Georgia State Division of International Association for Identification

GAIAI

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. **New Law Enforcement Technologies**

Over the years new law enforcement techniques have frequently given police officers a greater capability to pursue their duties with a renewed zeal and enhanced personal safety. Often the new tools are produced as a direct result of an apparent existing deficiency. What are some of these new technologies that have been suggested for future use?

In the area of biometrics, several new procedures have emerged. Suspect facial recognition software allows for the monitoring of numerous individuals instantaneously, even if they are in motion. In a large metropolitan area, it may become very difficult to determine specific facial features of persons entering the camera's field of view with older technology. However, the new software operates extremely well. It has the ability to capture facial imagery instantly and in low light resolution. Police officers are able to monitor a congested city street or airport terminal and discern specific identification features even from a great distance away. Another biometric tool involves the concept of iris recognition. Normally used for area entry, an individual places their eye within the monitoring station until identification is completed. Single fingerprint and/or palm print recognition has been used by commercial industries for several years. The military has been following suit by using single fingerprints for processing new identification cards. These new military style cards are also unique in that they are imbedded with personal identifiers rather than having one's social security number (SSN) and birth date (DOB) printed on the paper card. If a new style military identification card is lost or stolen, the theft will be unable to steal the SSN or DOB for fraudulent purposes. Voice recognition software has been considered and is being tested throughout the world as an additional means of personal identification. The idea is to ensure the person speaking is in fact the authentic person and not an imposter. Lastly, touch DNA has entered the mix as another means of positive identification. While testing can be time consuming, it is relatively simple to collect a small DNA sample and submit it for examination. In the near future, the testing time will be reduced to minutes rather than days.

Video recording and documentation methods have been used for many years in law enforcement applications. Dashboard cameras and monitoring devices record continuously during a patrol officer's shift. Research has provided devices which are smaller and more intricate in design. Cameras can be secreted in many objects allowing remote monitoring of undercover operational transactions. Many cities have cameras located at various intersections to monitor traffic infractions such as failure to stop for a red traffic light. The equipment can also be used to aid in identifying a suspect vehicle in more serious felony crimes. In New York cameras are mounted at various

Training Dates for 2011

Summer Meeting—June 24th at Douglasville PD

Fall Conference—October23th—27th in Panama City Beach

The Fall Conference is going to be joint between GAIAI and FDIAI.

locations throughout the city. On city streets, subway routes/stations, and airports it is not unusual to find multiple cameras and monitoring stations.

With the requirement to search suspicious packages that might contain an explosive device, police departments have at their disposal a new tool. It is called Optimal Dynamic Detection (ODD) and it uses visible light to operate. It detects microscopic residue on the outer surface of a package. More specifically, the device used lasers to locate the energy state of the residue around the package. Then it beams the molecules of the residue into the analyzing portion of the instrument. When the light spectrum is measured and analyzed, a determination is made as to whether the residue is explosive in nature or not.

In the area of robotics, many departments have already been using instruments to assist in detection of explosives and hazardous devices. Rather than risk the safety of a human being, a robotic instrument moves in close to the suspicious package and documents its features. After x-raying the package, a decision is normally made to disarm or destroy the device to prevent possible further destructive results. The field of robotics seems to be moving toward more autonomy by the device. Instead of requiring a person to provide instructions to the instrument for every movement, new robotic devices are being programmed to "think on their own". Basic movements and activities are being planned for each robot to accomplish independently. Robots are able to grasp and manipulate objects with seemingly effortless ease.

A police officer's safety in the field has always been a major concern for administrators. The question often is how a department can provide proper protection for its members at the least cost. In a close combat situation when a suspect is armed and attacking the officer, lethal means is always an option. However, if the officer can disorient the suspect and disarm him/her safely, that would be a good alternative to consider. The LED Incapacitator (LEDI) device is a strobe light which flashes rapid bright light toward the suspect. It is the size and design of a flashlight and it emits different colored impulses as various spatial patterns. This device overloads the suspect's visual system and causes him/her to be disoriented. It normally makes the person nauseous and they stop their aggressive movements. It is a non-lethal process without injuries being sustained by the suspect.

The Long Range Acoustic Device (LRAD) is an instrument that uses sound waves to produce high pitched tones which tend to disorient a person. Currently this device is being used by commercial ships for anti-piracy methods. If a pirate boat approaches a vessel, they will be deterred by the high pitched sounds emanating from the device and be forced to retreat. The LRAD could be used to disburse a large crowd when they refuse to obey an order to disband.

Another device is called the Active Denial System (ADS). This instrument emits heat waves over a large distance without causing injury or lethality to the suspect(s). A department could use this device in crowd control as well. It will disrupt and disband a group of people who fail to obey an order to leave the scene. This particular instrument was originally developed for the military and will be used as a non-lethal device.

