

Editor's Note

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Twenty-Five Years After 9/11: What Actually Made Flying Safer?

Twenty-five years has passed in the blink of an eye as they say. You don't believe it until it happens and you are standing there looking back. I try to write about my friend David on 9/11 to keep his memory alive. We went to college together. He was whip smart, funny and kind. He was also incredibly motivated and ambitious — one of the first among our Embry-Riddle cohort to get hired with a legacy airline. I was right behind him, almost there, flying the DC-9 for a start-up airline out of Dallas Love Field. But I was also juggling motherhood and trying to be a good life partner to my husband.

David popped into my mind with the recent passing of Dolly Parton — here is why. We all had our plans for making our way towards success as pilots. David told me once that after he built up his time as a flight instructor, he was going to go to Nashville and try to get hired to fly the business jet of one of his favorite performers — Dolly Parton. I loved that he had such a plan. A remembrance written by one of his American Airlines colleagues says so much about his character. "He was a great listener. He spoke lovingly of his family and friends. I never met anyone who didn't like David. He was always compassionate and kind," his American Airlines colleague and friend wrote.

In the past 25 years, many things have changed with regards to airport security. Let's review.

Before September 11, conventional wisdom during a hijacking was essentially to cooperate, remain calm. The thinking was that eventually the aircraft will land and negotiations will begin. September 11 destroyed that assumption. Passengers now know an aircraft can be used as a weapon. The response aboard United Airlines Flight 93, which was hijacked and then commandeered by the passengers, demonstrated the implications immediately.

An attempted 9/11-style takeover today confronts something the original hijackers largely did not — a cabin full of passengers and crew who understand that doing nothing may be more dangerous than fighting back. Many passenger briefings in the cabin now add a short note to this effect saying, "The safety and security of this flight is a shared responsibility."

Perhaps the single most consequential change may be locked and reinforced cockpit doors. After 9/11, the FAA required reinforced flight-deck doors on most passenger aircraft, designed to resist forced entry and penetration. More than 6,000 aircraft were required to have reinforced doors installed by April 2003.

Interestingly, the system is still evolving. The FAA is moving toward requiring secondary cockpit barriers because the reinforced door provides less protection during the brief periods when it has to be opened. Secondary barriers for commercial aircraft cockpits became required on August 25, 2026; however, that requirement is for new aircraft only. It does not mandate retrofitting older planes currently in service. Full fleet integration will take many more years.

Before 9/11, checked baggage was not universally screened for explosives. Afterward, the government required screening of all checked bags, driving the enormous deployment of explosive-detection systems behind the scenes at airports. This infrastructure is near the top of the list of substantive changes that have made a difference in avsec.

Under Secure Flight, a risk-based passenger pre-screening program managed by the U.S. Transportation Security Administration (TSA), was implemented. That agency took over responsibility for comparing passenger information with government watchlists instead of leaving it to airlines. The system uses more biographical information and has improved the government's ability to distinguish genuine matches from innocent travelers with similar names.

The Department of Homeland Security says the program was designed to collect only the minimum personal data necessary to complete accurate matching while safeguarding private information. It's certainly not perfect. Tales of mistaken identities were common when it was first developed in the mid-to-late 2000s. These were false positives — innocent travelers flagged because they shared a name with someone on a federal watch list — and were a widespread problem. However, updates to how data is collected have drastically reduced these errors. Now mistakes affect less than 0.0001% of travelers.

A change we love to hate followed Richard Reid's December 2001 attempt to ignite explosives hidden in his shoes. The rationale was understandable. Terrorists demonstrated a specific concealment method, so security adapted to it. But universal shoe removal eventually became an example of what critics call security theater — applying a highly visible procedure to millions of people long after screening technology and risk-assessment capabilities evolved.

