Towering Ambitions

U.S. controller training speeds up as simulator systems come online

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FAA is set to accelerate the training of air traffic controllers as the agency nears completion of a nationwide simulator deployment program.

The final four MaxSim training systems, developed by simulation specialists Adacel, will be installed at sites around the U.S. by the end of this year as part of a concerted effort to ramp up controller hiring and training. The FAA currently has 14 systems at its Oklahoma City training academy and 22 others at or near major U.S. airports, including the Hawthorne facility close to Los Angeles International (LAX).

“We are training and hiring new controllers throughout the U.S., and at least 11,000 are being hired over the next 10 years,” says William Withycombe, FAA Western-Pacific regional administrator.

The MaxSim system—each of which incorporates nine 73-in. high-definition televisions that feature 270-deg. out-the-window views—is “an important new tool for training new and veteran controllers. This device gives us an opportunity to improve safety of operations and efficiency. We can simulate just about anything with this,” he adds.

As part of the system’s expansion, controllers from airports around the Los Angeles basin will be stepping-up use of the MaxSim system at the FAA’s regional office in Hawthorne. Eight controllers from Orange County’s John Wayne Airport are among the most recent to start using the Los Angeles simulator. Trainees, experienced controllers in need of a refresher course, and personnel tasked with developing new procedures to deal with changing air traffic scenarios, will take part.

From March onward, controllers will be “preparing for new gate assignments and ramp procedures that are scheduled to kick in when the new terminal opens around November and December,” says Joe Santoro, a John Wayne Airport tower support specialist.

That airport’s new 282,000-sq.-ft. Terminal C, developed under a $195.5 million effort, includes six new gates, security screening checkpoints, concessions and three baggage carousels. The project also includes construction of new permanent commuter terminals at the south end of Terminal C and the north end of Terminal A, replacement of passenger boarding bridges at all 14 existing gates in Terminals A and B, as well as a new baggage-handling system for all three terminals.

The system provides interactive realistic training with a large, wraparound graphic depiction of the airport and the surrounding area. A range of weather and night-and-day conditions can be simulated, along with a variety of scenarios that encompass routine operations through extreme emergency situations.

The simulator provides synthetic voice response and voice recognition that allows the student to talk to the simulator; in other situations, a pseudo pilot responds directly to students.

“Prior to this we would take a trainee from the academy in Oklahoma City for several weeks of classroom work, followed by on-the-job training with ATC instructors,” says Santoro. “Now we can finish classroom training and go into the simulator where we can teach phrasing, controller judgment and so on. We can also pause, repeat problems and do all the things we can’t do with live traffic.”

Significant time savings are being achieved as a result, says Santoro. “We are able to take two trainees to the next level within 40 hr. [about four weeks] versus three months under the old system.”

Controllers from the Bob Hope Airport in Burbank, and the nearby Long Beach and Van Nuys airports, are expected to start using the LAX-based system later this year.

Airport-specific databases enable the LAX-based simulator to be used for training controllers at satellite fields, such as John Wayne Airport.

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