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Enhancing Forensic Information Exchange With FIDEX

A project to advance the exchange of forensic case information between law enforcement agencies, crime laboratories and the courts promises to boost lab efficiency and management of data.

The Forensic Information Data Exchange (FIDEX) system provides an electronic Web-based platform for law enforcement agencies to submit examination requests and allows crime labs to more efficiently handle case management. The Office of Justice Programs' National Institute of Justice (NIJ) developed FIDEX through the National Forensic Science Technology Center, which contracted with Waterhole Software in Colorado to design the software.

Although many crime labs have laboratory information management systems (LIMS), law enforcement agencies frequently use handwritten forms and other hard copy methods to submit requests for analysis and case information to crime labs. Also, most information that is exchanged on results of forensic analysis and case disposition, such as a verdict, plea or dismissal, is not done electronically.

A 2009 informal assessment of 94 state and local crime laboratories by the IJIS Institute found that although 79 percent of respondents indicated they had some form of a LIMS, 87 percent of those said they are still accepting requests for examination via a handwritten long form, rather than by electronic means. Also, 98 percent of respondents said that they needed clarification regarding what examinations are being requested from the lab. These factors result in significant administrative burdens placed on the case agents and laboratory analysts, which contributes to delays in turnaround time.

FIDEX is based on the National Information Exchange Model (NIEM), and XML-based information exchange framework. Pilot projects to evaluate FIDEX in a working environment are ongoing in the Boston Police Department and the Phoenix Police Department.

The implementation portal exchange platform should be available for release in the coming months. However, agencies can start using some of the FIDEX standards and specifications by downloading the following Information Exchange Packet Documentation (IEPDs) from the IEPD Clearinghouse at www.it.ojp.gov.

■ **Forensic Case Submission.** A standard for sharing data from a police records management system or evidence management system with a crime laboratory's LIMS.

■ **Forensic Case Disposition Data Request.** Share court case disposition information from the court and the prosecutor's offices with the crime laboratory.

The Boston crime lab has about 20 forensic scientists and handles approximately 1,000 cases per year. Lab criminalist Kevin Kosiorek has been experimenting with the FIDEX portal and is pleased with the system so far.

FIDEX generates the evidence submission form (the so-called paper "long form" traditionally used by law enforcement) electronically, and notifies the lab that an examination request has been made.

"It is very easy to use," Kosiorek says. "Once you set up preferences as to what type of e-mail notification you want to receive regarding evidence coming into the system, as well as different meetings or court date alerts, it's really easy. You just enter your case number and as the case is processed, you are sent notifications."

"Sometimes we are unaware of what is happening in a case, for example, we might receive comparison samples in a DNA case, but don't find out right way. With FIDEX, if evidence comes in, I'm notified," Kosiorek explains. "The crime lab forensic scientist is the point person and can add people to the alert list such as district attorneys and detectives. It's a great way for everyone to be on the same page."

Cases are tracked through the law enforcement incident number. When a user enters the number to check on the status of or add information to a case, the tool will gather all the information on it from disparate systems that are linked through the portal application, and arrange the information in different tabs. The organizational structure of the FIDEX portal includes case summary, which contains basic information such as incident date and location and disposition of a case; evidence; subject/victim; case parties; and scheduled events, such as court dates. Drop-down lists make it easy to add and standardize data.

Because additional evidence can always emerge in a case over time, every 24 hours (or other increment established by the user), the FIDEX portal can automatically query interfaced systems to update the record. If additional evidence has been identified or submitted for analysis, users associated with the case will automatically receive notification of the update.

FIDEX is intended to enhance the functionality of existing systems, explains Robin Wilson Jones, a consultant with NIJ. It is not meant to take the place of a LIMS within a crime laboratory or a records management system within a law enforcement agency. Rather, it allows for the interoperability of existing systems to streamline processing time and increase the accuracy of information being communicated among law enforcement, crime labs and the courts.

In addition to expediting and enhancing communication about a case, FIDEX can help agencies with management reporting. For example, it can track how many cases are assigned to an examiner and what percentage of time is spent on different types of casework, according to FIDEX developer Aaron Gorrell of Waterhole Software.

"We have just skimmed the surface of what we can do with the data," Gorrell says.

FIDEX continues to be refined as a result of practitioner comments. A final report and lessons learned will be issued later in 2010.

For more information on FIDEX, contact Aaron Gorrel of Waterhole Software at (719) 243-2568 or aaron.gorrell@waterholesoftware.com; Robin Jones of the National Institute of Justice at (202) 353-2436 or robin.w.jones@usdoj.gov; or William Ford, NIJ Information and Sensor Technology Division director at (202) 353-9768.