



Biometric Technology Is Featured at the 2006 Mock Prison Riot

By Tom McLaughlin

The law enforcement and corrections (LEC) community have a long history with the use of biometric technology. However, LEC officers are often out of the loop when learning about new developments in this area.

A Historic Perspective

Alfonse Bertillon, while working for the Paris police department in the late 1800s developed a system of physical measurements to better identify criminals. Along with the measurements were descriptions, such as eye color, scars and tattoos. All this information was placed on a card with a photograph. This type of system began to organize the booking procedure within the LEC community; however, this method would have slight variations based on the precision, tools and method used by the officer taking the measurements.

Continuing through the early 1900s the LEC community began to realize the uniqueness of the human fingerprint. This turnabout came largely from the research work conducted by an Englishman, Sir Francis Galton. Galton showed Scotland Yard the value of the human fingerprint, which could be used to identify repeat offenders. Sir Edward Richard Henry of Scotland Yard developed a rudimentary classification method based on common fingerprint patterns such as the whorl, arch and loops, as identified by Galton. Eventually the method used to classify and identify persons using an inked fingerprint advanced to the point that agencies routinely recorded these on cards along with a photograph and other distinguishing features. Examiners began to develop an expertise in identifying and verifying an individual. Also, these techniques could be used to identify individuals from latent prints found at a crime scene.

It became evident that a central depository using a standardized process was needed to organize the gathering of this data. In the United States, it took an act of Congress to establish an identification division, within the FBI, devoted specifically to this work. Through the years, this process has become more automated, using advances in computer systems to create an efficient methodology for fingerprint storage, retrieval, submission and matching. The largest division within the FBI is the Criminal Justice Information Services (CJIS) Division, which serves as a central depository of criminal information for the LEC community. The

CJIS database includes more than 51 million subjects, with 6,000 to 7,000 new subjects added every day.¹ Today criminal electronic submissions can be processed and provide information within hours if the offender was previously enrolled in the system. Also, records can now be transferred digitally.

Mock Prison Riot

Technological advances in the area of identification and verification continue, but LEC officials have little opportunity to try out and learn about such tools and techniques. The Mock Prison Riot (MPR), held annually at a decommissioned penitentiary in Moundsville, W.Va., highlighted the use of biometric technology to identify subjects in near-real scenarios.

In its 10th year, the Mock Prison Riot took place May 7-10, 2006. This event is closed to the public, but specifically designed for officers and decision-makers of LEC agencies. More than 1,400 attendees came to the Mock Prison Riot to view 90 technology booths displaying and demonstrating the latest technology for the LEC industry. Overall, there were 53 mock riot scenarios conducted and 50 workshops available to provide instruction and discuss the latest advances in technology.

The classroom workshops included a biometrics primer provided by the National Biometrics Security Project for those wanting to learn more about biometric technology. The course gave the end-user and decision-maker an understanding of how data is captured and stored, and provided information on specification measurements that define the biometric tools. Another workshop related to biometrics, featured the Pinellas County (Fla.) Sheriff's Office, which provided an overview of its use of face recognition to help identify repeat offenders.

A major focus of the annual Mock Prison Riot has always been to showcase new and emerging technology to the corrections and law enforcement communities in near-real scenarios. This event allows corrections and law enforcement tactical teams the opportunity to use the latest technology.

Companies specializing in technologies to identify and verify individuals took part in showcasing and demonstrating their equipment to LEC professionals. Identix demonstrated live scan technologies; Viisage demonstrated face recogni-

tion technology; Cross Match Technologies took part in near-real riot scenarios to demonstrate mobile fingerprint devices used in the field; and SecuriMetrics Inc. participated in scenarios using iris identification technology.

The combined Correctional Emergency Response Teams (CERT) from Ft. Leavenworth, Kan., (U.S. Army) and the Federal Bureau of Prisons located at Ft. Dix, N.J., organized a scenario that involved an officer taken hostage on a bus. The teams used smoke as a distraction device, while some members positioned themselves at the bus windows. The officers casing (watching or providing coverage of) the bus windows used a human step technique where one team member places his or her back against the bus with knees extended and another officer stands on the teammate's leg and knees to gain access to the windows. With precision timing, a number of CERT officers stormed the bus while some of officers positioned themselves at level with the bus windows with weapons drawn. This tactic surprised the hostage takers and the officers were able to suppress the disturbance with lightning speed.

Fingerprint Technology

After the scenario, an officer used the portable Cross Match MV 100 Fingerprint Workstation to identify the inmates. The workstation employs a fingerprint scanner, an integrated personal digital assistant and a digital camera all-in-one self-contained portable unit that connects wirelessly to the stationary enrollment machine. The enrollment machine contains the database of enrolled finger-prints, along with photographs and descriptive information. The complete system showcased at this scenario is known as the Cross Match PrisTrak stationary and mobile fingerprint biometric system for tracking and managing prisoners.

A Mock Scenario Within a Facility

Another scenario utilizing biometric technology involved the Virginia Department of Corrections (Western Region) team in the infirmary setting. Two inmates took control of the office area within the infirmary and one staff member sustained injuries during the incident. The Virginia team conducted a downed staff rescue operation using flash bangs as a distraction technique. The team's overwhelming force approach secured the area within seconds of entry.

Iris Biometric Technology

After the scenario, the inmates taken into custody were identified using the Portable Iris Enrollment and Recognition Device (PIER) developed by SecuriMetrics. PIER is a rugged hand-held device that allows the operator to enroll and identify individuals using the highly unique patterns and textures of the human iris.

SecuriMetrics also unveiled a new multi-modal biometric device called HIIDE (Hand-held Interagency Identity Detection Equipment). HIIDE users can enroll, match or verify with the three biometrics — iris, finger and face. This device is currently deployed by the U.S. Department of Defense for use by the military forces and has many applications within the law enforcement communities.

MPR Is a Learning Experience

The Mock Prison Riot provides a rare opportunity for officers to review new technologies, discuss operational needs with manufacturers of equipment and gain additional prison training in a facility that closely resembles their working environment. Every scenario has minimal rehearsal and some things do not go exactly as planned. This allows the team to adapt to the situation. Each scenario is filmed. The film is provided to the teams, so they can further scrutinize their tactics and the technology used. The Mock Prison Riot

is an opportunity for teams to test themselves and learn about technological advances.

The Mock Prison Riot would like to build on the use of biometric technology in the coming years, so that law enforcement and correctional officers will continue in the LEC community's tradition of leading the efforts in verifying and identifying criminals.

Next year, the Mock Prison Riot will be held May 6-9, 2007. For more information, visit www.oletc.org/riot.

ENDNOTE

¹Information provided during a program overview by the FBI, CJIS Division located in Clarksburg, W.Va.

Tom McLaughlin is a project manager at the Office of Law Enforcement Technology Commercialization, a program of the National Institute of Justice, Department of Justice and an initiative of the West Virginia High Technology.



2006 Mock Riot participants demonstrate the HIIDE device.

Courtesy: Office of Law Enforcement Technology Commercialization

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