Air Taxi at Your Service

In the past, only the rich and famous may have had access to personal jets designed to whisk travelers from city to city without the inconvenience of crowded major airports. Now, however, with NASA's support and the work of several companies determined to redefine personal air transport, flying direct to nearly any city from the closest local airport may soon become a viable option for everyone.

In 1996, NASA initiated a program designed to revitalize the U.S. light aircraft industry through the development and commercialization of more affordable propulsion systems, including turbofan engines. Enlisted through this initiative, known as NASA's General Aviation Propulsion (GAP) program, Glenn Research Center conducted a small turbofan development competition among major U.S. engine builders. As a result, Williams International of Walled Lake, Michigan, won a cooperative research and development program with NASA, and work on the new NASA/Williams GAP engine began.

A year later, Vern Raburn, a successful entrepreneur in high technology, sought to apply digital technology; efficient lightweight engines, such as those being designed through the GAP program; high volume manufacturing; and high technology business practices to a whole new type of general aviation company. Raburn met with Dr. Sam Williams, president and founder of Williams International, and created Eclipse Aviation Corporation of Albuquerque, New Mexico, to provide alternatives in air transportation.

The EJ22 engine, which has a low noise level, light weight, and low fuel consumption, delivers over 770 pounds of thrust while only weighing approximately 85 pounds.

NASA and Williams were then proceeding with the FJX-2 turbofan engine demonstrator. The FJX-2, the smallest commercial turbofan of its time and weighing less than 100 pounds, achieved a thrust-to-weight ratio that would enable the creation of a new, small, lightweight aircraft. The turbofan power would allow this new generation of aircraft to fly faster, have longer range, and provide more comfort, while setting new standards in general aviation safety.

The FJX-2 engine's low noise level, light weight, low emissions, low fuel consumption, and low cost in quantity production made it a perfect match for Eclipse. Under an exclusive agreement with Eclipse, Williams will manufacture the EJ22 engine, a commercial version of the FJX-2, for the Eclipse 500 aircraft. The new engine, which weighs approximately 85 pounds and delivers over 770 pounds of thrust, provides a higher thrust-to-weight ratio than any commercial turbofan ever produced. Being the smallest, quietest, and lightest commercial aircraft engine currently available, the EJ22 engine makes a whole new class of twinjet light aircraft feasible.

Eclipse is working closely with NASA and its Small Aircraft Transport System (SATS) program to reevaluate air transportation in the United States. The goal of the SATS program is to provide a safe travel alternative that will reduce public travel time by 50 percent in 10 years and by over two-thirds in 25 years at equivalent highway systems costs. The concept is an "air taxi" that will allow companies to provide fast "point-to-point" air travel. Enlisting the Eclipse 500 as an air taxi, passengers are free to use the small, uncrowded airports near their homes to reach their destinations.

Powered by the EJ22 engine, the Eclipse 500 aircraft is intended to provide "point-to-point" air taxi travel.

Eclipse's vision of air passengers flying directly between cities in a fast and affordable way is quickly becoming a reality since The Nimbus Group, Inc., of Fort Lauderdale, Florida, has placed an order for 1,000 Eclipse 500 jet aircraft. The Nimbus Group will use the Eclipse 500 to operate air taxi services throughout North and South America. The aircraft is capable of using approximately 10,000 airports in the United States, leading the company to anticipate that the air taxi service will take commuters as close to their final destination as possible. The Nimbus Group intends to make personal jet travel broadly affordable throughout the Americas. Pre-screened "Nimbus Jet Travel Card" members will have the convenience of traveling at the spur of the moment. The company is planning on-demand service to its clients, similar to calling a ground taxi service. With Eclipse's vision and The Nimbus Group's execution, perhaps catching that plane for a business trip will be more like hailing a cab. ❖