He fought against airline deregulation from the moment that specter reared its head. His stand on this subject was as



Continental-TXI Merger, 1982. After a bitterly-disputed merger, the surviving Continental Airlines became a major trunk airline.

much instinctive as analytical as he had never shunned competition.

In contrast, Lorenzo was a more private individual. While Six would make an intuitive decision, and act impetuously upon it, Lorenzo would analyse, consider the options, dissect a problem into its essential parts, and with careful timing, act with surgical precision and incisiveness. Whereas Six would react vehemently to criticism, real or imagined, Lorenzo would show little sign of outward irritation — although his subsequent course of action would reveal that he had not ignored the commentary. Six was almost married to Continental, but his domestic family life was patchy, and only after two false starts did he find a partner in life who understood, tolerated, and supported his life style. Lorenzo, on the other hand, is a dedicated and sensitive family man, in spite of intense preoccupation with the clinical diagnosis of the financial ills of the companies which he leads, and a dedication to curing their ailments. Six was an autocrat, running the airline almost single-handedly, while Lorenzo respected the organizational lines more and delegated responsibility to his trusted executives.

But in some respects, the two men were alike. Both

were men of their respective times. Neither was afraid of man or beast, bureaucrat or banker. Lorenzo could not have applied his special skills effectively during Six's era; and the reverse was also emphatically true.

The Big Merger

On July 13, 1982, the stockholders of Continental and Texas Air Corporation (the parent company of Texas International) voted their strong approval of a merger of the two companies. The previous March a new Continental board was elected and was comprised exclusively of nominees of its largest shareholder, Texas International. Officials then declared their intention to synchronize the operations to eliminate inefficient redundancies. Six months beforehand on January 25 — exactly two months after Continental had declared the fight over and elected three Texas International representatives to its board — a "prosperity plan" had been announced. This was a nice euphemism for drastic cuts in costs and staff. One employee continued to resist the inevitable layoff. Robert Six still made frequent appearances at the Continental offices. His influence on the direction of the

airline's affairs, however, had evaporated.

The merger came as no surprise. Observers of the U.S. airline scene had been under no illusion as to the plans for the fate of the joint operation. On June 1, 1982, duplicate timetables had been published by both airlines, with almost identical covers, with the slogan "Together We're Even Better." The map inside showed the two networks neatly superimposed, dramatizing the two intensive hub systems at Denver and Houston.

In August, an agreement with the pilots was reached, rationalizing the two contracts, and paving the way for other employee agreement rationalization—at least that was the intent and expectation. In October 1982, the financial merger was completed, under the chairmanship of Frank Lorenzo. Even though his Texas International had been the driving force behind the merger, Continental Airlines remained as the surviving name. This was an indication of the Lorenzo approach: there was no question as to which was the more marketable as a national product, large though the name of Texas may have loomed in the Lone Star State and to its neighbors. Had the position been reversed, Bob Six would probably have invented a new name, had the fleet of 110 aircraft repainted, together with all the ancillary equipment and office buildings, and reprinted every sheet of paperwork, from the tickets to the toilet rolls. Lorenzo's choice of name was also a sign of his respect of all that the Continental name stood for: superb customer service. His aim was to reinforce this reputation with managerial discipline and financial acumen.

The effective operational date of the new airline was October 31, 1982. The new system was built around the former network of Continental, which was the larger of the two. Duplication of routes was eliminated and new points were inherited from Texas International: Cleveland, Monterrey, Hartford, Guadalajara, St. Louis, Jacksonville, plus several points in Texas. Oddly enough, these last had once been served by Continental, and now rejoined the system. New domestic destinations were added: Great Falls, Billings, and Rapid City, while Maracaibo and Caracas, Venezuela, were picked up as South American destinations, as a fallout from the debris of the Braniff debacle. The interchange service to Alaska, which had been a casualty when the Continental-Western talks had fallen through, was resumed via Alaska Airlines, interchanging at Portland.

The new airline was impressive. Its fleet consisted of 112 aircraft of only three basic types: 13 McDonnell Douglas DC-10s (11 of the Dash 10s and 2 of the Dash 30s, for Pacific operations); 60 Boeing 727s (45 of the 200s and 15 of the 100s); and 39 McDonnell Douglas DC-9s (22 Dash 30s, 17 Dash 10s). Its route system stretched to four continents.

Lorenzo and the managers he installed had a fight on their hands in more ways than one. Continental's finances had reached rock-bottom, and only the most austere approach to management, with unpalatable staff cuts and wage reductions, would have the slightest effect in reducing the chronic deficits which piled up every month. Only significant improvements in productivity could contribute to the rescue action. But as 1982 moved into 1983 and Continental Airlines made preparations to move its base from Los Angeles to its largest operating hub, Houston, losses mounted to record levels, unions

balked at further cost-cutting, and crisis point was reached.

Breaking Point

As the months of 1983 went by, Continental's finances progressively worsened. During July, August, and September, the company's losses exceeded \$50 million. By the end of September, load factors had dropped to less than 40 percent and the airline was losing a million dollars a day. As the summer months are normally the most profitable in the airline year, the prospects for the last three months were horrifying. Continental's management estimated that the five years 1979-1983 produced a cumulative loss, before special items and sale of assets, of half a billion dollars, more than a quarter of which would have been sustained during the last six months of 1983. The chances of survival without a revolutionary change in the entire cost and revenue structure of the airline were next to non-existent.

