



Reflections

The Quarterly Journal of the Northwest Airlines History Center



March 2021

Volume 19, number 1

In this issue:

The first Electra - dependable elegance that transformed two carriers

Industrial design tangents not taken in the late 1940s - one dead end and one intriguing direction

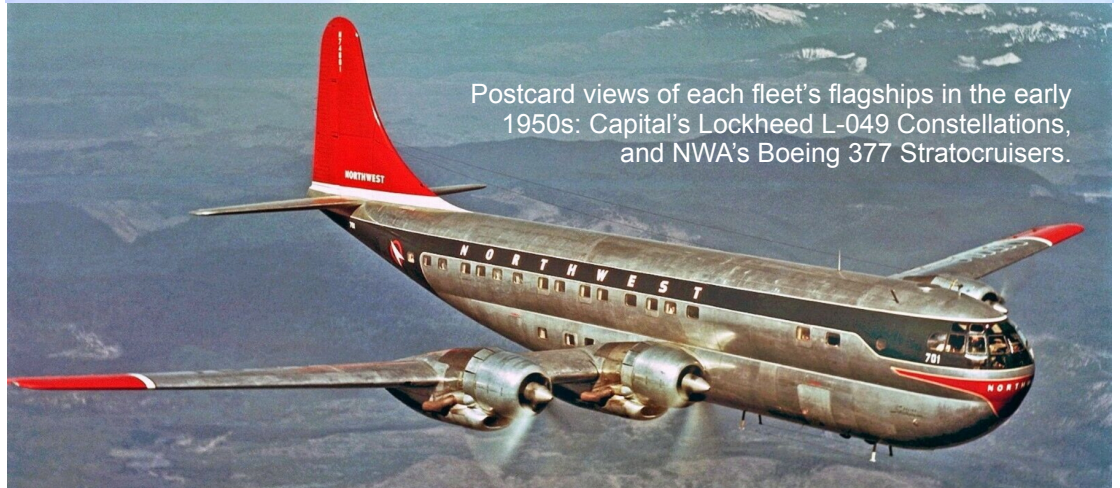
A call for your original research, commentary, and reminiscences

Our mission:

To preserve and display the memory of Northwest Airlines' colorful history.

To tell the stories of carriers merged and allied with NWA, and the stations and regions they served.

To show how the legacy of NWA carries on into the future.



Postcard views of each fleet's flagships in the early 1950s: Capital's Lockheed L-049 Constellations, and NWA's Boeing 377 Stratocruisers.

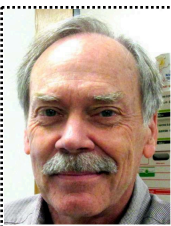
The Siren Song of the East, Part 1

Would "growth at any cost" have been worth the price? —by Scott Norris

The human, financial, and operational disaster of the Martin 202 fleet adoption and its aftermath weighed heavily on the NWA management team on University Avenue in St. Paul in the late 1940s and into 1950. Net profit had all but disappeared at the turn of the decade - while the company secured almost \$4 million in military airlift contracts for the Korean War, it also faced a \$4 million surge in aircraft maintenance bills, and was kept in the black only by fickle changes in Federal air mail payment rates. Northwest was heavily dependent on northeast-northwest domestic business traffic and the limited home markets of Seattle and Minneapolis, while it nurtured its investments in Pacific flying. In short, the company was vulnerable.

A CAPITAL IDEA? to page 8

Boarding Announcements



From Director Bruce Kitt

Needless to say, 2020 was not the best year for the Northwest Airlines History Center (NWAHC). Coping with the open/close cycles and trying (largely unsuccessfully) to keep our changing operation schedule updated on our phone is exasperating. I confess, I'm a typewriter and 3x5 index card type of person.

The museum planned to be opened for 196 days in 2020, weather and volunteer staffing allowing (see phone messaging exasperation above!). Due to COVID, the museum was open for only 100 days. The prevalent uncertainty responding to the COVID closures, the drop-off in visitors, the inability for our volunteers to plan ahead so they could be available...2020 was a difficult year for us all. For those who experienced the illness itself, to those who lost family and friends – their heartbreak and loss outweighs the piddly little issues about the NWAHC, but COVID touched everything.

2021 will probably be another coping year. There are optimistic breaks in the COVID clouds with the numerous vaccines beginning to roll out. Those, plus people feeling better about being out and mingling with others will hopefully start us on the reciprocal to normalcy. We volunteers are so thankful that the membership has stood by us and supported

us with renewals and donations. Thank you, you have enabled us to keep going.

