

New Tool for Safer Skies

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MARINE CORPS AIR STATION IWAKUNI, Japan (Dec. 1, 2006) -- Smoke billows from the failed engine of the plummeting C-130 Hercules as it desperately tries to pull up. With the landing gear still locked in its great steel belly, the aircraft hits the runway and skids to an eventual halt into the industrial zone adjacent to the flight line.

Luckily, this scenario was just one of many created by the new Adacel Tower Simulator System, the most recent tool available to station air traffic controllers.

Equipped with the latest in computer technology, the simulator utilizes state-of-the-art 360 degree panoramic graphics and voice-activated controls to give users an authentic experience. Controllers wearing headsets give computerized pilots ATC commands that are followed by the digital aircraft.

It's a fully customizable piece of equipment; everything from the type of clouds to the position of the sun can be modified, said Master Sgt. Michael S. Andersen, Headquarters and Headquarters Squadron air traffic control tower chief and Seattle native.

The TSS is capable of simulating almost any situation that can occur on the flight line.

Being able to repetitively practice scenarios a controller does not usually encounter is one of the biggest advantages of having the simulator. During his first run on the TSS, Staff Sgt. Michael D. Damron, H&HS air traffic controller and Washington Courthouse, Ohio, native, was impressed with the equipment's capabilities.

"For air traffic control, muscle memory is key," Damron said. "Here we can simulate any scenario that a student may have a problem with. You're going to get a thorough application of rules you might not see on a day-to-day basis."

For now, air traffic controllers only have the opportunity to practice on the simulator during the weekend or at night when the flight line is closed. Andersen, however, hopes to someday run the TSS every day.

"Ideally we'd like to have one of our permanent personnel assigned to this, but we have to have qualified people to do that," said Andersen. "You have to have someone that knows the system, knows ATC rules, is familiar with computers, and can build scenarios and think creatively. It takes a dedicated position, and that will be the next challenge."

Even with its limited availability of use, Andersen feels the TSS is an asset to the station and a step up from the "old simulator," a painted piece of plywood with plastic planes representing the station's aircraft.

Because the simulator is constantly providing the air traffic controllers with traffic, there is a constant upward learning curve. The end result is Marines are well-prepared in all aspects of their jobs, he said.