The airline was faced with a Hobson's choice. If, as in the good old days before deregulation, it raised fares to increase revenue, people would simply flock even more to the new low-budget airlines. If it lowered fares, the break-even passenger level, already impractically high, might go ludicrously beyond the maximum capacity of the aircraft.

The break-even level was high because the costs were high, a major element of which was labor. Almost like a drowning man clutching the proverbial straw, Continental sought to ameliorate the position through negotiation with the staff, in an effort to increase productivity and reduce wages.

But so strong was the resistance that, in response to an offer by Continental to raise wages by 20 percent in exchange for a 20 percent increase in productivity, the International Association of Mechanists (IAM) went on strike on August 13, 1983. By this time, Continental was, in a peak summer month, losing half a million dollars a day. Clearly the union leaders were out of touch with reality, as the airline was hurtling towards certain oblivion.

Lorenzo made one final attempt to rescue a sinking ship. On September 14, he proposed to offer stock to Continental's 12,000 employees, with profit-sharing. As a bonus, four million shares would be offered, with options to purchase eight million at 85 percent of the market price through payroll deductions over two years. Employees would receive 25 percent of the airline's profits. The plan would result in the employees owning 35 percent of the common stock.

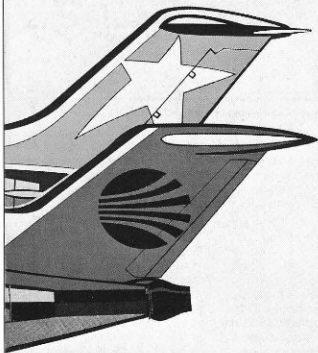
This offer was conditional upon an across-the-board agreement to reduce wages and salaries, and to increase productivity through fewer holidays, less vacation time, and other devices. The total cost savings were estimated at \$150 million per year. Of this amount, \$30 million would be required as concessions from the clerical staff, agents, and management, and \$20 million from the IAM represented employees. The remaining \$100 million was requested from the pilots and flight attendants.

The deadline for the proposed plan was set at September 19. Stephen M. Wolf, who had become president and chief operating officer of Continental on December 1, 1982, resigned on September 21, 1983. Phil Bakes, a former Texas Air official, was elected executive vice pres-

Texas International

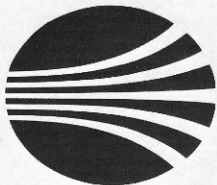
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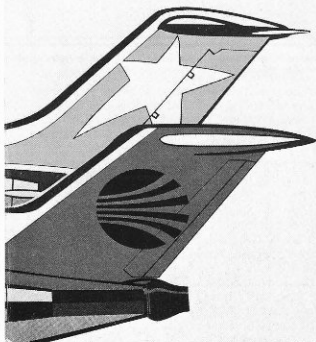
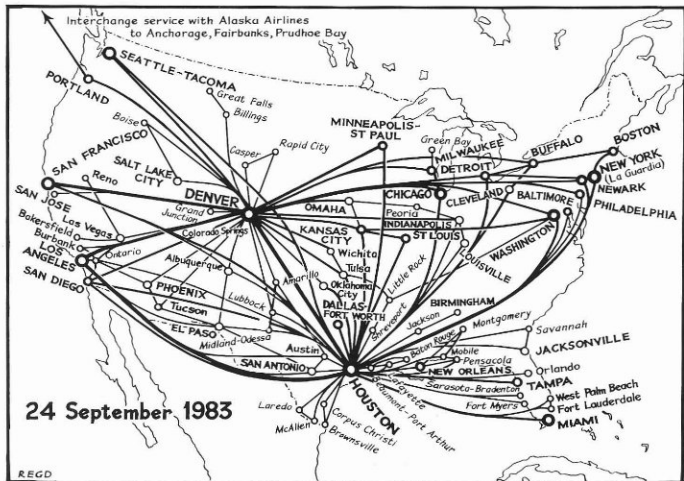


Exhibit J. Texas International and Continental Airlines joint timetables.

ident and assumed the duties of chief operating officer. Frank Lorenzo and his team took the responsibility of trying to overcome the massed union opposition. With no readiness on the part of the pilots' union to compro-

mise, Lorenzo took drastic action. The medicine already offered had certainly been unpalatable. But if the patient refused to take it as a last hope to cure a chronic ailment, major surgery was the only alternative.



Continental Airlines Before "Chapter 11," 1983. The devastating effect of the measures taken to assure the survival of Continental is vividly illustrated by this map and the one on the following page.

Chapter Eleven

At 6 p.m. on Saturday, September 24, 1983, Continental Airlines ceased all domestic operations, as it filed under Chapter 11 of the Federal Bankruptcy Code to reorganize the company. The filing was made under the jurisdiction of the U.S. Bankruptcy Court, Southern District of Texas. Two-thirds of the 12,000 employees were furloughed. Services across the Pacific, and to Mexico and South America, however, were not interrupted.

As Lorenzo told *Business Week* about the need for the drastic action of Chapter 11:

"There was no halfway procedure. There's no Chapter 5½. The company would have been out of cash in short order had we done nothing."

