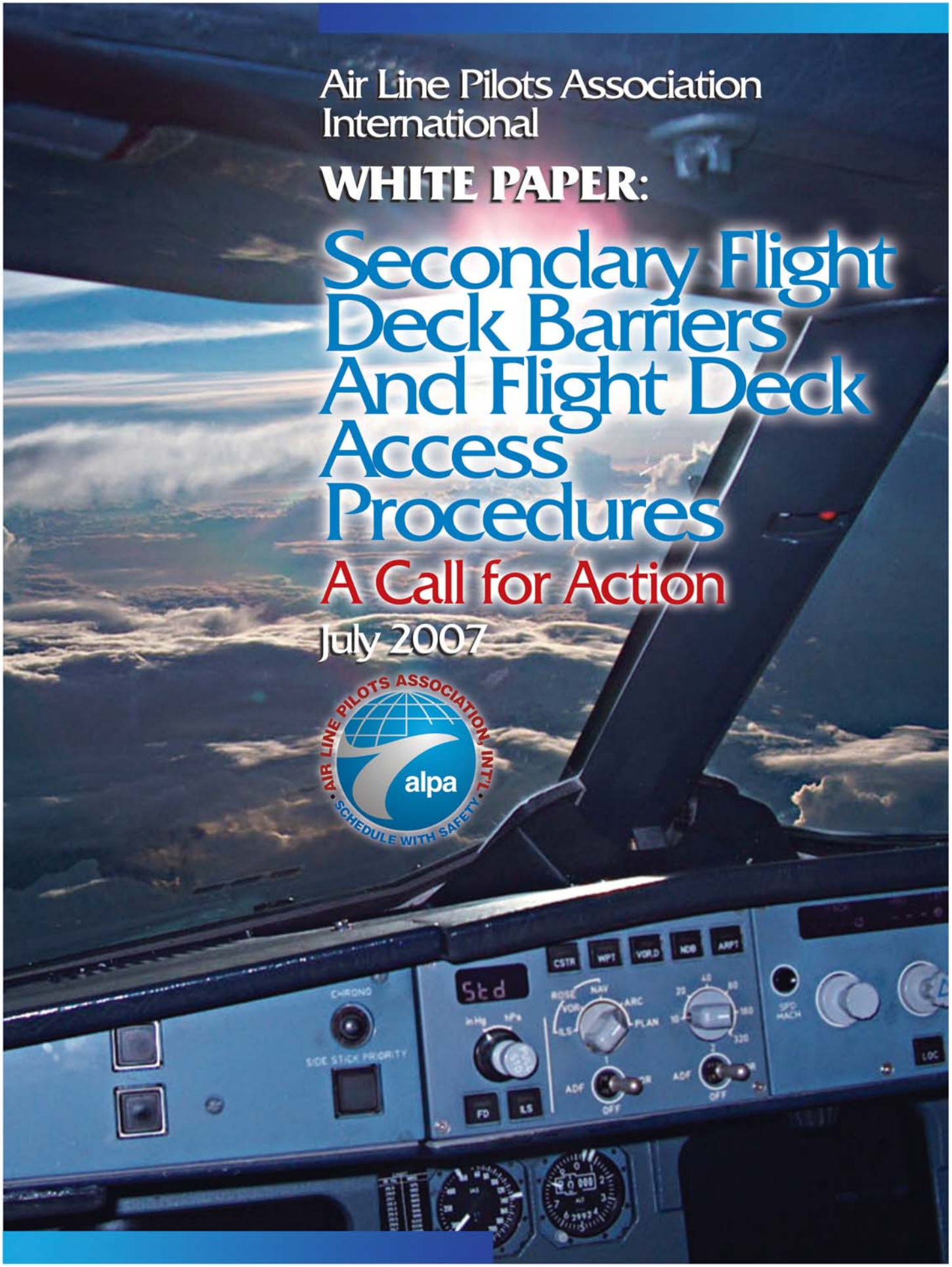

Air Line Pilots Association International

WHITE PAPER:

Secondary Flight Deck Barriers And Flight Deck Access Procedures

A Call for Action

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ALPA WHITE PAPER
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Secondary Flight Deck Barriers And Flight Deck Access Procedures

A secondary barrier, accompanied by standardized procedures for protecting the cockpit door when opened in flight, would significantly augment the fortified door and add an important layer of security to prevent hostile takeover of the cockpit.

The Air Line Pilots Association, International (ALPA), founded in 1931, represents the safety and security interests of 60,000 pilots who fly for 41 U.S. and Canadian domestic and international passenger and all-cargo airlines. Based on our considerable experience and vested interest in aircraft design and operational safety and security, we offer our views regarding secondary flight deck barriers. To learn more about ALPA, visit the Association's website, www.alpa.org.