A particular shortcoming in the purpose of the NWAHC has been the return-on-history that I feel has not been a round-trip flight. More has come into the museum and archive than we have been able to share with you, whether in new displays or through articles in Reflections. Reflections is the flagship of the NWAHC, and reaches the greatest number of our members, far ahead of those who are able to visit the museum. We have been exceedingly fortunate in the quality and editorial skills of Anne Kerr, Bob DuBert, and now Scott Norris. We have likewise been exceedingly fortunate that these three write informative and articulate articles for Reflections.

The articles I am beginning to write are both my personal attempt to share some of my immersion into our history and an invitation to you to put your knowledge to paper and share. From its inception, Reflection's purpose is to be an original, researched, informative – and historically accurate publication. I am encouraging you to follow that purpose. There are so many layers to the history of the respective airline we went to work for on our first day. While the museum's name mentions Northwest Airlines, 13 other legacy carriers are represented within the museum, and each one – and you – has information or a story, that, if backed up with facts and citations, can be shared and be historically educational. Follow me, weigh in with constructive input, and let's share history.
— CAVU.



From Editor Scott Norris

Researching each issue inevitably pulls me down the rabbit hole: each Internet search returns irresistible threads and

away we go. But what I can't fit in these pages often goes up on the Blog section of our website - including a series of "getting away from it all" hunting and fishing brochures from Northwest and North Central. Perhaps the cabin fever after a year is subconsciously directing my Google and eBay searches?

If you want to get away, I've been loading plenty more files to our Timetable archives - and our Aircraft Galleries continue to grow as well! Come online and pay us a visit virtually!

Shop online to support the NWAHC!

- Treasure hunt! We offer surplus materials and new apparel and pins for sale on **eBay** under the handle "cyberglight" - the assortment changes every week!
- Buying on **amazon.com**? Aren't we all, during these pandemic times? Sign up for Amazon Smile and 1/2% of every purchase is contributed to our museum. Use the link at smile.amazon.com/ch/41-2020975 to specify the NWAHC!

Interested in donating materials?

Please contact our collections manager, Bruce Kitt, at bruce.kitt@northwestairlineshistory.org with details of your items, photos if possible, and how we can reach you.

We are especially interested in items that help us tell stories or demonstrate concepts and procedures; records and correspondence; video, audio, and photos; training materials; and union communications. Items from Hughes Airwest & its predecessors, and Southern are especially appreciated.

Compass Readings

Logos don't speak for themselves (Part 2)

By Bruce Kitt

1934 was a defining milestone in the history of U.S. commercial aviation. Repercussions from Congressional investigations into the manner airmail contracts were awarded in 1925/26 culminated in the Air Mail Act of 1934. Among the mandates were changes in the organization and operation of America's airlines. The practice of inter-locking directorships that wedded aircraft and engine manufacturers' holding companies to air transport operations was prohibited, and several former airway presidents were banished from their respective companies. Col. Brittin and Northwest Airways were out.

The re-organized Northwest Airlines, led by Croil Hunter, introduced a new logo when Northwest resumed flying in April 1934 (Illus.6). The previous logo was tweaked to comply with the Congressional mandates and, considering how minor the change was visually, it's easy to presume the re-work was accomplished in-house. This logo flew through World War II and reached New York in June 1945, when Northwest became the fourth transcontinental airline.

1945 was a very busy time for Northwest. The February 9, 1945 issue of Northwest Airlines News Letter (NWANL) announced, "NWA GETS NEW INSIGNIA". Designed by New York-based Newell-Emmett Company, it used a cleaner presentation to identify Northwest Airlines (Illus.7). One of the ex-US Army Air Force Douglas C-47s turned over for conversion to DC-3 airliner configuration, debuted the new logo in mid-March (NWANL, March 16, 1945, p2), followed by the March 18, 1945 timetable and the May 11, 1945 edition of the company's News Letter. How 1946 became the accepted introductory year is a mystery as nothing has been seen in writing challenging the early 1945 announcements and usage.

The new c.1945 logo was prominently displayed on the vertical stabilizer of all Douglas DC-3s & DC-4s. It was on DC-4s when Northwest conducted their survey flights and subsequent inaugural service to Alaska in 1946 and Asia in 1947. It was part of the logo family until the next acknowledged logo, the compass motif. However...there is a contender in the family of logos that has been ignored and may have been part of the new the Martin 202's introduction.

