LOGISTICAL AIRCRAFT COMPANY_{LLC}

THE NEW ARCHITECTURE OF FLIGHT FROM NORTH CAROLINA

SC-1 AIRCRAFT

THE AGE OF MULTI-ROLE AIRCRAFT

Over the next 10 years, air traffic is expected to double, and possibly triple. These anticipated increases will force airports and carriers to work collaboratively to explore innovative options for controlling air traffic and limiting the potential for long and frustrating customer delays. One of those options will be increased use of multi-role aircraft, such as LAC's proposed prototype, the SC-1.

WHAT IS THE SC-1?

The SC-1 is a short to long range multi-role aircraft, with the ability to make vertical takeoffs and landings on a regular basis to meet mission requirements. The SC-1 is a fixed-wing aircraft, turbo-fan powered, with four identical fixed wings. The wings utilize a "variable symmetric" airfoil. The cockpit is configured for a two pilot operation initially and is designed to allow a fast transition for fixed-wing pilots. The aircraft can be configured for regular passenger operations, particularly in a feeder role from landing zones as small as two acres in very low visibilities, and proceeding to a hub airport, blending in with normal fixed-wing traffic. The SC-1 and its military variant use a novel and recently-patented pilot interface, "The Curtis Protocol", plus a new orchestration of existing technologies, to achieve their truly multi-role personalities.

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INNOVATIONS

In addition to the potential of cutting pilot training costs through "The Curtis Protocol", LAC is poised to help the aircraft industry meet other pressing challenges as we move into the age of multi-role aircraft. For example, in vertical takeoff and landing mode (VTOL), the SC-1 has the potential to bring about significant point to point fuel savings, a big plus as the industry faces stringent new fuel efficiency standards in the next few years.

OUTSIDE CONFIGURATION

The four identical wings are swept 45 degrees for high-speed flight, two aft and two forward. The relationship of the forward and aft sections to the chord will change the configuration as called for by the regime of flight selected via the CMS. The traditional "wing box" is in the high wing configuration, and is rotated for VTOL operations. In-flight refueling is an option plus lower fuselage modular fuel tankage as needed for range/payload mission requirements.

INSIDE CONFIGURATION

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US PATENT #9,126,677

CURTIS PTROTOCOL

AIRCRAFT COCKPIT CONTROL SYSTEMS

As the need for multi-role aircraft increases to meet future demands, so will the need for pilots who can switch safely and efficiently from one flight protocol to another. LAC is proud to introduce a technological solution called "The Curtis Protocol" to meet that goal. Patented in September 2015, "The Curtis Protocol" has the potential to significantly reduce the cost and time involved in training pilots.

Currently, an aircraft type is derived from the Federal Aviation Administration's (FAA) type certificate designation for a particular aircraft design by a specific manufacturer. Pilots are categorized according to their license to fly a particular aircraft type: fixed wing, rotary wing, or helicopter. This categorization is due primarily to the different skill sets and extensive training required for each respective aircraft type.

REDUCED TRAINING COSTS

A pilot seeking qualification to fly a different aircraft type must undergo type initial training and simulator training, followed by aircraft, line training, and checks. Cockpit confusion by pilots and the high cost of training have been major obstacles for pilots, the military, and the commercial arena.

"The Curtis Protocol" is designed to help pilots manage flight in all its regimes. This is done by utilizing modern digital flight control management systems in a standardized format to reduce pilot workload and the possibility of confusion in the cockpit.

CONTROL MODE SELECTOR

The Control Mode Selector (CMS) enables the pilot to tell the aircraft to enter a given operational regime via the system's logic of the particular type. The Vertical Velocity Control (VVC) is incorporated in types with the VTOL capability. It deploys automatically when called for with these selections from the CMS and dispenses with the helicopter "collective" and twist throttle control.

REDUCED TRAINING TIME

"The Curtis Protocol" will drastically reduce the amount of pilot training required to obtain qualifications in new and different types of aircraft, resulting in huge cost savings to the aviation industry.

AIRCRAFT STANDARDIZATION

As airports and airlines seek solutions to increasing air traffic, "The Curtis Protocol" offers an innovative training transition that will help bring widespread acceptance to multi-role aircraft.

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