Comments by

JAMES B. TAYLOR
Chairman, Canadair Inc.

on the occasion of being honored as

THE 1984 AVIATION MAN OF THE YEAR

by

THE GATHERING OF THE EAGLES

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You may imagine my reactions on first hearing of your intent to honor me as Aviation's Man of the Year. It's a very special accolade, and I thank you deeply for it.

For a moment, though, I thought you had made a mistake. Up until the time your invitation arrived, 1984 had been dismal. True, Canadair had delivered the 100th CHALLENGER in April this year, but we had booked few new orders. So I wondered why you hadn't done this in 1982, which was a great year for us, or even in 1983, when we again beat the competition.

But in mid-August, fortune smiled. The German government announced the purchase of seven new CHALLENGERS and 1984 suddenly became a brighter year. We in marketing had identified the German government as a prime prospect nearly five years ago, and we had done two things that had a major effect on the final German decision.

First, we insisted on the development of the CHALLENGER 601, with its General Electric CF34 engines. Second, we selected Dornier, with its excellent facilities near Munich, and its wealth of experience, to be the center for CHALLENGER product support in Europe.

The Germans conducted a detailed technical and financial study of Canadair before they signed. Their order, in excess of $100 million dollars, is a strong vote of confidence. I regard it as a marketing breakthrough that emphasizes the CHALLENGER's position of leadership in the industry.

Becoming a leader is one thing, but maintaining leadership is quite another. It demands an ability to initiate, to stay ahead of the pack by anticipating trends and forseeing the future. And the future of our industry, particularly the business jet portion of it, is really not too difficult to forecast. As it does for so many other industries, our future lies in using new technology, because technology determines the shape of the future.

You may think of the future as uncertain; but some of the future is as certain as death and taxes. Aviation fuel is never going to cost substantially less than it does now. Wages for the skilled labor force that predominates this industry will not decrease. There will be a continuing increase in air traffic, and ground traffic will grow just as rapidly. Industry will continue to move from the cities to the suburbs, and manufacturing will move from high-wage areas to low-wage areas. Computers will become the basis for the internal communications for industry, and they will continue to produce erroneous results because of faulty instructions from insufficiently trained operators.

And business will continue to demand more efficient transportation/communication systems, with lower operating costs. (There is no better way to communicate than face-to-face or eyeball-to-eyeball.) That's where we come in. Because -- even though the airlines have recently begun to woo business travelers after ignoring them for years -- the airlines remain an inadequate way to get from here to there. Airlines persist in unrealistic scheduling, they deceive us deliberately about the time their airplanes will leave or arrive, and they seem to be unwilling or unable to do anything about it. That's why business aircraft were invented in the first place, and why they will continue to play such an important role in domestic and international business and commerce.

So what do we do -- what can we do -- with business aircraft designs to meet tomorrow's transportation requirements and constraints?

First, second and third, we can keep them fuel-efficient. Low fuel consumption and economical operations are imperative. Gas-guzzlers get temporary reprieves now and then as OPEC suddenly discovers it has a surplus of oil. But in the long run, nobody's able to make any more oil; the earth holds all there is, and it's getting increasingly expensive to find it, capture it, and move it.

The next priority goes to aerodynamic efficiency. Drag is as much the enemy now as it was when biplane struts and wires were built-in speed brakes. Some innovative work is being done on drag reduction. But the exterior of a modern airplane like the CHALLENGER is about as clean as it can be made by contemporary manufacturing methods. New airfoil designs, combined with special treatment of the wings and forward portions of the fuselage, could reduce drag even further, and perhaps even dramatically.

Weight also is the traditional enemy of efficient flight, as we well know from our CHALLENGER experience. Aluminum alloys will weigh as much in 1994 as they do today, but perhaps by 1994 we'll have learned how to incorporate major primary structural components made from composites. Stronger than steel, lighter than aluminum, these new materials offer great promise for future weight reduction. Additional gains will come by replacing the heavy hydraulic control systems with fly-by-wire or even fly-by-light controls, with redundancy built in to guarantee safety.

In tomorrow's air traffic environment, today's airplane is obsolete. The present-day cockpit, with its profusion of water and steam gages, knobs, levers, switches, buttons, lights, horns, and voices, is on the way out. Solid-state electronic devices, driven by families of dedicated computers, are changing completely the cockpit environment of tomorrow's business jets. Similar "electronic cockpits" exist today on the Boeing 757 and 767, the

European Airbus, and are becoming operational in current business jets. Further, cockpit information systems will be linked to satellites that furnish accurate, worldwide position data.

Now, given all this superb technology, what kind of an airplane do we put it in? A supersonic business jet? Nonsense. Fuel consumption alone defeats that concept, to say nothing of the fancy designs required, the additional runway length requirements, and the air traffic and airport environments.

A vertical riser and lander? Maybe. The military has been developing vertical takeoff for nearly 30 years, and has produced, to date, only one relatively efficient design, the British Harrier and its derivatives. There's promise in the new JVX, a tilt-rotor aircraft being developed by the Marines. But the trickle-down theory works in aircraft design as well as elsewhere, and it will take many years before you see any business aircraft -- except a helicopter -- rising vertically into the air.

You are seeing, right now, an increasing acceptance of advanced helicopters, such as the Sikorsky S-76, in business service. They compete with jet aircraft times on routes along the East coast corridor between Boston and Washington, and they have the payload and economy to make them a useful addition to corporate transportation means. And they're beginning to help reduce the traffic problems at the "hub" airports.

But for any major change in fixed-wing aircraft design in our field, we need a new engine. And there isn't a single one on the horizon, except in the lower-thrust categories. Until there is, airplane designers can only develop big transports and a range of military aircraft that require a lot of thrust. Without a proper and suitable engine, the design of larger business jet aircraft will remain stagnant.

So tomorrow's airplane will be lighter, stronger, more fuel-efficient, and with an electronic cockpit, but probably with an up-dated engine rather than a new one. (And any all new business jet will probably be built by a consortium of two or more companies possibly of different nationalities.)

And a decade or so from now, your Man -- or Woman -- of the Year will tell you that if we can achieve better fuel economy, lighter weight, and lower drag, we can build another generation of even better airplanes.

That drive has motivated us all, from the earliest pioneers to today's professional pilots and engineers. It has driven airplane design to the high level it holds today. And it will continue to move us all toward exciting and challenging future possibilities in this, the best of all industries.

Peg joins me with heartfelt thanks for this honor, for your friendship, and for your warm hospitality. Thank you.