

Montreal Post

Air-taxiing into the future

Sean Silcoff, Financial Post

Published: Saturday, October 21, 2006

ORLANDO, Fla. - At the U.S. National Business Aviation Association trade show, the world's largest showcase for corporate-aircraft sellers, hundreds of wealthy Americans are checking out a cabin mock-up of a shiny new six-passenger jet rotating on a raised, underlit platform. The onlookers, including some fleet managers for Fortune 500 companies, are snapping pictures with their cellphones and lining up for a peek into the cabin.

The object of their attention is the US\$3.65-million HondaJet, Honda Motor Co.'s first airplane and the latest launch of what has come to be known as a "very light jet" -- the VLJ. Despite being four years from production, Honda had more than 100 orders after just three days at the trade show this week.

"We feel this has the potential to really grow into something, a few hundred million dollars' worth of business," said Takeo Fukui, chief executive of the Japanese auto giant, which has been eyeing the aviation industry for two decades. "We don't see it as something small at all."

Honda, by far the highest-profile entrant into the VLJ category, has a lot of company. Last month, Eclipse Aviation Corp., pioneer of the VLJ, and Cessna Aircraft Co. became the first two firms to have their jets certified by the U.S. Federal Aviation Administration. Next week, Albuquerque, N.M.-based Eclipse -- led by high-tech entrepreneur Vern Raburn and financed partly by his friend Bill Gates -- is to deliver its first jet. Eclipse plans to churn out 500 more of the US\$1.5-million jets by the end of 2007, part of a 2,500-jet backlog. Another startup, Adam Aircraft Industries Inc., is seeking certification of its distinctive A700 jet, while Brazil's Embraer SA -- a newcomer to private jets after making its name with airliners -- expects to roll its US\$2.85-million Phenom 100 off the line in 2008. In total, about 12 VLJs have been unveiled.

Forecasters predict demand of 200 to 500 VLJs a year, and the impact is rippling through the sector. Pratt & Whitney Canada, the engine supplier to Eclipse, Cessna and Embraer, has changed the way it makes the product, assembling an engine in eight hours on a 60-foot assembly line at its Montreal-area plant.

The VLJs have also stimulated the creation of "air taxi" and other new charter services. If their cocksure founders, mostly industry outsiders, are right, they could change the way people travel -- and their quality of life.

"This is the most significant change in aviation in 20 years," said Jim Burns, a former top technology consultant and investment banker, who has ordered 50 Phenoms and 50 A700s, with backing from National Bank of Canada. His MagnumJet, based in Stamford, Conn., will offer air-limo services in the U.S. Southwest next spring.

VLJs weigh less than 10,000 pounds, generally seat up to six people and are powered by a new class of engines that are barely larger than a barrel of beer. Other advances in avionics and composite materials have been incorporated to make the jets light, cheap to buy and operate, but also sophisticated. Most, except for Honda's, cost less than US\$3-million, compared with US\$4-million for Cessna's previous entry-level corporate jet.

Mr. Burns and other operators have ordered hundreds of the small jets and plan to use them to serve thousands of small public airports ignored by major airlines.

"If you live in the lower 48 [states], we will be coming to [an airport] near you in the next four years," Ed Iacobucci, a software entrepreneur whose DayJet Corp. of Florida is taking delivery of 310 Eclipses over 24 months, told a packed audience at a VLJ presentation Wednesday.

Former American Airlines boss Robert Crandall, 70, heads Pogo Jet Inc., which has raised US\$18-million and is launching a charter service in the Northeast. He plans to order 50 jets by year-end. "Our perception is private aviation can and will appeal to a much broader market when you do two things: make it as convenient as renting a car, and make it cheap," Mr. Crandall said.

Linear Air, a charter based in Lexington, Mass., and headed by 43-year-old e-commerce entrepreneur Bill Herp, will fly people in its 30 Eclipse jets from Washington, New York and Boston, and eventually 12 other cities, to secondary markets they can only reach via connecting flights. He now has 600 customers, using Cessna turboprop planes, and expects the number to rise to 5,000 when he offers jet service, charging less than existing charters.

The draw for the air taxis is the opportunity to offer hassle-free point-to-point regional travel to business travellers, who now drive hundreds of miles rather than deal with the ever-growing inconveniences of hub-and-spoke travel. With direct air links, the thinking goes, customers would happily pay to turn business trips into day trips, and be home for dinner. At a cost of US\$5 or US\$6 per mile, a VLJ full of executives would cost as much as first-class fare for all, while saving a lot of time.

Richard Aboulafia of Teal Group, a Fairfax, Va. aviation consultancy, said the air taxi model is speculative and "we still have zero evidence that it will [succeed]."

Cessna boss Jack Pelton also has doubts.

"It's a tough model; it assumes some extremely low direct operating costs," he told reporters this week. "They need a lot of planes at one time for their model to work."

In addition, most of the air-taxi firms don't yet have financing in place to pay for their orders; their startup funds barely cover the deposits. As well, U.S. airlines have warned the thousands of VLJs could put a strain on the air-traffic control system, something VLJ makers and the FAA deny.