Executive summary

Reinforced airliner cockpit doors mandated by the U.S. Congress and the Canadian Parliament after the terrorist attacks of Sept. 11, 2001, have added a valuable level of protection to airliner flight decks. Experience has proved, however, that the doors do not provide a complete solution to the problem they were intended to resolve. A secondary barrier, accompanied by standardized procedures for protecting the cockpit door when opened in flight, would significantly augment the fortified door and add an important layer of security to prevent hostile takeover of the cockpit.

ALPA and other airline industry advocates therefore urge the U.S. Congress, the FAA, the TSA, the Canadian Parliament, Transport Canada, and other appropriate U.S. and Canadian government agencies to require secondary flight deck barriers and appropriate flight deck access procedures on all airliners by Jan. 1, 2010. The secondary barriers should be able to delay, by at least 5 seconds, anyone trying to attack the cockpit.

The threat is real

Government intelligence-gathering efforts continue to indicate that terrorist organizations remain interested in hijacking airliners to use as improvised weapons of mass destruction. Despite worldwide government and industry attempts to prevent persons likely to engage in this criminal behavior from boarding airliners, individual hijacking attempts continue to occur throughout the world.

The vulnerability of flight deck security has been laid bare recently by the following hijacking incidents:

- *Oct. 3, 2006:* Turkish Airlines Flight 1476, a Boeing 737 with 113 passengers and crew members aboard, while en route from Tirana, Albania, to Istanbul, Turkey
- *Jan. 24, 2007:* Air West Flight 612, a Boeing 737 with 103 passengers and crew members aboard, while en route from Khartoum, Sudan, to El Fasher, Darfur
- *Feb. 15, 2007:* An Air Mauritanie Boeing 737 with 71 passengers and 8 crewmembers aboard, while en route from Nouakchott to Nouadhibou, Mauritania
- *April 10, 2007:* Pegasus Airlines Flight 157, a Boeing 737 with 175 passengers and 6 crew members aboard, while en route from Diyarbaker to Istanbul, Turkey

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PHOTO: UNITED AIRLINES

The barrier...

Each of these events involved an armed hijacker attempting to gain unauthorized access to the flight deck. In two instances, the hijackers were reported to have used firearms, though there are conflicting reports as to the type of weapons used and injuries sustained.

Operational experience with reinforced doors

After Sept. 11, 2001, the U.S. Congress and the Canadian Parliament mandated that airlines replace standard cockpit doors with hardened doors on certain types of airliners. The reinforced cockpit door has proved to be a valuable enhancement to flight deck security.

If the door remained closed and locked throughout all flight operations, flight deck security would be better assured. However, operational experience has shown that, on many flights, the fortified flight deck door does not remain closed for the entire flight. The flight crew or cabin crew members must open the cockpit door during extended operations for a variety of reasons, including crewmember coordination, meal service, and pilots' physiological needs. During this time of opening and closing, known as "door transition," the protective characteristics of the fortified door are negated, and the flight deck becomes vulnerable to attack.

Crew procedures and supplementary measures

The reinforced door is a vital element in flight deck protection, but it is not sufficient to protect the flight deck from attack. As a result, many airlines have established flight deck access procedures to ensure that door transitions are made safely and in minimal time. In addition, a number of airlines have approved and begun improvised use of onboard equipment as a supplementary, interim protective barrier whenever the reinforced door is opened in flight.

Generally, a flight attendant positions a galley/beverage cart diagonally across the aisle and monitors the cabin during the door transition. While using a galley/beverage cart in the aisle, coupled with properly executed door transition procedures, may provide an improvised method of protecting the cockpit, these combined precautions do not establish a predictably reliable system capable of significantly slowing and deterring a hijacker intent on seizing control of the flight deck.

Thus the reinforced flight deck door does not provide a complete solution for securing the flight deck.

Flight deck security in the all-cargo environment

In the unique all-cargo segment of the airline industry, many airliners, including widebody designs, operate with no cockpit doors at all, and newly manufactured cargo airliners are not required to be equipped with cockpit doors. All-cargo flight crew members do not have the support of flight attendants or U.S. Federal Air Marshals.

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PHOTO: UNITED AIRLINES

The barrier in position as viewed from the galley.

Because all-cargo airliners often carry supernumeraries (i.e., company employees or handlers of unique types of cargo), these flight crews are vulnerable to attack any time a flight deck door is opened in flight. Moreover, recent history has shown the ease with which stowaways can board all-cargo airliners. Terrorists or other persons with malicious intent can readily exploit this vulnerability. In fact, the TSA has publicly stated that hijacking poses the greatest threat to the all-cargo segment of the airline industry.