While it is impossible to speculate on future research projects, it would seem logical that laboratories will continue to create products to assist police officers in completing their duties effectively and safely. Let us hope our profession never stops investing the funds needed to continue such research.

Forensics Reform Legislation Proposed

On January 25, 2011, Senator Patrick Leahy (D-Vt) proposed legislation which is slated as a means of strengthening the quality of forensic evidence. It is intended in part to ensure that those persons involved in conducting laboratory analysis and presenting evidence testimony are the most qualified to do so. As background in February 2009, the National Academy of Sciences published a report which identified significant problems within the field of forensic science. As a result, the senate held hearings to focus on possible solutions to the problems that were presented. One of the criticisms raised by the National Academy Report was the need for "uniform standards for forensic testing and analysis."

The legislation is entitled, "The Criminal Justice and Forensic Science Reform Act of 2011". It stipulates that the forensic science field will be directed by scientists and experts with "criminal justice expertise and scientific independence." The Department of Justice and the National Institute of Standards and Technologies will conduct oversight and give advice as needed. Furthermore, forensic laboratories that receive federal funding must be accredited and their forensic scientists must be certified to conduct examinations within their respective disciplines. Additionally, this legislation will ensure that basic research is conducted to establish a basis of validity and reliability within the various disciplines. Senator Leahy indicated when he presented this bill that the forensic sciences are so vital to those seeking justice that we must ensure that law enforcement and forensic processes are in place so that innocent people are not convicted wrongfully. The credibility of any process hinges upon those who participate within its framework.

The Reform Act further establishes:

- The Office of Forensic Science with the Department of Justice, which will be responsible for setting standards and enforcing the priorities as determined by the Act.
- Certain experts within the field will comprise a Forensic Science Board. They will be selected from the various sciences, prosecutors, defense attorneys, and practitioners within the forensic science field. They will make recommendations for the standards and manner of business by the department.
- A Committee of Scientists will be established to have oversight regarding each individual forensic science discipline, as to their needs to conduct research and set uniform standards.
- The accreditation standards for laboratories will be rigid and there will be education and training certifications required before examinations are performed.
- There will be peer reviewed scientific research conducted by the laboratories.

(Information for this article was obtained from Senator Leahy's website

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Financial Report

Incoming Funds	Nov 1, '10 - May 10, 11 Amount
Parts	
COINS	10.00
iai division share	700.00
misc income	80.00
NOTE PADS	8.00
Total Parts	798.00
Service	
Conference Dues	700.00
Membership Dues	3,000.00
Total Service	3,700.00
TOTAL	**4,498.00**

Expenditures	
Stamps	88
THP	222
Best Buy	1064.62
TOTAL	1374.62
Checking Account Balance	10526.5

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Welcome to New Members!

If you are new to the Georgia Division of the International Association for Identification (IAI), we are very glad you are with us. We look forward to being a support for you in your given specialty, and we encourage you to share your ideas and issues in the coming year. As with any organization, we ask that you would consider becoming an active partner in fostering the divisional goals and objectives as set forth in our by-laws. We are only as strong as those who would be willing to give of their time and talents to help us all meet those objectives together. If you have a suggestion or an issue of concern, please feel free to contact one of the Divisional Officers or a member of the Board of Directors.

Newsletter Submissions

Do you have a particularly interesting case which you recently conducted or assisted on with your department? Is there a new processing technique which you are using that you would be willing to share with your colleagues? Do you have any "forensic news" which you would like to provide to others within our division? If so…..please share your information with us all. I know you may be tired of hearing me "beat the same drum", but if you are so inclined I would appreciate your assistance.

Legislation to ban "Bath Salts"

On February 10, 2011, State Representative Jay Neal from LaFayette, GA., introduced legislation to ban the sale and possession of chemicals marketed as "bath salts." This product is not to be confused with a health and beauty aid used to enhance bath water for a therapeutic "bubble bath". The product contains methylenedioxypyrovalerone (MDPV), which when ingested into the blood stream mimics the effects of cocaine and methamphetamines. It is manufactured in China and India, and is sold as plant fertilizer and insect repellant as well as "bath salts." Abusers snoot, inject and/or mix the product in food and ingest it. The results can be devastating and often leading to high anxiety attacks, agitation and hypertension. "Narcotic bath salts" are commonly marketed with names like: "Cloud Nine", "Ivory Ware", and "Blue Silk." They can be currently purchased legally online or at various "smoke shops" throughout the state of Georgia and other states. DEA has indicated a concern for the abuse of the product and there is hope that it will become listed as a controlled substance in the near future.