

Model behaviour

After going 12 years without a single discrepancy in the Federal Aviation Administration Part 139 inspection criteria, Miami International Airport could be considered a paragon of safety and efficiency when it comes to ground operations. New technology is playing its part but, says **Lonny Craven**, investing time and effort in creating the right business culture is as important.

Lonny Craven

Lonny Craven, a 27-year veteran of the Miami-Dade Aviation Department, was recently promoted to division director for airside operations at Miami International Airport. Craven has worked in almost every capacity in airside operations, including as a clerk, airport ramp agent, gate control agent, senior agent for access and an airport supervisor.

Airport operating certificates are only awarded if an airport satisfies the Federal Aviation Administration (FAA) Part 139 inspection criteria, a stringent test designed to make sure that air transportation and airports meet high operational and safety standards. The basic phases of the inspection include checking the equipment and safety provisions in the movement area, and facilities for aircraft rescue, fire fighting and fuelling.

Miami International Airport (MIA) has maintained its zero discrepancy rating in this assessment for 12 consecutive years, putting it at the forefront of efficiency and safety in airside operations. Technology plays a big part in this success, but the importance of having the right culture should not be overlooked.

"The staff in ramp control are very dedicated and we have a great relationship with our maintenance division in scheduling work to keep MIA safe and up to specifications," says Lonny Craven, division director of airside operations in MIA's Miami-Dade Aviation Department (MDAD). "I like to think that MIA not only meets, but exceeds industry standards."

Improved control of aircraft on the ground is central to MIA's strategy, and involves close co-operation with other agencies to create a better view of aircraft movement, plan ground operations more effectively and control congestion. In December 2003, MDAD partnered with the FAA to share aircraft control; the FAA oversees all the aircraft in the movement area, but MDAD takes over in the non-movement area. >>



“We created hand-off points,” explains Craven. “The FAA turns over control of an aircraft to the airport when it arrives at the terminal service roads and, likewise, we turn over control to the FAA at the same point upon departure.

“Prior to implementation, MIA was having major traffic congestion in the terminal areas that had a direct affect on the nearby taxiways. A survey from 2003 showed that the average cost to an airline was \$106 per minute of delay, which included crew costs, fuel burn, maintenance, misconnects and curfews. By June 2004, this system virtually eliminated all aircraft traffic congestion.”

A culture of responsibility

MDAD’s airfield operations division has three sections: ramp control, aircraft gate control and access control. Each has its own responsibilities, but they work collectively towards a common goal – promoting a safe, secure and

efficient operating environment at MIA.

Ramp control ensures the safe operation of aircraft on the airfield and maintains MIA’s Part 139 certification through a specialist team reviewing runways, taxiways and airport surface conditions. Aircraft gate control runs all MIA’s aircraft gates, handling gate assignments on a daily flight-by-flight basis. It controls the movement of aircraft traffic on and around the airport terminal apron ramp to prevent conflicts and minimise congestion. Access control monitors the access and

FAA safety and security requirements.

Co-ordinating these functions requires significant investment in IT. MDAD installed a resource system manager from Air IT, AODB-AOIS flight information system and Flight Explorer radar in its aircraft gate and ramp control towers, plus hotlines linking the towers with the FAA. Aircraft gate and cargo assignments are loaded into the system 36 hours before each flight. On the day, a gate-cargo controller assigns airport resources to the airline.

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movement of vehicles in the restricted areas of MIA’s airfield, interfacing with airlines, airport tenants, government agencies and contracted service companies to ensure compliance with

