

The Local DNA Database

Better, Faster... and *You Own It*

A NUMBER OF police departments around the country have found a DNA databasing system that truly turns DNA and DNA databases into a rapid law enforcement investigative tool. It's not CODIS or the National DNA Indexing system. Increasingly, more departments are utilizing private laboratories to process DNA in weeks rather than months, creating their own databases where *they* control what profiles are used, and having the results reported directly to them. Unlike CODIS, the police agencies control what offenders go in the database and what crimes it can be used to investigate. Local DNA databases provide an investigative tool that puts the decision-making power in the hands of local police, not the crime lab, and not constricted by guidelines established for national utilization.

I have been involved in the effort to maximize the potential of DNA technology for more than 20 years. As a county child abuse prosecutor, director of the DNA Unit for the National District Attorney's Association, assistant U.S. attorney and director of the National Commission on the Future of DNA Evidence, and consultant in over 35 foreign countries, I have pursued applications of DNA technology that leverage the power of DNA as a truly investigative tool—not just a better piece of evidence. But if you were to ask me how far along we were toward reaching that goal, I would say maybe 20% to 25%.

DNA analysis and DNA databasing make up some of the best crime fighting tools available to law enforcement. Nationally, we have invested hundreds of millions of dollars in DNA-technology development, laboratory infrastructure, and evidence-backlog reduction. The Federal Bureau of Investigation has methodically developed an effective national connectivity of state and local databases. And every day we can find stories in the press about cases solved or inno-

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cent individuals exonerated. But we are not even close to solving and preventing the number and kinds of crimes possible. DNA is not truly law enforcement's tool yet.

CODIS: What has changed... and what has not

First, the existence of CODIS has helped implement the explosion of "cold case" units, institutes, programs, and protocols. The DNA database has given police a reason to go back to old cases with a renewed sense of purpose and optimism. Thousands of cold cases have been solved and, in doing so, future crimes have been prevented. But there is a difficult question to be asked: How many cases were active when evidence was sent to the laboratory, but went cold while waiting for results from the state crime lab or while waiting for technical review of private lab profiles?

And what changes have not developed in the wake of CODIS? We have not seen the development of rapid response teams that show up to the station in the morning, check the list of database generated hits, and

move out to find criminals—before they burglarize one more house, steal one more car... or worse. In fact, one of the biggest problems cited with the current system is the failure of police to follow up on hits.

Making local crime pay for local DNA databasing

Any time law enforcement considers a new application of forensic DNA, one of the first questions asked by anyone responsible for its implementation has to be, "How much is this going to cost me?" And that's for good reason: regardless of the cost/benefit value of DNA testing, the initial investment in any DNA testing project will be considerable. That was certainly the case when Fred Harran, the director of public safety in Bensalem, Pa., was presented with the idea of using DNA and a local database to solve property crime. Like most police executives, the director quickly understood the basics: most crime is local and property crimes are our most recidivistic crimes. Therefore, a local database with a rapid turnaround time and results that can be quickly entered into that database offered huge benefits. The faster he used DNA to solve his property crime cases, the faster he removed thieves and burglars from the streets of his jurisdiction. The sooner he did that, the more crime he prevented.

Bensalem Township has decided to leverage the speed and efficiency of a private-sector laboratory, Bode Technology, and has established its own DNA database through the BodeHITS program. The police department now has its property crime, drug, and other DNA results returned in 30 days. And those results are entered into a database that the police department owns, allowing them to decide which profiles are entered.

Thus, the key component to this program is a commitment to quick

over, five guys and bag of heroin or crack are sitting in it, and everybody is pointing fingers at everybody else.

Constructive possession cases with multiple potential “possessors” are difficult cases for prosecutors. Resolution of the case, if resolution is possible, usually requires wheeling and dealing with some of the handlers to get to the bigger culprit. Even at that point, most constructive possession cases result in a negotiated plea deal.