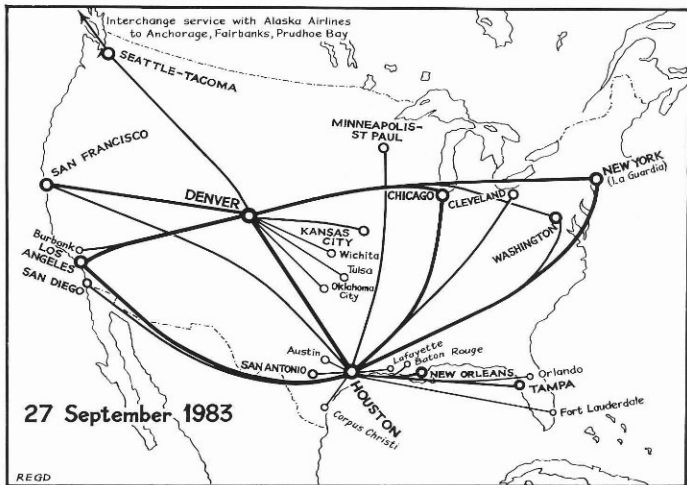
If this drastic step had not been taken, Continental could not have avoided going out of business altogether. The stockholders' equity, which was close to \$300 million in 1979, had dwindled to less than \$1 million. Common stockholders' equity stood at minus \$44 million.

On Tuesday, September 27, 1983, Continental Airlines resumed domestic operations. Except for the appearance of its aircraft, it was unrecognizable from the pre-Chapter 11 Continental. Within the mainland United States it

served only 25 cities, compared with 78 the previous week. Staff numbers were reduced from 12,000 to 4,000. All DC-10s, except for two on the Pacific route, were grounded. Half of the 100 Boeing 727-200s and DC-9s were parked on the Houston ramp.

In an attempt to restore public patronage, and the good will of the travel agents (who had almost ceased to book customers on Continental flights during the days immediately before the bankruptcy filing), Continental offered a four-day bargain basement fare of \$49.00 on any nonstop segment; and \$75.00 or less from October 1-15, later extended to October 22. Some saw this new fares policy as a desperate attempt to attract passengers to Continental, regardless of economic considerations. In fact, the fares package was the other half of the economic equation.

Lorenzo had once steered Texas International successfully through its financial problems partly by the daring *Peanuts* experiment in 1977, and in so doing, had established his place in airline history. His innovative policy then was comparable with a previous precedent-setting break in orthodox fares policy. In 1948, 'Slim' Carmichael, president of Capital Airlines, had revolutionized airline tariff structures throughout the U.S. by the



Continental Airlines After "Chapter 11," 1983.

introduction of the *Nighthawk* coach fares. As with Capital's experience, the *Peanuts* fares had been matched by every competitor, and the so-called deep discount fares were applied across the nation. Now, Lorenzo recognized that every airline in the U.S., with the protective cloak of the C.A.B. removed, would have to come to terms with the new tariff structures. The doors had been opened to a new breed of airline. Continental had the likes of Southwest, MuseAir, and People Express (not to mention Pan American, with its special gateway-linked tariffs) breathing down its neck with low fares, while the industry giants, United and American, were major competitors out of Denver and Texas. There was no time to lose.

The Ultimate Clash

Labor-management relations in the United States airline industry are still governed by the Railway Labor Act, passed in 1926 (the same year the Air Commerce Bill was enacted) and applied to the airlines from 1936 onward. The primary assumption made in the application of the terms of the act was that it would operate in a regulated, quasi-monopoly business environment. The passing of the airline Deregulation Act in October 1977 turned this entire framework into an anachronism. With fares inevitably plunging in a free market, costs had to take a similar dive, and these costs included labor.

Certain unions, however, felt that they were somehow

exempt from airline deregulation. Attempts by Continental to bring the sides together had met with procrastination, if not obstruction. Both the Air Line Pilots Association (ALPA) and the Union of Flight Attendants (UFA) declined to meet Continental's negotiating representatives on the very day when it filed for bankruptcy, after a clear warning that such a drastic step was imminent if something could not be done at the eleventh hour.

The pilots' union, ALPA, became the focal organization on the union side of the dispute. While the other unions were as much involved in the basic issue, none fought its case with more vehemence than ALPA. Continued attempts by Continental to meet the pilots for discussions, subsequent to the September 24 termination of operations, were met almost with contempt. Finally, at a meeting on September 30, the attorney for ALPA-International, serving as chief spokesman for ALPA, began the meeting by laying down four preconditions which many company negotiators would have rejected out of hand. In the event, Continental accepted the preconditions with only minor exceptions.

The basic issues, however, were the salary scales, the working conditions in an emergency — which Continental now faced — and the privileges which went with the job. Continental proposed a package which ALPA had recently accepted from the bankrupt Braniff Airways, but this was refused. ALPA appeared to have another course of action in mind.

At 2 a.m. on October 1, 1983, ALPA and UFA went on strike. The morning newspapers carried large union advertisements seeking public support. Pickets appeared at the Houston Intercontinental Airport at 7 a.m. the same morning, carrying placards and distributing leaflets, urging passengers to "THINK TWICE" before flying the New Continental Airlines. Apart from rhetorical statements of the obvious, neither the placards nor the leaflets explained what the pilots were striking for.

