American Airlines efficiency and safety soar with paperless cockpit solution

AT&T Business

- **Business Needs** - A better way for pilots to access flight information on the go

- **Networking Solution** - AT&T Networking, MIS, Mobility, AT&T NetBond®

- **Business Value** - Improved safety, reduced costs, increased efficiency

- **Industry Focus** - Airline

- **Size** - $40B in annual revenue

About American Airlines

American Airlines (AA) is the world's largest airline as measured by fleet size, revenue, scheduled passenger-miles flown and destinations served. Together with its regional branch airline, American Eagle, AA offers an average of nearly 6,700 flights per day to nearly 350 destinations in more than 50 countries. American is a founding member of the oneworld® alliance, whose members serve more than 1,000 destinations with about 14,250 daily flights to 150 countries.

Challenge

Airline pilots are required to carry kit bags containing the flight information, navigation charts, and reference materials they need to fly the plane, along with the vast number of forms they must complete for the Federal Aviation Administration (FAA). The bags were cumbersome and heavy – filled with papers and binders, each weighed as much as 40 pounds. Lugging the bags onto every flight was inconvenient and even caused some pilots to develop back problems. American Airlines wanted to find a better way to provide pilots with the up-to-the-minute information they need to fly safely and meet FAA requirements.

Networking Solution

AT&T helped American Airlines become the first commercial carrier to replace its bulky flight manuals with tablet computers. The FAA approved the use of AA's "Electronic Flight Bags," tablets that contain radar, schedules, flight charts, manuals, and other FAA-mandated information. The reliable AT&T network and the AT&T Control Center for the Internet of Things ensure that pilots can use the tablets to access the information they need at any time, whether they're in a crowded airport or cruising at 30,000 feet.

Nonstop Innovation – the American Way

American Airlines (AA) has a rich history of innovation. Its first flight was piloted by pioneering aviator Charles Lindbergh in 1926, when he delivered U.S. mail from St. Louis to Chicago. A decade later, AA founder C.R. Smith worked with Donald Douglas to create the DC-3, a plane that changed the airline industry by switching its focus from mail delivery to passenger transport.

Over the years, AA became the first carrier to offer nonstop transcontinental flights, the first to hire an African American commercial pilot, and the first to introduce passenger loyalty programs. These developments and the airline's efforts to provide safe, dependable and friendly air transportation were recognized recently by Air Transport World, which named American as its 2017 Airline of the Year.

Most recently, AA became the first commercial airline to introduce the Electronic Flight bag,

a solution that takes a heavy load off its pilots, enhances safety, simplifies operations, saves money, and benefits the environment. AA initially distributed 8,000 Electronic Flight Bags to its pilots, a number that was expected to nearly double after American merged with US Airways.

From an Abacus to a Spreadsheet

Appreciating the impact of American's most recent innovation requires an understanding of a pilot's burden – the heavy flight case containing reams of documents the FAA requires pilots to bring onto every flight. "We used to joke that when the paperwork outweighed the airplane, we were ready for takeoff," said AA Pilot Jennifer Ewald.

Today, powerful connectivity through the AT&T network enables pilots to carry all the data they need on a tablet computer. "It's an Electronic Flight Bag," Ms. Ewald said, a 21st century version of the navigation charts, reference manuals and other material the airline formerly provided on paper. "Now we can download our flight plans to our tablets with one touch."

Central to the success of this solution is the AT&T Control Center for the Internet of Things, a sophisticated, cloud-based platform with powerful capabilities that enabled AA to launch, manage, and rapidly scale its Electronic Flight Bag initiative. The solution gives AA greater control, better flexibility, and increased safety and security for the vital information pilots need to access.

AA Chief Information Officer Maya Liebman said the solution made an immediate impact on operations.

"It's like the difference between an abacus and a spreadsheet," she said. "The connectivity that we get with the AT&T network is just so powerful."

Safety, Savings, Speed

Airline officials are enthusiastic about other benefits of the Electronic Flight Bag. By replacing the heavy flight bags with a tablet computer, they hope to eliminate the back pain that many pilots experience. Patrick O'Keeffe, AA vice president of Airline Operations Technology, praised the initiative in a recent presentation at a tech conference. "We've reduced the single biggest source of pilot injuries: carrying those packs," he said.(1)

David Campbell, American's vice president of Safety and Operations Performance, noted the electronic flight bags have created "a significant positive environmental and cost-savings impact." Eliminating the bulky suitcases saves a minimum of 400,000 gallons of fuel annually; based on current fuel prices, this means $2 million a year in savings. The program also has a significant environmental impact, Campbell noted, in that 24 million pages of paper documents have been eliminated.

As fiscally responsible as the solutions are, it's the safety that AA appreciates most. "The electronic flight bag has made things more immediate," Ms. Ewald said. "And if something were to happen, we can quickly access the emergency procedures."

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Maya Liebman
American Airlines Chief Information Officer

Reliable Connectivity for Everything that Moves

The tablets have also streamlined pilots' pre-flight processes, Ms. Ewald said. "When I get to the airplane, the first thing I do is walk around the plane to make sure there is nothing broken or anything that would be unsafe for flight," she explained. "Then I go straight to my tablet. We can look at radar images, flight plans. It's so quick to access."

Although its initial 'pilot' program, relied on Wi-Fi, AA saw a need for more reliable connectivity. "Trying to connect to Wi-Fi at the airports was difficult, especially if you're in the airplane," Ms. Ewald said. "Wi-Fi doesn't always reach the plane."
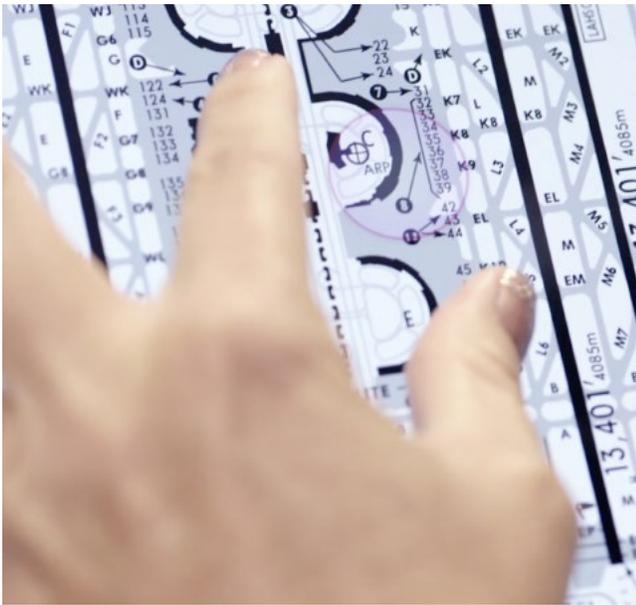
The airline then added AT&T Mobility services, Ms. Liebman said. "There's no industry by definition that's more mobile than the airlines," she added. The connectivity made an immediate difference, Ms. Ewald said.

AA's Electronic Flight Bags are another important milestone in the airline's efforts to make travel safe and convenient, and get passengers to their destination as quickly as possible. "And in this world that we have today everybody wants to get there early," Ms. Ewald said. "This makes it better for the pilots, it makes it better for the passengers, it makes it better for everyone.