Imagine the look on the face of the public defender when Bensalem Police Officer Dave Clee showed up at the preliminary hearing with a DNA result matching his client on a possession case of one baggie containing 30 vials of crack. “You did DNA on *this* case? Are you kidding?” was the first response. The second response was, “We’ll waive the preliminary hearing.” The third reaction comes later: “This is a non-negotiated guilty plea your Honor.”

But the other implications of using DNA in this kind of scenario are equally important. Thirty vials of crack constitute intent to deliver. A conviction of intent to deliver drugs kicks in federal and state drug forfeiture laws. Drug forfeiture laws allow police to take the cars out of which drugs are sold or transported and any cash found believed to be associated with the transactions. The cars are sold at auction and the proceeds as well as the cash are deposited in the drug forfeiture fund, ultimately for distribution to the police department. In Bensalem’s case, that means funding for more DNA testing.

In Bensalem, the DNA program will come close to funding itself. The differential between the cost of the program and the funds taken in by drug forfeiture monies is more than made up for in the value of cases solved, man hours reduced, and—most importantly—crimes prevented. Since the project was started in June 2010, Bensalem’s local database has assisted in solving 105 cases. Eighteen of those cases were the result of cold or blind hits. Given recidivism rates for drug dealing and property crimes, that’s a lot of crimes

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prevented and a very high rate of return on the money invested in the local DNA database. ☺

About the Author

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Rapid DNA Profiles Obtained from Stand-Alone Device Used in Criminal Prosecution for the First Time

On September 4, 2013, a break-in occurred at a home belonging to an individual deployed in Afghanistan with the U.S. Air Force. The burglars stole approximately \$30,000 worth of property, including firearms, electronic equipment, computers, televisions, military equipment including a bulletproof vest, clothing, several guitars... and even the cable box. The investigation yielded a suspect who was subsequently arrested for the crime based on witness statements and other evidence. A blood sample taken from the scene provided a DNA profile that matched the suspect who had been arrested and charged with the crime.

While utilizing DNA from property crimes is not new, the way that DNA evidence was processed is quite new: It was done in less than 90 minutes, on a stand-alone Rapid DNA device being tested and validated by the Palm Bay (Fla.) Police Department.

Working closely with the State Attorney’s Office for the 18th Judicial Circuit, the Palm Bay Police Department is set to use the DNA profiles obtained using this Rapid DNA technology—the RapidHIT 200 from IntegenX—in a criminal prosecution. It is the first-ever application of rapid DNA technology in a criminal investigation.

Since it received the RapidHIT 200 unit in November 2012, the Palm Bay Police Department’s Criminal Investigations Division (CID) has been working with the manufacturer, using actual crime scene evidence samples to test and validate the equipment’s accuracy and reliability. In January 2014, the CID began processing samples from active cases.

“What we’ve done is taken actual crime scene evidence, including this burglary case and many others, and processed the samples using the RapidHIT 200,” said Captain Diana Blackledge, who leads the CID and its Rapid DNA program. “We compared all of the results with those from an accredited lab and they all matched. This validates the device as giving reliable and accurate profiles.”

The Palm Bay Police Department is now using the Rapid DNA technology on a weekly basis, in an effort to generate investigative leads, eliminate potential suspects, and provide evidence to convict offenders in court.

“We have met with the Palm Bay Police Department and have been following their progress with Rapid DNA processing for more than a year. We are prepared to present this case in court using the evidence they have developed from their program,” said Phil Archer, state attorney for the 18th Judicial Circuit of Florida. “This case is particularly important as it involves a person victimized while serving our country.”

At the beginning of 2014, the Palm Bay Police Department also added a local DNA database—using the SmallPond DNA profile matching system—to its Rapid DNA program. Palm Bay is now able to cooperate with other local agencies, including Melbourne, West Melbourne, and Cocoa police departments, to collect and share DNA profiles from local suspects and local crimes.

“The ability to solve selected crimes in less than a day is essential to protecting the public,” said Palm Bay Chief Doug Muldoon. “The use of this new technology is our paramount responsibility to the community.” ☺