In San Antonio, Jeff Keith (left), program focal for I-Gold/iCapture, discusses the I-Gold software interface with maintenance modification mechanics Raymond Luna (center) and William Orcutt II.

LANCE CHEUNG PHOTO

A clean sheet

KC-10 program delivers paperless maintenance

BY DEBORAH VANNIEROP

In the past, when Boeing returned a KC-10A Extender to the U.S. Air Force, the pilot or flight crew received several books of ship records that documented work maintenance, modification or repairs. Today, they receive one compact disc.

Last year, Boeing's KC-10 Contractor Logistics Support program employees in San Antonio delivered their first "paperless" aircraft. Gone are the boxes of paper listing every action on the aircraft. That information now is tracked through I-Gold, a third-party business-planning database program that integrates inventory databases with shop-floor management programs. The end result: Easier access to information, fewer worries about lost records, better process oversight and improved cycle time for servicing an important war-fighting asset.

"By having the maintenance records in an electronic format, we have easier access throughout the program to gather data and perform trend analysis," said Mike Wright, Boeing's KC-10 program director. "We will be able to use this information to reduce aircraft cycle time and perhaps reduce costs."

The journey to a paperless aircraft, however, wasn't easy or popular, and it had a few obstacles. "Bottom line, we made it work, and now there's no looking back,"

said Jeff Keith, KC-10 planner and I-Gold/iCapture program focal.

The team first looked at the entire KC-10 CLS program to determine how to begin the paperless implementation without interrupting the work flow. The Air Force operates nearly 60 KC-10 aircraft, which receive extensive checks or regularly scheduled maintenance every 12 to 24 months at San Antonio. Due to their high operational tempo, the aircraft must be serviced regularly to satisfy mission requirements.

It was decided the best time to integrate everyone into the paperless process was during the aircraft Time Compliance Technical Order modifications. These typically involve small aircraft-modification packages that are limited in scope. "That maintenance period provided us with the best opportunity for training while still allowing us to meet the customer's schedule," said Carlis Brady, KC-10 CLS deputy program manager.

The next step was to ensure that everyone was involved in training. The team included KC-10 management and mechanics, as well as specialists from I-Gold, Information Technology, Finance, Quality, Industrial Engineering, and even KC-10 CLS suppliers.

However, before anyone began inputting data to I-Gold, subject matter experts were chosen to learn I-Gold and iCapture, a wireless tablet that links to the I-Gold system and is used by mechanics and maintenance supervisors to identify needed aircraft maintenance or repair.

While the mechanics were taught how to

use the systems, the subject-matter experts were there to assist with training. For many employees, this was the hardest part of the paperless implementation. "It was a challenge to teach everyone that things don't just happen automatically because you're using a computer," said Eric Cavenaux, KC-10 I-Gold project manager.

The KC-10 team also drew upon its strong Employee Involvement and Lean knowledge, and found ways to streamline the training process. "Lean and EI contributed toward the design and location of the computer workstations," Brady said.

Following months of preparation, the program returned its first paperless aircraft in April 2007. While the team is pleased with the results, customers have also expressed their pleasure. "The crews like the fact that less data is now needed when they accept their aircraft, and the home station maintenance crews have access to all of the maintenance records for any given aircraft," said Brady. "This has also eliminated the potential for lost or missing records."

The team believes the process is still evolving and continuing to improve.

"The ability to see the real-time aircraft status, such as what jobs are complete versus what jobs still need to be accomplished, is a huge reward," said Cavenaux. "The ability to see exactly where all your employees are assigned and working is another benefit. But the most notable difference is that the KC-10 team has a better understanding of how the program operates." ∎

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