Beginning with the introduction of the Douglas DC-2 in 1934, domestic US airlines flew their planes in bare aluminum metal, adorned with simple logos. As WWII wound down, the airlines were awash in surplus C-47s & C-54s. Bare-boned military interiors were converted into comfortable passenger configurations; camouflage was stripped off and, as much as a cost saving factor, they were flown in the prevalent bare metal, livery-adorned style.

ILLUSTRATION 6: The revised 1934 "Airlines" logo. On Douglas DC-3 aircraft it would be positioned on both the nose and aft fuselage; on the Lockheed Electra 10A, just the aft; never the tailfin on either type.

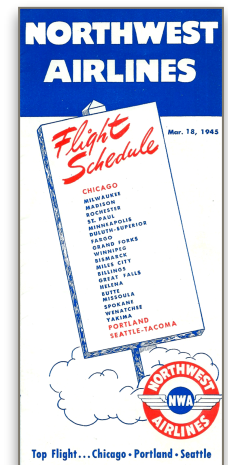
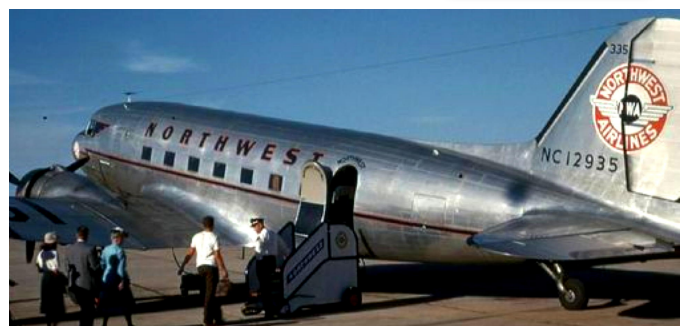


ILLUSTRATION 7: 1945's updated logo



NC12935 taking on passengers. Photographer unattributed.



Company-issued photo of NC6403 in the late-1940s livery.

Realizing the dated design of the Douglas DC-3, the Glen L. Martin Aircraft Company designed a replacement, the Martin 202, which incorporated many innovations learned during the war. As Northwest's interest in the plane solidified, Martin proposed ideas for an updated livery. The NWAHC archive has a color photo of one idea that incorporated yellow in the company brand. For whatever reason, yellow was not adopted. The first seven 202s delivered to Northwest in August-December 1947 wore the prevalent bare metal with the c.1945 logo livery.



Model of Martin's in-house new livery study with "floating" compass logo motif and yellow tail fin / nose, on display at the NWAHC Museum.



ILLUSTRATION 8: The 1947 experiment

Relying on our archive copies of employee newsletters, and extrapolating from the sparse details - and coverage - of the changes in Northwest's thinking, it appears there was a parallel program involving Newell-Emmett in re-imagining how ground support equipment could be branded. Their logo suggestion (Illus.8) was presented to employees on page 1 of the September 12, 1947 issue of Northwest Passage NEWS (NWPN), on the vertical stabilizer of Douglas DC-4 NC95416, f/n 416. The archive has only two photographs of this logo on an airplane, the second, still on NC95416, is in the NWPN of May 21, 1948. Unfortunately, neither photo shows the fuselage and what the full livery suggestion may have looked like. While both photos are black & white, the archive has a decal from that period that provides the colors: a blue outer border, white background field, and red NWA lettering. It's to be surmised that this was a test livery, not enthusiastically received by employees, the public, or the board of directors, yet it appears to have been flight-tested for at least eight months.

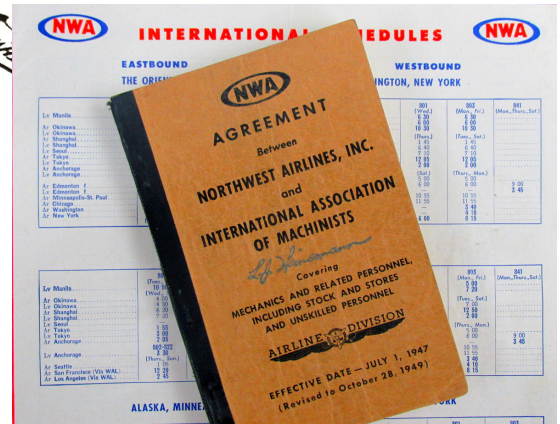
The "oval with text" motif was not uncommon in American industrial design of the era:



ILLUSTRATION 9: Usage examples of the 1947 experimental logo:



On the ground, however, this c.1947 logo was utilized extensively. There are views of it on airstairs (NWPN March 26, 1948, pp7&9) and in several other archive photos. Its widest use was in print, introduced on the Jan 5, 1948 timetable; the 1947 annual report (and as the only illustration on the austere 1948 annual report); the first IAM-negotiated Agreement in 1947 (and through 1952); and in artist renditions of NWA's future Boeing 377 Stratocruiser livery. It was also impressed into Bakelite cabin service ware (Illus.9). Considering this c.1947 logo's print life lasted for at least two years, how and why it has been excluded seems odd in light of an upcoming logo's inclusion. Overlooked from the line-up of Northwest logos, now seems the appropriate time for its inclusion.



If you have any photos or information to help clarify these ongoing articles, please share them so we wind up with the most accurate telling of our airline's history.



The Lockheed 10A Electra

Trusty Trunkliner in Three Decades

Regular readers will be aware of our ongoing efforts to digitize the extensive library of aircraft images at the NWAHC Archive. We are about one-third of the way through the main volumes on site, with galleries for 30 different aircraft types now online at the beginning of March 2021.

This winter we opened a gallery page for the Lockheed Model 10 Electra with over 130 images, covering both Northwest's use of the type from 1934 to 1942, and also Wisconsin Central, who initiated scheduled service with the type from 1948 to 1951. Here are some freshly-rediscovered and favorite scans from the series - to view the complete set, navigate to <http://northwestairlineshistory.org/aircraft-lockheed-10a-electra/>.



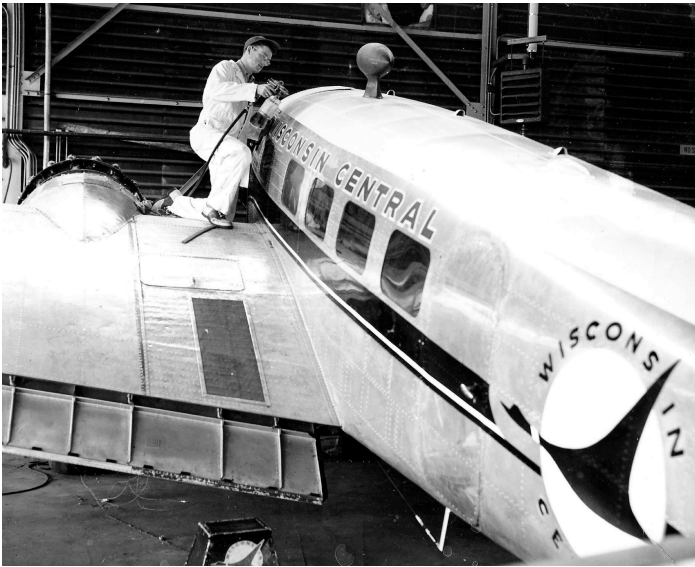
ABOVE: Engine check at the St. Paul maintenance base, 1934. Photo by Ralph Dauphin, via the James Borden Photography Collection.

BELOW: April 1935 look inside the St. Paul shop, where NC266Y (center) has been pulled in for its windshield rebuild. NC14263 is in the foreground. Lockheed Orion NC13748 is at right, and will leave the company soon. The engine test stand is in the far right corner. Hamilton Metalplane NC537E and a Waco are at back, also not long before their disposal. Photo from G. Johnson via the James Borden Photography Collection.



NC14244 cruising over Lake Minnetonka, west of Minneapolis, May 8, 1936. This flight was shadowed for some distance for a series of air-to-air photos over Minneapolis and its suburbs; many shots can be viewed in the Electra gallery! G. Johnson photo via the James Borden Photography Collection.

N79237 in a charming air-to-air shot over the rolling fields of western Wisconsin. Photo from Noel Allard.



Stub Roberts, who would eventually head the Engineering department, is applying white paint to the roof of this Electra in the Madison hangar in 1948. Stub determined a white top helped cabin temperatures remain cooler in the summer. From the Hal Carr Collection at the NWAHC.