All-cargo airliners are operated in the same airspace as those passenger airliners that are subject to more-stringent security regulations. Cargo airliners, if commandeered, can inflict damage as severe as that caused by their passenger-carrying counterparts.

The solution: secondary barriers

Because protecting the air transportation system is critical to the national economies and defense of the United States and Canada, the security of the cockpits of passenger and all-cargo airliners must be assured. While the reinforced cockpit door has contributed greatly to accomplishing this goal, it has not provided the total solution as originally envisioned. Clearly, the reinforced door is only one component of a multifaceted system necessary for protecting the flight deck.

The solution to this security deficiency is a secondary barrier—a lightweight device that is easy to deploy and stow, installed between the passenger cabin and the cockpit door—that blocks access to the flight deck whenever the reinforced door is opened in flight. The combined system of the reinforced cockpit door and secondary barrier must be accompanied by mandatory, standardized crew procedures governing use of the secondary barrier in conjunction with the reinforced door.

Federal authorities must acknowledge the obvious vulnerabilities associated with the reinforced door and take appropriate measures to ensure that the flight decks of passenger and all-cargo airliners are protected from hostile takeover. They should assume both the oversight role and financial responsibility for designing and installing secondary barriers, working in conjunction with the aviation industry and aircraft manufacturers.

Installing and using a secondary barrier, coupled with standardized flight deck access procedures, can provide a number of security benefits to airlines:

- The secure zone between the secondary barrier and the cockpit door establishes a buffer area that gives the crew an opportunity to visually assess a perceived threat.
- The barrier allows effective interpretation of hostile intent and gives the crew critical extra seconds to react.
- Further, any attempt to breach the secondary barrier would confirm the perpetrator's hostile intent to U.S. Federal Air Marshals (FAMs), Canadian Aircraft Protective Officers (APOs), Federal Flight Deck Officers (FFDOs), and other armed law enforcement officers, plus flight attendants and passengers enlisted to help defend the airplane.

Voluntary industry movement toward designing and deploying secondary barriers and flight deck access procedures began in 2003 with

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PHOTO: UNITED AIRLINES

The barrier in position as viewed from the aisle.

United Airlines' installation of secondary barriers on select airplanes in its fleet, and has continued with Northwest Airlines' installation of primary flight deck barriers on its B-747F cargo fleet. ALPA commends both airlines for taking significant leadership roles on this crucial security enhancement in the absence of federal guidance or standards.

Design standards and crew procedures

Although these two U.S. major airlines have developed and installed secondary barriers, there are no agreed-upon design standards for their manufacture and installation. Similarly, no standardized procedures exist for using such secondary barriers.

The process for developing standards should incorporate criteria including, but not limited to, effectiveness, ease and cost of installation, maintenance, effect on airplane liability insurance rates, ease of operation (functionality and effect on flight and cabin crew procedures), minimal activation and stowage time, weight, flight and cabin crew safety issues related to emergency ingress/egress situations, current and future airliner design issues, and adaptability of such secondary barrier devices. Government efforts should begin with evaluating existing, approved secondary barrier designs such as those used by United Airlines.

To develop a viable product, appropriate government agencies must conduct meaningful dialogue with flight and cabin crew unions, airline managements, and airliner manufacturers. Stakeholders should agree on flight deck access procedures and then incorporate them into government-approved standard security programs for passenger and all-cargo operations. The stakeholders also should consult with the Federal Air Marshal Service, the Royal Canadian Mounted Police, and the Federal Bureau of Investigation because of the effects that installing secondary barriers and developing standard flight deck access procedures may have on operational and tactical procedures used by these law enforcement agencies.

ALPA encourages all airlines to partner with federal agencies and other stakeholders in developing the design standards and appropriate flight deck access procedures, and to equip their fleets with secondary barriers as soon as possible, but not later than Jan. 1, 2010. ALPA recommends that the secondary barrier be designed to delay, by at least 5 seconds, anyone trying to attack the flight deck. The key requirement for door-transition procedures is to ensure that the flight or cabin crew can secure the reinforced door before an attacker penetrates the secondary barrier.

Conclusion and recommendation

The reinforced cockpit door has added a valuable level of protection to the flight deck, but does not completely eliminate the opportunity for hostile takeover of the cockpit. Delaying a potential attacker by 5 seconds, via a secondary barrier, along with standardized crew procedures for flightdeck door transitions, would add greatly to the security of the flight deck. ALPA therefore urges appropriate U.S. and Canadian government agencies to require secondary flightdeck barriers and appropriate flightdeck access procedures on all airliners by Jan. 1, 2010.