NAV Canada, which monitors the flow of air traffic over Canada, says there could be an impact in Canada if VLJs are flown to and from major airports, such as Vancouver, Calgary, Toronto and Montreal. But "it's more likely that these aircraft will be primarily used to access smaller satellite airports in urban and recreational areas, where landing fees are less," said Ross Bowie, director of Air Navigation System Service Design for NAV Canada. "For example, St. Andrews Airport, near Winnipeg, might be frequented by VLJs instead of Winnipeg International Airport, or Buttonville, near Toronto, instead of Pearson International."

Meanwhile, some air-taxi operators are already taking swipes at each other's business models (particularly DayJet's, for selling each seat in a jet separately), and many industry watchers continue to second-guess Mr. Raburn's ability to ramp up production from zero to 500 jets per year.

Pierre Beaudoin, president of Bombardier Inc.'s aerospace unit, which makes large corporate jets and is watching the VLJ revolution from the margins, said this week he doubts "this will be a highly profitable market niche."

Still, the explosion of VLJs is a vindication for Mr. Raburn, who was dismissed as an interloper when the founder of Symantec Corp. (and, before that, Microsoft's 18th employee) unveiled the Eclipse in 2000. "The experts said there was no VLJ market; this was all just fantasy," he said.

Even without air-taxi orders, VLJ makers say there is enough demand from owner-operators for 200 jets yearly. "We have more products being introduced into this category than any other category in aviation," said Mr. Raburn. "I'm glad I said this is an opportunity, and guess what? I'm right."

Mr. Raburn may be the pioneer of the VLJ era, but its godfather is a civil servant. Bruce Holmes, director of the National Aeronautics and Space Administration (NASA) advanced-planning office, played a key role in laying the foundation for the age of small-jet commuter travel.

In the late 1980s, as the aviation industry reeled from a vicious downturn, Mr. Holmes began pushing the idea within NASA that technology advances could revitalize the U.S. general-aviation industry. He believed the government and corporate-jet makers should work together to help bring small-jet travel to the masses.

To get there, "everything to do with producing an aircraft had to change," Mr. Holmes said.

That meant shrinking the size of engines and avionics, manufacturing more efficiently and using cheap, light materials. That would help solve a chronic inefficiency in the nation's air-transport infrastructure: There are 5,000 airports within a 20-minute drive of 98% of Americans, Mr. Holmes said, yet the airlines fly to fewer than 500 airports. Most airports are underused, and people underserved.

Mr. Holmes' own experience highlighted his point. In 1998, he began collecting data on every trip he took, 250 in all. He calculated how much time he could have saved by flying directly between the closest airports to his home and destination, "On average, I travel 7,200 miles out of my way per year and am away from home two weeks more than I have to be, if I flew direct," he said. "We are wasting enormous periods of time."

In the mid-1990s, Mr. Holmes convinced NASA to commit \$69-million to a program with industry to study ways to improve engines, materials and safety. NASA also launched a US\$45-million competition to develop a small, low-cost, high-performance engine that could demonstrate to industry the potential of a compact power plant.

The winner, Williams International Co. of Michigan, based its design on an engine it made for cruise missiles. The engine flew on a demonstrator plane at an air show in Wisconsin in 1996.

As it passed overhead, Mr. Holmes was talking to Mr. Raburn, the owner of vintage planes and member of the board overseeing the show, who at the time was also considering a career change out of the tech world. "Vern saw this plane in the sky and said, 'This is it. This is what I need to do,'" Mr. Holmes said.

Mr. Raburn said he was struck by the potential to adapt the dynamics of the IT industry, in which capacity rises as prices fall, to the design and building of small jets in a way that changed "the value proposition."

With his vision unfolding, Mr. Holmes looked content as he milled about the trade show this week. VLJs might still be jets for the well-heeled, but "fashion flows downhill," he said. If the air-taxi business takes hold, jet makers will drive down costs, make VLJs cheaper to buy and operate, and herald an era of "personalized, democratized air mobility," he said.

SWARM OF NEW JETS:

ECLIPSE 500

Price \$1.5-million

No. passengers 4

Range 2,084 km

Max. cruise speed 685 km/h

Status In production. First delivery next week.

The skinny The first VLJ, launched by software entrepreneur Vern Raburn.

CESSNA CITATION MUSTANG

Price US\$2.5-million

No. passengers 4

Range 2,130 km

Max. cruise speed 630 km/h

Status Certified and in production.

The skinny The lone VLJ from an established business-jet manufacturer.

EMBRAER PHENOM 100

Price US\$2.85-million

No. passengers 6

Range 2,148 km

Max. cruise speed 704 km/h

Status In development. Expected to enter into
service in mid-2008.

The skinny Key product for Brazil aerospace firm new to business-jet sector.

ADAM A700

Price US\$2.25-million

No. passengers 6

Range 2,037 km

Max. cruise speed 630 km/h

Status Expects to be third VLJ certified.

The skinny Innovative design and many orders, but many delays in program.

HONDAJET

Price US\$3.6-million

No. passengers 5 or 6

Range 2,185 km/h

Max. cruise speed 778 km/h

Status In development. Expected to go into production in 2010.

The skinny Realization of auto giant's 20-year ambition to get into aviation.

© National Post 2006