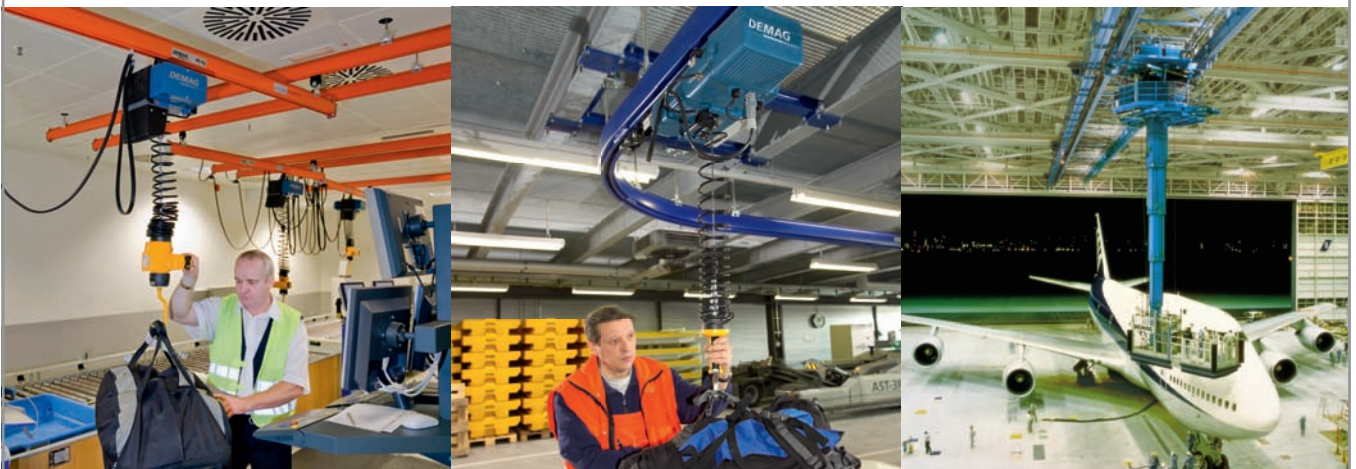
“There are times when we work very closely with the FAA tower to hold aircraft on the west side of the field for a few minutes in order to allow a mass aircraft departure from the gate areas. By the

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same token, the FAA sometimes requests that the airport hold aircraft on the gates to allow landing aircraft to enter the terminal area. Our goals are to safely and efficiently expedite aircraft traffic off of the runways and taxiways into MIA,” says Craven.

Better IT and inter-agency communication are not the only reasons for MIA’s outstanding record. For Craven, the long-term commitment to quality that the airport has made over the years is equally important.

“It started more than 25 years ago with MIA’s management. The airport watched as some major air carriers went out of business and left idle aircraft parked at their leased gates and concourses. After the demise of Air Florida, Braniff, Eastern and Pan Am, it was decided that all leases would not be renewed. In October 1991, the last leased gate expired and MIA went to 100% common-use resources.”

Prepared for the future

The systems and procedures in place at MIA will be put to the test as passenger numbers rise again and the airfield becomes busier.

“The integration of new technology will allow us to seamlessly track aircraft not only on the air, but on the ground also. Just like radar allowed us to avoid traffic congestion in the sky, these new technologies will allow us to avoid traffic congestion on the ground. Anytime we can keep aircraft moving, the airlines are making money, they add more flights and, of course, the airport gains more flights and passengers.”

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To maintain this mutually beneficial strategy, MIA will be constantly looking to improve the tools and techniques it deploys. It is working on an upgrade to its aerial display system, which, at the moment, is a simple snapshot linked to the Air IT system.

“It’s very simple in that it displays an aircraft icon on the gate using longitude and latitude on an aerial photo,” says Craven. “We are working on a next step that uses multi-lateral technology of ASDE-X, ADS-B, transponder codes and GPS to start tracking aircraft from around 80 to 100 miles out. It will even be able to track aircraft on the ground to and from the gate.

“We will then supply our FAA tower with a feed so the FAA controllers can see when we push back aircraft from the gates and block the alleys with traffic. The common use of gates, ticket counters and hardstands allows MIA to meet the airlines’ growth potential and still be able to fill the peaks and valleys with other carriers,” he adds.

The airport has also approved the installation of SafeGate aircraft self-parking systems, which can flag pilots into a gate following the lead-in line. Even when ramp operations have stopped due to lightning, aircraft will still be able to find a gate and park. ■



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