The first poststrike negotiations were held on October 6. ALPA representatives would not present any definitive proposals, and Continental indicated that, in their absence, it could not continue further to waste its time. On October 7 it issued a new pilot employment policy. The terms were better than those already offered by Braniff on June 22 and accepted by ALPA. Basically, they offered \$43,000 a year for a captain, \$28,000 for a pilot officer, plus a health insurance plan, company-paid short-term disability, profit-sharing, stock ownership, and work rules which had been standard throughout the industry for decades past. This stipulated 1,000 hours per year on the flight deck, although Continental pilots had habitually averaged about 620.

In spite of ALPA's attempt to portray the pilots as victims of a wicked plot to deprive them of their livelihood, crews and cabin staff responded to Continental's offer to the extent that the last day on which any scheduled flight was cancelled because of the lack of a complete crew was October 8 — the day after the new pilot employment policy was announced. Many pilots and flight attendants, as instructed by the pickets, thought twice, and then turned up for work.

The next week was stormy, with claims and counter-claims ricocheting back and forth between the two sides. On October 11, Continental sued the international organization of ALPA for \$50 million, charging price-fixing, refusing to bargain in good faith, and interfering with nonstriking pilots. This last was a mild description as there were reported incidents where physical violence had been used, reminiscent of the custom during the dark days of the Depression 50 years previously. Henry Duffy, president of ALPA, made an uncompromising statement against Continental, threatened \$10,000 fines on members who crossed the picket lines, and offered incentive payments of \$3,000 or so to striking pilots. Continental claimed such action to be in violation of the Railway Labor Act.

The Air Line Pilots Association finally made its counter-proposal on October 14, 1983. It called for a temporary 7 percent pay cut from the previous salary that would reduce the annual salary of a senior captain to \$100,000, with a projected retirement income of between \$60,000 and \$100,000 per year. Including profit sharing and stock plans, ALPA wanted a guaranteed equivalent salary for senior captains of \$150,000 by 1985. It also filed suit against Continental for \$100 million.

Whether or not the timing of this proposal was related to Continental's plans is not known. For the record, it came the day after the airline, in an effort to stimulate traffic, had announced a new range of fares, to be effective on October 23. Examples of this fare structure, reminiscent of the *Peanuts* fares of Texas International six years previously, were \$125 Denver-Los Angeles and \$150 Houston-New York. The difference, however, was

that these were first-class fares, and were in striking contrast with the \$382 and \$384, respectively, charged by the competition.

Knowing throughout the period of crisis that Continental Airlines was financially disabled, and was struggling desperately for its life, the ALPA proposals seemed completely out of touch with reality, and arguably designed deliberately to prevent any reasonable compromise solution. Not too many members of the public were to be found who wholeheartedly supported the ALPA case. Indeed, Continental Airlines was easily able to recruit staff at all levels, from mechanics to pilots with more than 20 years experience at other airlines. The majority seemed to take the view that the questionable insisting on a prederegulation way of life was not worth the agony of unemployment, and that their cause was better served by enthusiastically helping the stricken airline to get back on its feet.

The Long Road Back

When Continental resumed service on U.S. domestic routes on September 27, 1983, the map of the network was strikingly different from the one that had been so abruptly terminated three days previously. Concentration on the twin hubs of Houston and Denver was even more emphatic than it was before the shut-down. The two cities appeared almost isolated, and the nonstop Houston-Denver route was the only link between the two. All intermediate one-stop or multi-stop links, via such points as Little Rock, Tulsa, Wichita, Oklahoma City, and others, had disappeared. Important population centers such as Dallas/Fort Worth, Boston, Jacksonville,



Chairman Frank Lorenzo and President Phil Bakes hold one of many news conferences during Continental's rebuilding process which turned the airline from substantial financial losses to record profits in the second quarter of 1984, less than a year after filing for reorganization.

Photo by Walt Ferreck

A new tradition in flying.



Traditionally, airline passengers have had two choices if they wanted a scantly priced ticket. They had to give up the freedom of traveling when they wanted, or give up basic services and amenities.

Continental Airlines doesn't think that's much of a choice. That's why we are the first airline in America to offer all the great services you expect of a major airline, at an uncommonly low price.

And our low prices apply to every seat, every flight, every day. No restrictions. No reduction in service. No nonsense.

Prices you can afford. Continental Airlines is offering quality air travel at a very realistic price.

You don't need to pay more. And usually, you can't pay less. Maybe that's why we're the fastest growing

major airline in America.

Fly without strings. If you fly during our busiest times, you pay a low price. We call this our "Peak" fare.

If you fly when we're not so busy, you pay a lower fare. This is our "Off-Peak" fare.

And unlike any other major airline, Continental is selling every seat on every plane at these prices. You don't have to book seven days in advance, stay a week, or fly only on Tuesdays.

You can reserve in advance but you don't have to. Even if your travel plans change at the last minute, you can get a seat at the same low price.

First Class at coach prices. Most airlines charge so much for First Class, the closest most people can get is the first row of coach.

Well, Continental offers First Class service with one important advantage—it costs no more than other major airlines charge for full coach. Usually a lot less.

So if you're thinking of buying a full coach ticket on another airline, we have a suggestion.

Come to Continental. We will fly you First Class.

How's it working? In just three months, the New Continental flew over a million passengers.

And a recent survey showed that 95% of our recent passengers rated their flight "good" or "excellent."

Maybe that's because 100% of our employees now share in our profits—the best reason there is to make you want to come back. So next time you fly, fly Continental.

It's a full service airline. It's a scantly priced airline. It's about time.

