



For the exceptional work of the Automated Biometric Identification System (ABIS) team, U.S. Army Lt. Gen. Steven Boutelle, left, presents his General Officer coin to Warren Champ, ABIS program manager, and to Kasey Wertheim, the team lead in forensics and latent examinations (not shown).

Thumbs Up

Biometric system IDs insurgents, earns customer praise

Here's the scenario: A U.S. Marine patrol in Iraq detains a suspected insurgent, but the man claims to be someone else. A marine takes him to a fingerprinting device, takes a set of prints and e-mails them to the Department of Defense Biometric Fusion Center in Clarksburg, W.Va.

Soon afterward, the identity is confirmed. An insurgent is off the streets.

And that's the way it generally happens with the DoD's Automated Biometric Identification System (ABIS).

Lockheed Martin Information Technology (LMIT) has been operating ABIS as a pilot program since 2004, but the system has become a much more vital tool in the global war on terrorism than the description implies. In January, DoD's biometrics brain trust visited Clarksburg to praise the DoD and contractor employees at the Biometrics Fusion Center and to announce that Biometrics, of which ABIS is a part, would soon become a program of record.

"ABIS has been providing extremely valuable data to the war fighter," says Chip Nickerson, LMIT's director of Identity Management. "The Army general officers overseeing the program have recognized its importance by announcing that the ABIS program was being made a 'program of record,' which will result in greater support and a continuous funding stream."

ABIS is modeled on a similar biometric database and identification system maintained at Clarksburg for the Federal Bureau of Investigation. The FBI's Integrated Automated Fingerprint Identification System (IAFIS), originally developed by Lockheed Martin Electronic Systems, is also upgraded, operated and maintained by LMIT, and that experience has been invaluable for the ABIS team, says Nickerson, who is responsible for both programs.

"We had complete knowledge of the FBI system, so we were able to apply all of those lessons learned in building and fielding ABIS," he

explains. "There's also a lot of sharing of resources and information that makes this a really unique environment, where everybody is focused on protecting our warfighters and protecting the homeland. The partnership with the FBI and the DoD is probably the single most critical element that has allowed this program to be so successful."

One aspect of the ABIS program that has been a pleasant surprise for the customer has been its success in identifying latent fingerprints — those hidden impressions left behind on items of

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interest. Counterterrorism investigators, for example, have been able to recover pieces of an improvised explosive device, process them for latent prints and then send the images to ABIS for comparison to previously captured fingerprints. Latent print collection has produced numerous hits, officials report.

Once a bomber's fingerprints are in the system, that same individual could then be detained if, for example, he were fingerprinted by the Department of Homeland Security trying to enter the United States or picked up by the FBI in an investigation.

That interconnectivity is perhaps the most exciting aspect of the work, says Warren Champ, LMIT's ABIS program manager. "By working with other agencies, we're able to help identify terrorists before they cross our borders," he says. "That's what makes this program special even beyond the success we're having in identifying people from data collected in the field."

Champ says the ABIS team's enthusiasm has fueled a constant improvement of the techniques and algorithms that are used to evaluate incoming fingerprints. The team consists primarily of engineers who write software and maintain the system and fingerprint experts who evaluate search results.

"The automated system does most of the matching," Champ says, "but

Lockheed Martin also provides fingerprint examiners who provide the government with recommendations on further actions with low-scoring and latent fingerprint results. The system is continually being optimized to deal with the variable quality fingerprint impressions collected in a field environment."

While fingerprints have been the initial focus of the system, biometrics covers a wide range of potential identifying features. Champ expects the program will have a pilot up and running this year for facial matching, and iris matching will soon follow.

For the team's exceptional work, Army Lt. Gen. Steven Boutelle presented Champ and LMIT's Kasey Wertheim, the team lead in forensics and latent examinations, with his General Officer coin — a high honor.

"It was pretty special to have a three-star general thank you personally for supporting the warfighter," Champ says. "But everybody out here on both these teams, ABIS and IAFIS, deserves recognition for the great job they're doing." ■

INFO To learn more about the Department of Defense's biometrics programs, go to www.biometrics.dod.mil. For more information on the Automated Biometric Identification System, call Lockheed Martin Information Technology Warren Champ at (304) 333-4310.



U.S. Army officials visit the Biometric Fusion Center in Clarksburg, W. Va. Here, Kasey Wertheim, the Automated Biometric Identification System team lead in forensics and latent examinations, shows the system to, from left, Lt. Gen. Steven Boutelle, Maj. Gen. Conrad Ponder and Kevin Carroll, the Army's program executive officer for Enterprise Information Systems.