

Very Light Jets - The New Air Transport Technology

Exciting new options are on the horizon for our future commercial air travel vacations and business trips! The hub-and-spoke system of air travel has become outdated. Flying through Atlanta to get to anywhere on the planet is routine.

National Business Aircraft Association (NBAA) Fact Book 2004 reports that 30 out of the 550 commercial airports in the U.S. account for 70% of all of our air travel. Our skies are crowded around many major airports and the air traffic control system is rapidly approaching capacity. NBAA also reports that there are 5300 available satellite airports in the U.S. Many of these underused airports could be used by small jets to relieve this situation. "Microjet" air transport technology is on track to make this a reality.

Microjets are identified by other names including Very Light Jets (VLJs), Personal Jets, and Minijets. Their manufacturers are scheduled to begin deliveries worldwide within the next eighteen months. Reporting advance sales of thousands of these new planes, their customers are primarily owner/ pilots, air-taxi fleet and charter operators, private owners, and fractional providers. Plans are to deliver 15,000 of these aircraft by 2015.

Microjets are generally considered to be a new category of plane because of their smaller cabin size compared to other business jets. They are also powered by a group of newly developed and smaller jet engines.

Many groups are planning to compete for a piece of this new way to travel. These entrepreneurial efforts include a team headed by Donald C. Burr, founder in 1980 of the former airline, People Express. On March 29 Burr, his son Cameron, and associates made a Securities and Exchange Commission filing for their Microjet Company, iFly Air Taxi. The name has been changed to POGO.

Burr says "our intent here is to bring the private-travel market down from CEO level to manager-level people." The reported pricing plan of iFly is to provide a \$3 to \$4 a mile travel experience. This fare structure compares to retail first-class on most flights.

The commoditization of these Microjet air-taxi seats will make this travel option available to progressively larger segments of air travelers.

The various aircraft at the heart of this breakthrough technology will have twin engines, glass cockpits, and seats for four to nine passengers. Their range will be over 1000 miles and they will fly at a speed of 340 to 380 knots and up to FL410. The turbofans that power these rockets produce 700 to 1700 pounds of thrust and weigh 100 to 200 pounds!

The Microjet manufacturers are reported to be seeking single pilot certification but most of the planes will likely be flown with a crew of two.

NASA's General Aviation Propulsion Program (GAP) ran from 1996 until 2002 on a mission to deliver a selection of vastly improved performance-to-price ratio General Aviation engines.

NASA and Williams International participated in the turbine portion of the GAP cooperative agreement and developed the FJX-2 turbofan. This prototype engine weighed 85 pounds and ultimately produced over 700 pounds of thrust with a thrust-to weight ratio over 8.2, the highest in commercial turbofan history!

The FJX-2 program inspired the development of the GE/ Honda HF118, Pratt & Whitney Canada PW615F, and Williams International FJ33-4 which are the production engines for the Microjets. There are also many military applications for

these new engines beyond their use in commercial aviation.

The aircraft are in various stages of manufacture and certification. Adam Aircraft Industries A700, Cessna Mustang, Eclipse 500, Honda Jet, Safire Jet, and others are at the starting line. Which manufacturers will win the high-stakes race?

What about our future vacations and business travel? Will we be comfortable in these small Microjets? Will our kids miss running up and down the aisles and harassing the flight attendants? Will our spouses complain about the size of the bathrooms?

Stay tuned!

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