 **CONTINENTAL AIRLINES**

Exhibit K.

Miami, Indianapolis, Louisville, and Portland had been temporarily removed. Cities in west and southern Texas, New Mexico, Arizona, and Nevada, together with all those north of Denver, except Seattle and Minneapolis, were no longer on the Continental map, at least for the time being.

Of all these deletions, the most surprising to outsiders was perhaps Dallas/Fort Worth, which had once been a key Continental junction point and access to which had probably been the main reason why Robert Six had once negotiated the merger with Pioneer Air Lines. The new policy, however, was matched to immediate traffic expectations, not to tradition. Continental could not now, while it was desperately struggling to remain airborne, afford to indulge in the luxury of long-term image-building. Dallas/Fort Worth was the headquarters and an important hub of American Airlines. There was no point in risking a head-on battle for traffic there, at the same

time diluting the hub traffic at Houston.

This skeleton network was the start of a long uphill pull to rebuild a shattered airline. At the end of the first week, Continental was operating only 39 percent of its former passenger-miles. But significantly, this percentage was being operated with 400 pilots, or 28 percent of the former roster of 1400. Furthermore, the average captain's salary had been slashed from \$83,000 to \$43,000, or by almost half. Continental's new breed of flying crews were thus operating, in cash terms, at about two and a half times their former productivity level. By November 15, when access to Portland was restored, and frequencies increased on other routes, Lorenzo was able to state that Continental was flying almost 50 percent of its former capacity.

Improvements continued. On December 16, when a two-tier pricing structure was introduced (retaining, however, the low fares in force soon after the launching of

the "new" airline as the "off peak" level), Denver was once again linked with Salt Lake City, Colorado Springs, and Minneapolis. On January 4, vacation flights to the Mexican Pacific Coast were augmented by a Houston-Iktapa route; and on January 15, 1984, Denver-Phoenix and Houston-Miami routes were added. Continental was now flying 56 percent of its previous capacity.

Throughout the remainder of winter and into spring and summer, Continental continued its rapid rebuilding. In February, Omaha was brought on line, while Detroit and Philadelphia joined the airline's domestic system on March 1. By April 1, when McAllen, Texas, became part of the Continental network, the airline was flying 85 percent of its systemwide capacity.

In June and July, Continental added five domestic cities — Albuquerque and Ontario, California, in June and Dallas/Fort Worth, Boston, and San Jose in July — bringing the number of domestic cities served to 40 and pushing capacity to 107 percent of the level flown prior to reorganizing domestic operations nine months earlier. Pensacola service began August 1 and Milwaukee and Cincinnati were added September 5.

Throughout the reconstruction period of the domestic network, the overseas routes continued without interruption and even grew during the first six months of 1984. On March 18, Continental initiated nonstop service between Guam and Tokyo and then followed that with nonstop flights between Honolulu and Guam on March 31. To feed those routes, the airline then added a San Francisco connection with additional frequencies through Honolulu to the South Pacific more than doubled Continental's Pacific service. But the international expansion did not end with the San Francisco connection. On July 1, Continental added service to Hong Kong and Taipei through Guam.

The increased Pacific service required the acquisition of more equipment, and during the first part of 1984 Continental acquired two more long-range DC-10-30s, as well as a short term lease on three MD-80s for domestic service. The DC-10s not only increased the airline's passenger capabilities in the Pacific region, but provided additional cargo space to that area of the world.

Rebuilding Continental during the first part of 1984 brought management and employees closer together. Through the establishment of participative management, employees became an integral part of the airline's operations. And at the same time, Continental management took steps to ensure that employees would share in the success of the company. A substantial profit-sharing plan and stock ownership plans were created. In addition, special incentive programs were instituted among non-management employees aimed at rewarding workers for exceptional contributions to the company's operations.

Nothing, however, improved employee morale more than the news that in the second quarter of 1984, less than a year after filing for reorganization under Chapter 11, Continental Airlines recorded a net profit of \$10.4 million — the highest in five years — and an operating profit of \$27 million — the highest quarterly operating profit in Continental's history. The quarterly profit also meant that the airline was profitable for the first six months of 1984. And Chairman Lorenzo vowed that Continental would be in the black when the books are closed for the year.

The Public Convenience and Necessity

During the abrasive exchange of accusations which accompanied the bitter fight between Continental's management and unions, the voice of Frank Lorenzo was muted by comparison with other spokesmen from both sides. Never given to impulse, and a man of carefully chosen words, his statement during the crisis weekend of September 24-27 might have been taken from a textbook on how to come to terms with the postderegulation airline world: "Continental patiently and valiantly tried to use the negotiating process to bring costs down to today's marketplace. Continental owes it to its shareholders, employees, and, as importantly, its customers to make Continental cost-competitive and provide for its future — a profitable one."

Remarkably, these words were a reflection of much that the Civil Aeronautics Board had stood for during the years of its control from 1938 to 1978, when it conscientiously tried to carry out its mandate "in the public convenience and necessity." Careful examination of the C.A.B.'s record shows that it clearly saw the definition of the word "public" as broken down into three categories in exactly the same way as did Lorenzo in the postderegulation era: shareholders, employees, and customers.

Frank Lorenzo's hobby is long-distance running, an unusual and possibly unique leisure occupation for an airline chairman. But he and Continental are showing every sign of possessing the stamina necessary to sustain a difficult course. And while, in the early stages of the deregulation race, the Houston airline seems to have faltered, this has been less through fatigue than through a necessary reapportionment of latent strength.