ABOVE: Vacationgoers planning a trip? Not entirely - Capt. William Bitner discusses the timetable with Gerry McAdams, WIS secretary, at center, and Peg Klepatz, WIS communications, at right, in this staged Spring 1950 photo at Madison, from the Gary Schulz news bureau, via the Hal Carr Collection at the NWAHC. Gerry featured in photos from our December 2020 issue as well - staff in the early days had to perform many roles and be masters of improvisation! Photo from the Hal Carr Collection at the NWAHC.



LEFT: First Officer Tom Fowler at left, and Chief Pilot Ray Ashley at right, with an Electra in 1948. From the Hal Carr Collection at the NWAHC.

Feature Article

Capital's Growth Dilemma

The predecessors of Pennsylvania Central had forged a solid trunk route from Washington, DC through Pittsburgh to Cleveland and Detroit in the early 1930s, and in recognition of honorable service during World War II, gained another from New York City through Pittsburgh to Detroit and Chicago. Another set of spokes for Pittsburgh set north to Buffalo and Rochester, NY, and south via West Virginia and eastern Tennessee to Birmingham, Alabama, linking the country's main steel-producing centers at the time.

However, other route awards wandered across Virginia, North Carolina, and Tennessee, through the Lower Peninsula of Michigan, and from Washington to upstate New York, connecting some major cities but via low-population stops, and not providing feed to the Pittsburgh hub. Capital was also tasked with flying into many adjacent destinations, such as Erie, PA, Youngstown, OH, Akron/Canton, OH, and Cleveland, OH - while each had a good reason, the net effect was to keep route segments short and uneconomical - and to inflate the fleet size needed to regularly serve overlapping points.

When Capital did finally receive additional Trunk routes such as Chicago-Washington or New York-Atlanta, the effect was not to build traffic through hub-and-spoke connections, but rather to make Capital fight competitively as the second or third operator on a jumble of individual point-to-point services where they were not the dominant carrier at either end. Passenger counts were high, but only on a fraction of their total route miles.

An Interventionist CAB

Federal government policy post-war was to encourage airlines with non-competitive routes to combine in order to create fully national networks that could fly with reduced or no subsidy payments, and repay loans to the Reconstruction Finance Corporation faster. In the early 1950s this resulted in combinations like Braniff-Mid-Continent and Delta-Chicago & Southern.

At the same time, the Civil Aeronautics Board also encouraged the growth of Local Service operators like Allegheny, Piedmont, and Lake Central. This was vexing for Capital as new awards which could have been drawn to feed its trunk lines went to upstarts, flying the same Douglas DC-3 equipment.

No good alternatives

Capital's uneven network growth, five crashes in two years, and economic issues after the war combined to force the carrier to renegotiate its debts in 1947. The board determined the company had no chance of becoming a dominant national carrier - and sought merger partners. Northeast, Delta, National, Northwest, and Colonial were all courted and a Northeast deal was struck, but fell through. NWA in 1952 was only the latest in a string of pursued combinations.



THE HYPE MACHINE: Covers of the February 29, 1952 Northwest Airlines News and the February-March 1952 Capitaliner both enthusiastically trumpeted the merger. Both issues are in the NWAHC Archives.



Fleet analysis

Capital's ambitions to be a major force in the East were undercut in the late 1940s and early 1950s by a small-gauged fleet that struggled to provide frequency, capacity, and speed on its trunk services. Its first-generation Lockheed Constellations were pressurized and fast, but small for a mainline craft, and essentially served the same route profile as its Douglas DC-4s. Capital's innovative development of short-haul Coach services stimulated traffic but the DC-4 cabin configuration for those flights ruled out using such craft for longer-haul sectors.

Over-reliance on the DC-3 would vex the company for years to come - but was also tied to its over-exposure in short-haul flying. The turboprop Vickers Viscount was still three years in Capital's future, and even that craft would have struggled to serve a coast-to-coast network.

NWA's Boeing Stratocruisers adequately covered its Pacific sectors for the moment, but the withdrawal of the Martin 202s left the company short-footed for domestic traffic growth and forced leases of DC-4s and retention of DC-3s. Douglas DC-6s would arrive in 1953 to start plugging Northwest's capacity and frequency holes, and once Lockheed L-1049G Constellations arrived in 1955, it could redeploy the Stratocruisers for "jumbo" lift on trunk domestic sectors.

Northwest's DC-3s were stretched thin to cover its smaller stations and the company had no orders in the pipeline for craft that could handle essentially Local Service sectors like what Capital was burdened by.