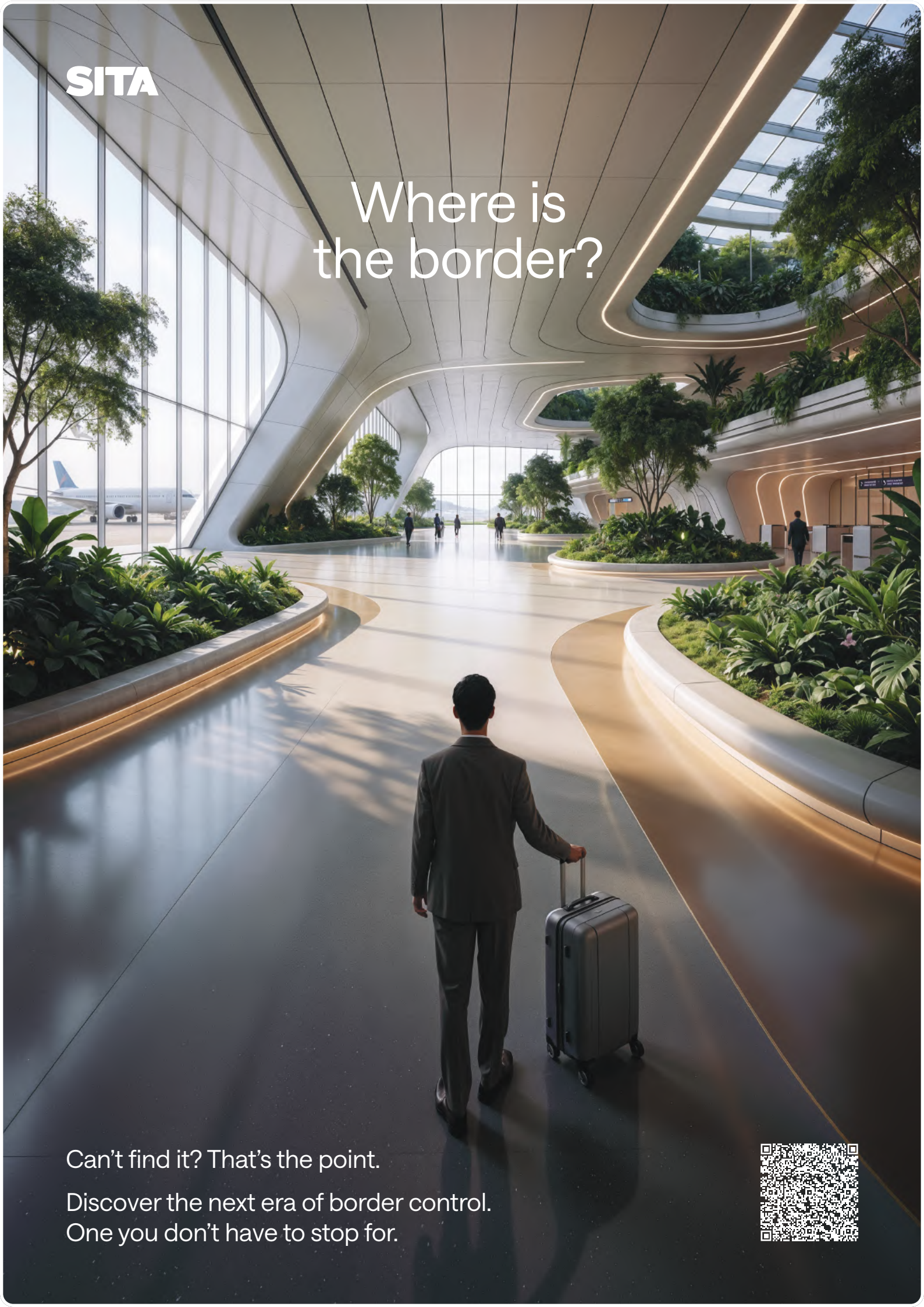
PreCheck passengers generally don't remove shoes, so if removing shoes is essential to aviation security, why is it safe for some passengers not to?

The 3-1-1 rule followed the 2006 transatlantic liquid-explosives plot and remains one of the most recognizable, and irritating, airport security measures. It requires every individual container of liquid, gel or aerosol carried on to be 3.4 ounces (100 milliliters) or less. The liquids must all fit in a one quart bag and only one bag per passenger is allowed. TSA still applies the basic restriction. The original threat was genuine. The more interesting question all these years later is whether technology can finally make the blanket restriction obsolete.

Advanced imaging technology became widespread after the 2009 "underwear bomber" showed that a metal detector wasn't sufficient for detecting nonmetallic explosives concealed on the body. The technology is capable of detecting metallic and nonmetallic objects, which represents a real improvement over walk-through metal detectors.

The particularly provocative contrast is that some of the measures that may have made the greatest difference such as reinforced cockpit doors, intelligence sharing, passenger vetting, checked-baggage explosives detection and changed crew/passenger behavior — are largely invisible to travelers. Meanwhile, some of the most visible manifestations of post-9/11 security like shoes, liquids, pat-downs and behavioral observation, are among the measures whose continuing value is easiest to question.

No matter how you feel about each of these protocols, the facts remain. Hijackers used knives and box cutters to stab flight crew members, pilots and passengers to breach and take over the cockpits. My friend David was the first officer on American Airlines Flight 77 that crashed into the Pentagon on the morning of September 11. He would be 64 years old this year — eyeing mandatory pilot retirement next year. Thousands of people died on 9/11 — David Charlebois was one of them.


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