With the dramatic financial turnaround assured, news media headlines told the story best:

"Continental flies profitable course." *Rocky Mountain News*.

"The airline that came back from the dead." *The Australian*.

"Comeback of a trimmer Continental." *New York Times*.

"Continental Air Soars Above Union Turbulence." *U.S. News & World Report*.

"Continental soars boldly into new era." *Cleveland Plain Dealer*.

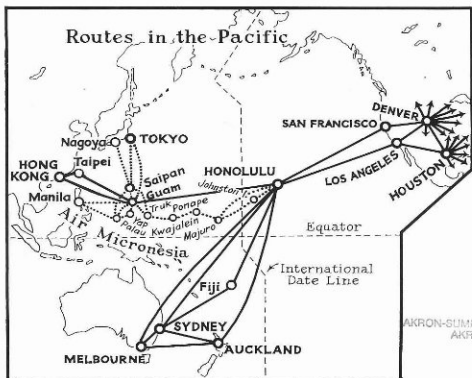
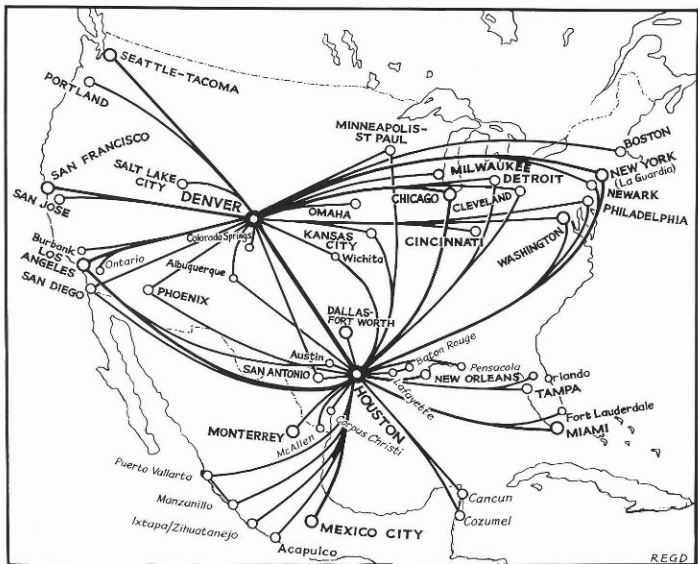
"Airline again sees a future." *Chicago Tribune*.

"Continental workers radiating optimism." *The Houston Post*.

"Reborn Continental earns \$10 million." *The Denver Post*.

"Continental is coming out a winner." *Business Week*.

As Continental Airlines celebrates its 50th anniversary, there are signs that, far from being the "ugly duckling" of the airline industry that it was painted in the fall of 1983, it is emerging once again as a "proud bird," unashamed of its plumage, and with supreme confidence in its ability to set standards of excellence for others to follow in 1984 and beyond.



The New Continental, 1984. Comparison with the map of Continental Airlines after "Chapter 11" (page 95) shows the remarkable recovery made by Continental.

Pratt & Whitney

The engines powering Continental Airlines' fleet of Boeing 727s and McDonnell Douglas DC-9s and MD-80s are produced by United Technologies' Pratt & Whitney, the world's foremost designer and builder of jet engines for commercial and military aircraft.

Since its founding in 1925, Pratt & Whitney has produced power plants for more than 1,200 types of aircraft ranging from wood and fabric-covered biplanes of the late 1920s to the swept-wing, high-performance jets of the 1980s.

Today, Pratt & Whitney engines manufactured in Connecticut power nearly three-fourths of the commercial aircraft in service with some 250 airlines throughout the world.

The company's first commercial jet engine — the JT3 — brought the jet age to commercial aviation powering the Boeing 707 on its maiden flight in 1958. Two years later an improved version — the JT3D — was introduced with higher thrust and better fuel efficiency. After nearly 25 years, the JT3D continues in service today powering 707s and McDonnell Douglas DC-8s on long-range routes.

Pratt & Whitney's JT8D, which powers Continental's 727 and DC-9 jetliners, is the most successful commercial jet engine in aviation history.

Ninety-five percent of all standard-body jetliners in the world are powered by JT8D engines. It is estimated that every five seconds, a jetliner equipped with JT8D engines takes off somewhere in the world.

Since entering service in 1964, JT8D engines have flown more than 225 million hours — more inflight service than all other commercial jet engines combined. The



Pratt & Whitney's JT8D-200 series engine powers Continental Airlines' McDonnell Douglas MD-82 transports.

JT8D fleet continues to accumulate more than 17 million hours each year.

The newest and most powerful member of the JT8D engine family is the fuel-efficient JT8D-200 series, which



Continental Airlines' fleet of Boeing 727s are powered by Pratt & Whitney's JT8D engines, the most widely used engine in commercial aviation history.

have been in service since 1980 as the exclusive power plant for McDonnell Douglas's MD-80 series aircraft.

The Dash 200 engine's increased thrust, with lower fuel consumption, permits the MD-80 to use up to 20 percent less fuel per seat mile than earlier JT8D-powered aircraft. Continental has two MD-82s in service and four more on order.

The largest of the Pratt & Whitney engine family is the JT9D, introduced in 1970 on the first wide-body transport to enter service, the Boeing 747.