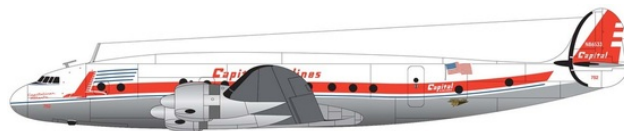
Ultimately, neither carrier could answer the other's fleet deficiencies, and neither had enough trunkline capacity in the early 1950s to supplant American, United, or TWA on key Chicago-East Coast / Chicago - Pacific Northwest sectors.

Financial analysis

Wall Street was on board with the NWA-CAP combination, with both NWA's Croil Hunter and CAP's James 'Slim' Carmichael both considered to be cost-conscious managers. Both companies also were paying stock dividends regularly, a priority for the financial community.

Neither company had trouble accessing the bond market, but Northwest's higher debt level was a function of its Pacific build-up (and resulted in a robust asset base.) Capital's refinancing in 1947 saved the company in the moment, but left the company in a lean liquidity position - Carmichael's "pay as you go" philosophy was painted as a thrifty virtue but he didn't have the long-term profit potential to borrow against that Northwest did.

Northwest's broader revenue base (less reliance on passenger volume) was also well-regarded by financial analysts for its longer-term consistency and stability, and as leverage to temper Capital's exposure to seasonality and competition, especially if volume-generating discounted coach services were to be curtailed by the skeptical CAB.



Capital's 1952 Fleet:

Lockheed L-049 Constellation	7
Douglas DC-4	27
Douglas DC-3	24
Douglas Super DC-3	3
Douglas C-47 (cargo)	1



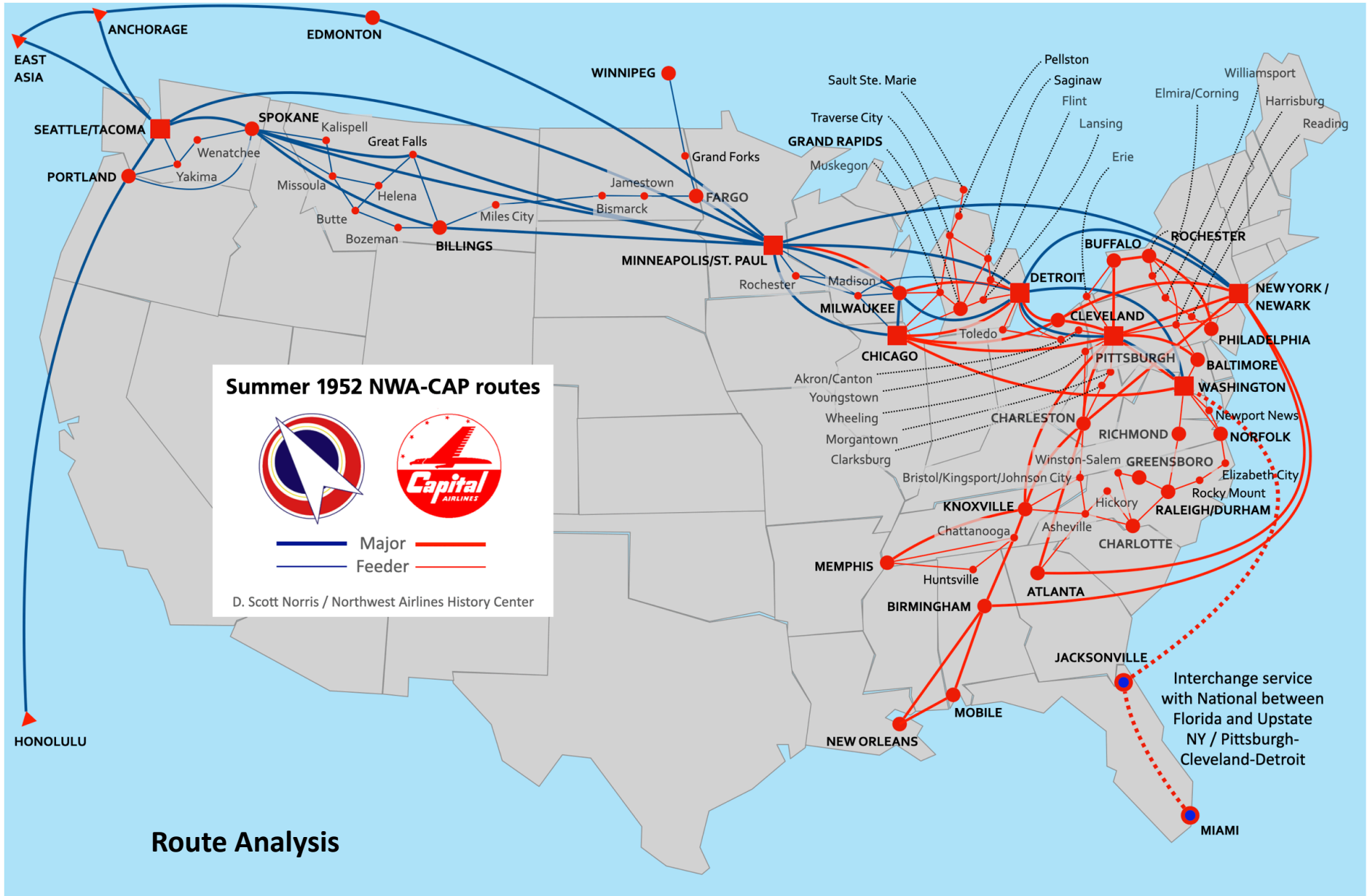
Northwest's 1952 Fleet:

Boeing 377 Stratocruiser	10
Douglas DC-4	23
Douglas DC-3	7

(11 Martin 202 frames were leased out at this time, pending final sell-off - not operating NWA services)

(Illustrations by Vintage Flyer Decals)

NORTHWEST	1951 results	CAPITAL
18.825 million	ARMs (Aircraft Revenue Miles)	26.274 million
605 million	RPMs (Revenue Passenger Miles)	616 million
64%	Avg. Load Factor	69%
0.79 million	Passenger Count	1.97 million
661 miles	Avg. Domestic Haul	246 miles
\$49.0 million	Operating Revenue	\$38.7 million
\$35.1 million	Passenger revenue	\$34.6 million
\$7.8 million	Mail revenue	\$1.2 million
\$6.1 million	Cargo & other revenue	\$2.9 million
\$2.8 million	Pre-tax Net Income	\$3.5 million
\$1.14 million	Income Tax	\$1.75 million
\$46.6 million	Assets	\$18.3 million
\$10.1 million	Long-term Debt	\$3.5 million
~ 5,400	Staff	~ 4,100
\$21.6 million	Payroll	\$16.6 million



Combining the route maps of Northwest and Capital for 1952, it becomes clear how the haphazard growth of Capital's network worked against its aim to funnel traffic into high-value trunkline services. The CAB-mandated multi-stop runs in Michigan, North Carolina, and Pennsylvania were more suited even then for Local

Service carriers - and indeed would ultimately find their way to North Central, Piedmont, and Allegheny. However, this still left two incompatible traffic flows: one set from the Great Lakes to the Mid-Atlantic, and another from New York into the Southeast. This imbalance would haunt Capital and then United until Deregulation.

What was the plan?

The merger agreement was announced February 1, 1952, to be voted on by Capital and Northwest shareholders on May 19th.

It involved no cash payments: each share of Capital or Northwest common stock would be exchanged for one share of the new company. At the time, Capital had about 821,000 common shares, and NWA 782,000. Northwest's roughly 385,000 preferred stock shares would also convert one-for-one.

Operationally, neither management team provided much in the way of specifics, such as where the merged company would be headquartered, which senior managers would retain their jobs, or which ground-level facilities and staff would be cut or relocated. The only public pronouncements were that Croil Hunter of NWA would become Chairman, while Capital's Carmichael would be the President and CEO, and that the company name would be the (unimaginative) Northwest-Capital Airlines.

How it fell apart

The lack of specifics in the initial announcement and follow-up briefings, combined with complaints about Minnesota's tax structure by NWA's Executive Vice President Malcom Mackay and VP A.E. Floan, caused the Minneapolis Chamber of Commerce to challenge NWA management and express reservations about the impact on jobs and connectivity for the Twin Cities. Employee groups such as the IAM also opposed the deal. MSP's Airport Commission also made statements calling for increased competitive access should the merger take place, to offset NWA-CAP dominance.

When it was learned Capital had acquired property in downtown Chicago, allegedly for a new ticket office, speculation grew that the merged company's headquarters and maintenance bases would move there, and if not there, then administration would consolidate in Washington. Even as late as May 10, Croil Hunter claimed there were "no discussions with Capital yet" about where to site its HQ.

