AVIATION WEEK Intelligence NETWORK

Daily Memo: Pilots Unite Against Single-Pilot Operations

Thierry Dubois April 05, 2023

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In the concept of single-pilot operations, a pilot may spend long phases of flight, if not the entire flight, alone in the cockpit of a commercial aircraft.

The promoters of single-pilot operations have been consistently making technological and regulatory progress. But now pilots are organizing to counter the effort.

Reducing the number of crewmembers has been synonymous with improving safety, automation champions—typically Airbus—say. Moving to a cockpit designed for a single pilot goes beyond that evolution and against fundamental safety principles, pilot unions answer.

The International Federation of Air Line Pilots' Associations (IFALPA), the European Cockpit Association (ECA), and Air Line Pilots Association International (ALPA) have issued a joint statement on the topic.

The three unions intend to "prevent airlines and manufacturers from pushing ahead with plans to remove pilots from the flight deck, a profit-driven scheme that poses a significant safety risk." They say it is "an aggressive corporate-led lobbying campaign targeting regulators around the world, including the International Civil Aviation Organization." They assert airline and airframer lobbyists seek to put profit first and introduce an unacceptable level of risk.

Despite developments in automation and improved technologies on the flight deck, two pilots at the controls remain the most important safety features of an aircraft, the unions say. Their argument: "Pilots eliminate system-failure scenarios and act as a critical onboard backup for failed systems, bridge technology gaps, and adapt in real-time and in the real environment to unanticipated situations and emergencies."

The unions' ire may have been spurred by recent advancements at Airbus, which has been expanding its research into autonomous flight systems. The Dragonfly program was unveiled last January as a follow-on to the two-year Autonomous Taxi, Takeoff and Landing (ATTOL) project. Dragonfly adds the capability to automatically select an emergency diversion airport—taking into account external factors such as flight zones, terrain and weather—and plan a trajectory to the alternate, where cameras will be used to identify the runway and guide the aircraft to a landing.

The system's features include automated communication with air traffic control (ATC) and the airline operational control center. The focus of the project is technology maturation, after which Airbus will look at certifiability.

"No commercial pilot was involved," notes Vincent Gilles, the vice president of the SNPL France ALPA pilot union. "We would have loved to be asked to participate. Even when you do not agree with the principle of a project, you can help make it better."

Dragonfly is focusing on very simple use cases, such as a diversion during an intra-European flight, he points out. "The problem is that it would have to be used worldwide, such as in China—when it takes a crew 10 minutes to negotiate with ATC and avoid a thunderstorm amidst military areas," Gilles says.

"Airbus' proposed system was devised outside a realistic operational context," Gilles adds. "Test pilots do not know an airline pilot's job, which involves years of flying on a variety of routes, with accompanying fatigue and multiple unexpected situations to cope with."

One of the use cases Airbus has cited, the system could make the crew available to manage a crisis with the passengers. "Would a pilot tell those

passengers, 'Do not worry, our automated system is taking us to our gate in Beijing?'" Gilles wonders.

He describes Airbus' approach as overconfident. And the airframer is seen as proceeding with a hidden agenda for alleged cost-cutting. "The demonstration project, in fact, aims at advancing the concept of single-pilot operations," Gilles says. "Going ahead with one pilot instead of two is eliminating a fundamental redundancy. That is a step the industry should not take. It has yet to be demonstrated that single-pilot operations are safer."

Meanwhile, in Europe, the European Aviation Safety Agency (EASA) has issued a concept paper on artificial intelligence and, more specifically, machine learning applications. The paper aims at anticipating future certification requirements.

AIRBUS AIR LINE PILOTS ASSOCIATION (ALPA)