The JT9D powers nearly 90 percent of all Boeing 747s, as well as versions of McDonnell Douglas's DC-10 and Airbus Industries' A300 wide-body aircraft.

The latest addition to the family is the fuel-efficient JT9D-7R4, an advanced technology version of the JT9D-7. Selected as the launching engine for the Boeing 767, 747-300, Airbus Industrie A310 and A300-600 jetliners, the JT9D-7R4 series engines offer a takeoff thrust—or power—range from 48,000 to 56,000 pounds, allowing airline operators to select the appropriate power for aircraft and route requirements.

Design improvements and refinements make the Dash 7R4 engine the most fuel-efficient member of the JT9D

family, up to eight percent better than its parent engine. On a typical 1,000-mile flight, for example, the Boeing 767 twinjet will use about 35 percent less fuel per seat mile than the aircraft it is designed to replace.

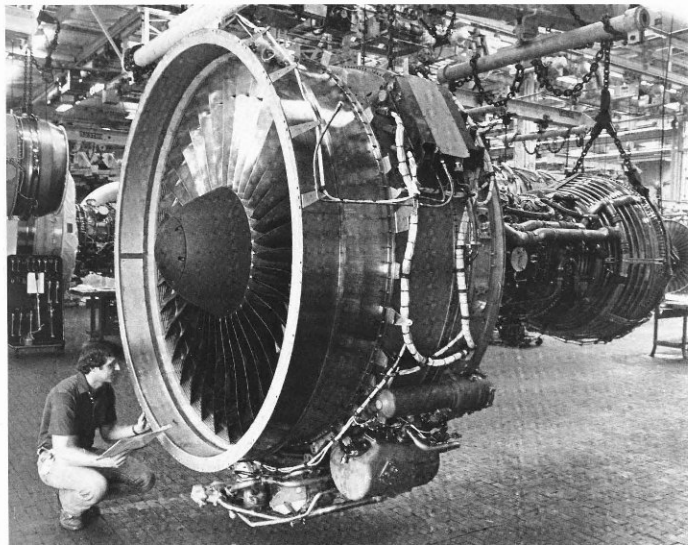
To help airlines reduce the costs of operating and maintaining their fleets, Pratt & Whitney is developing three all-new technology engines that cover the spectrum of thrust that airlines will require for at least the next two decades.

The key to all three of these new engine programs is the technology that Pratt & Whitney has developed during the past decade. This technology came together for the first time in the advanced PW2037 engine, developed for the Boeing 757 airliner.

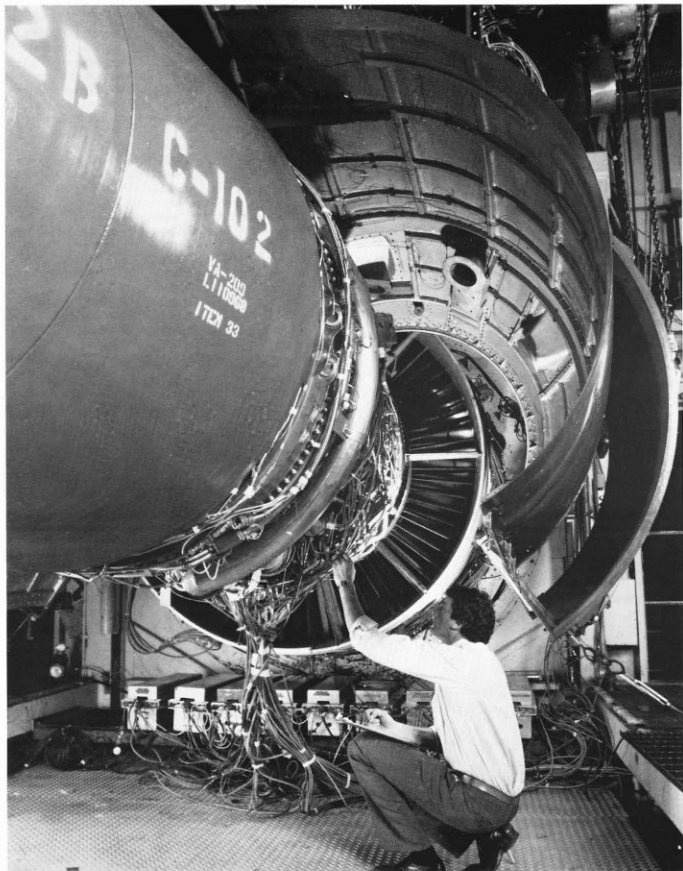
The PW2037 draws heavily on technology gained from the evolution of the JT9D engine and the Energy Efficient Engine program sponsored by the National Aeronautics and Space Administration.

The 37,000-pound thrust PW2037 engines uses state-of-the-art advances in materials, electronics, and aerodynamic design to achieve dramatic improvements in fuel efficiency.