A group called the "Northwest Airlines Shareholders Protective Committee" organized during Spring 1952 to oppose the deal. In addition to communicating its position to Twin Cities businesses and labor organizations, it also filed for a court injunction to delay the May share vote. This was denied, but the group vowed to fight at the proxy vote and beyond to the CAB if necessary.

Meanwhile, on the eastern front, in March 1952, Delta and Northeast jointly offered Capital \$4 million for its New York / Pittsburgh - Birmingham / Atlanta / New Orleans authorities. Separately, Chicago & Southern also requested the CAB to reassign Capital's New Orleans / Memphis routes to them.

Capital strenuously objected to both moves, as either would have undercut the paper value of the company and caused Northwest to walk away from the deal.

On May 19, Capital's shareholders voted to merge by 97%. Northwest's vote required a 2/3rds margin to pass - but only received 59%. Key New York institutional shareholders rejected the offer, as well as employee groups and some larger Twin Cities shareholders. In addition to the expected loss of local jobs and connectivity, objection was also leveled at the simple stock-swap deal undervaluing NWA's asset base, which was 2-1/2 times larger than Capital's.

Capital pivoted quickly that summer to an attempted merger with United, which also fell through.

Croil Hunter resigned his President / CEO position in January 1953, becoming Chairman. Harold Harris was recruited from Pan Am to lead the company but would leave in 15 months.

What would have happened in the merger?

The heart of the objections were likely valid, even if the hyperbole leveled at the time was alarming. Certainly the headquarters would have moved east, although the Minnesota maintenance bases would have remained. Capital's key officers would have been promoted (as the old Human Resources saying goes, "you can't convince someone from Minnesota to leave there".)

The new company would have concentrated on east-west flows over Chicago and would have sought new route authorities to build a hub operation there. However, such awards would have been unlikely to be granted.

Capital's underdeveloped fleet would have needed Northwest's equipment to bolster traffic. Its famous Viscounts would still have been ordered but couldn't handle the western half of the system. Replacing the Stratocruisers with Constellations would have been likely but in general the network west of MSP would have been neglected.

By 1960 the "new" Capital would have been in essentially the same predicament as its real-world self, and forced to merge with United.

Did Northwest need a merger then?

NWA's board over-reacted to short term issues and initiated a period of distracting executive turnover. However, its investments in Asia started paying off handsomely even in 1952; domestic route awards to New York, Washington, and Florida brought substantial traffic increases; and new Douglas DC-6s from mid-decade filled its capacity needs. NWA's underlying strategy and steady operational competence yielded better results with time.



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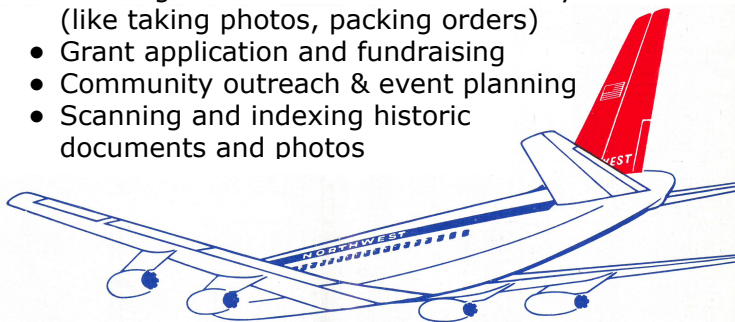
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GIVE WINGS TO YOUR HEART

We are looking for volunteers like YOU for fun projects in and outside our museum, like:

- Greeting and guiding our museum guests
- Designing and building museum exhibits
- Growing our e-commerce functionality (like taking photos, packing orders)
- Grant application and fundraising
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- Scanning and indexing historic documents and photos



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What museum is the tallest? The one with hundreds of stories.

Every quarter, hundreds of NWAHC Members read REFLECTIONS in print or by email link - and hundreds more airline industry enthusiasts read back issues online! If you have an original story to tell, photos to share, or research to contribute, about Northwest, Republic, Hughes Airwest, or any of the predecessor carriers or Airlinks - these are the people you want to reach - and this is the platform to get it published.

With our website expansion and YouTube channel, we can even host audio recordings and videos. There's no better time to interview friends and family members - because as we all know from the pandemic, living history can disappear before we're ready. Let's help preserve their legacy together.

Contact northwestairlines@comcast.net with your ideas - our editor will help bring your efforts to an interested audience!