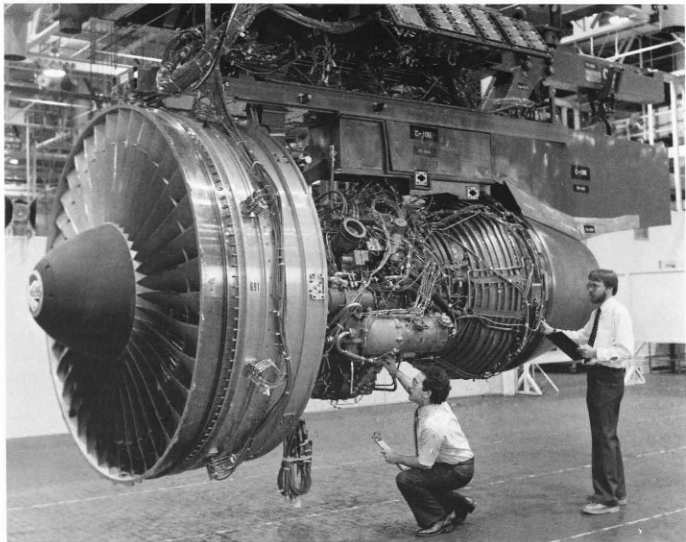
Compared to the first generation turbofan engines it



Pratt & Whitney's all-new PW2037 engine for Boeing's 757 transport.



Pratt & Whitney's advanced PW4000 engine has set new levels of performance in initial testing at company headquarters in East Hartford, Connecticut.



Pratt & Whitney's new PW4000 engine for wide-body aircraft will be available for commercial service in 1986.

replaces, for example, the PW2037 offers more than a 30 percent improvement in fuel consumption, a savings equivalent to about \$1 million a year per aircraft.

The technology incorporated in the PW2037 is being further advanced by Pratt & Whitney's PW4000 for current and new wide-body aircraft, including the Boeing 747 and 767, and Airbus Industries' A300 and A310 aircraft.

Radically new in design, the PW4000 will offer airlines operating wide-body jetliners dramatic economies in fuel consumption and maintenance. This new engine, which produces from 48,000 to 60,000 pounds of thrust, will be available for flight certification in 1986.

The PW4000 will be seven percent more fuel efficient than Pratt & Whitney's current best engine for wide-bodies, the JT9D-7R4. The improved performance of the PW4000 will save airlines up to \$1 million a year in fuel costs for every four engines they operate.

The PW4000 also offers airlines striking advantages in maintenance costs. For example, the new engine will have 27,000 fewer parts — roughly half the number found in current JT9D models. And the most commonly used sets of replacement parts will be about 25 percent less

expensive to buy than JT9D parts.

To power a new generation of 150-passenger aircraft currently being developed or under study, Pratt & Whitney has joined a multi-national consortium, International Aero Engines, to design and produce a third new engine — the advanced technology V2500.

The V2500 will burn only half the amount of fuel of existing short-range aircraft, and will be 14 percent more fuel efficient than any currently available engine.

The V2500 will be certified in April 1988 at two thrust levels, 23,000 pounds and 25,000 pounds.

The 25,000-pound thrust engine will meet power requirements for both Airbus Industries' A320 aircraft and McDonnell Douglas' MD-80 series transports. It also is a candidate power plant for Airbus' four-engine TA-11 transport, which is under study.

The 23,000-pound thrust engine will meet power requirements for advanced versions of Boeing's 737 family and those projected for the Boeing 7-7 aircraft.

Joining Pratt & Whitney in the consortium are Rolls-Royce of Great Britain, Motoren-und Turbinen-Union (MTU) of West Germany, Fiat Aviazione S.p.A. of Italy, and Japanese Aero Engines Corporation.

MCDONNELL DOUGLAS



CORPORATION



The McDonnell Douglas MD-80, the newest Continental jetliner.

Douglas Aircraft Company More than Fifty Years of Airline Transports

In 1934, Douglas Aircraft Company first flew the DC-2, the first production airliner in the famous DC (for Douglas Commercial) series of airliners that led to the DC-10 tri-jets and the MD-80 twinjets that are the pride of today's Continental Airlines fleet.

That same year, Varney Speed Lines was organized, and from that grew the airline that today is known as Continental.

Throughout the history of McDonnell Douglas and Continental, the two companies' fortunes have been intertwined. In 1944, Continental began flying DC-3s, the workhorse of the commercial aviation industry in the 1940s. Trans-Texas Airways, later Texas International and now a part of Continental, began service in 1947, also using DC-3s.

The relationship continued into the 1950s, as Continental added first the DC-6B, considered by many to be the most profitable four-engine piston airliner ever built, and later the DC-7s, the last of a long-line of piston-engine airliners.

In the 1960s, Douglas introduced the DC-9 jetliner for short-haul routes. Continental was one of the earliest customers for that aircraft, and Texas International was one of the all-DC-9 airlines in the world. For many years, DC-9 Fuselage No. 1 flew in Texas International and Continental colors.

The DC-10 was added to the Continental fleet in 1972, bringing wide-cabin comfort on routes within the United States, and to Hawaii, and later to the Pacific and Australia.

For the 1980s, Continental adds to its fleet the McDonnell Douglas MD-80, the most advanced jetliner in its class today. McDonnell Douglas is proud that this quiet, fuel-efficient jetliner will be joining Continental on its 50th anniversary.

And when a newer generation of airliners is needed for Continental to continue serving its passengers, McDonnell Douglas will be there to build those airplanes.



Continental's DC-7B, the City of Chicago, the last and finest of the piston-engine airliners.



The DC-10, the wide-cabin flagship of Continental's fleet.



One of Continental's original DC-9s.



The DC-3 was the workhorse of the Continental fleet in the 1940s.



Trans-Texas Airways, later Texas International and now part of Continental, got its start in DC-3s.

