

**PART 4**

# DETECTIVE PERSPECTIVES

## ON CRIME GUN INTELLIGENCE

### **PART 4: LAYER & LEVERAGE YOUR TECHNOLOGIES**

**IF YOUR WORK IS DEATH WORK, ONE WEAPON IS NOT ENOUGH, JUST AS A PLUMBER WOULD NOT ANSWER AN URGENT SERVICE CALL WITH A SINGLE WRENCH.**

- DEAN KOONTZ, BROTHER ODD

People will always be the principal driver in any crime reduction solution. However, people can become more efficient and effective by using efficient processes supported and sustained by technology tools. When users can adapt new processes to the technology they've adopted, it can often lead them to even higher levels of efficiency and effectiveness. A number of law enforcement agencies have done just that. They've adopted new technology and then adapted their procedures to a new way of working.

For example, a number of police agencies have adopted their own NIBIN data input stations which makes it possible for them to launch a search of the NIBIN database within a short time of collecting evidence at crime scenes and test-firing a suspected crime gun. Within a few hours, the ATF NIBIN Correlation Center in Alabama, can determine if there is a probable match and provide an investigative lead. Alternatively, a local crime lab may do the same. It is a win for the police in that they have significantly shortened a process that—at best—once took weeks (or months or was never done at all) and reduced it to less time that it takes to receive an Amazon Prime order.

In 2023, the Office of Justice Programs posted a study entitled: Research on a 15-Year Statewide Program to Generate Enhanced Investigative Leads on Crime Gun Violence. One of the programs examined was New Jersey's Rapid Assessment in NIBIN (RAIN) program. RAIN reduced NIBIN turnaround time for firearms evidence from 6 – 10 months to 24 – 48 hours and involved three broad phases; 1) identifying and reducing inefficiencies within the NJSP Ballistics Unit to improve the quality and timeliness of evidence, 2) expanding forensic evidence collection from crime guns to DNA swabbing, latent fingerprint examination, and visual examinations for trace evidence, and 3) extending RAIN standards to the entire state of New Jersey. Following the implementation of RAIN in mid-2015 the number of NIBIN acquisitions by the NJSP Ballistics Unit more than doubled. In addition, the proportion of all New Jersey NIBIN acquisitions submitted to NJ State Ballistics Unit grew from about 32% of all acquisitions in 2014 to 54% of all the state's total acquisitions in 2019 and after.

<https://www.ojp.gov/library/publications/research-15-year-statewide-program-generate-enhanced-investigative-leads-crime>

Furthermore, Part IV of the Executive Summary of the 2020 report of the Presidents Commission on Law Enforcement and the Administration of Justice, refers to technological advancements as "... integral to investigations of violent crime, as data analysis of crime gun intelligence and hotspot mapping can allow law enforcement to target the most violent criminal actors and their organizations."

### **LAYER & LEVERAGE YOUR TECHNOLOGIES**

In addition to increasing the speed and effectiveness of processes, technology also increases the reach and range of data sharing and information exchange. While there may be situations in which a crime may be solved using just a single investigative aid or forensic test, there will be

many situations requiring the leveraging of multiple layers of investigative aids and forensic testing in order to solve the crime at hand.

The following are some examples of existing technologies that can prove invaluable when conducting crime gun investigations - especially when layered and leveraged. The list is certainly not all inclusive.

### **NATIONAL INTEGRATED BALLISTIC INFORMATION NETWORK (NIBIN)**

ATF's NIBIN, is a national database of digital images of cartridge cases (in some cases bullets) that were collected from crime scenes or test fired from confiscated weapons.

Networks like NIBIN can share critical data quickly across widely separated geographical regions. For example, a firearm that has been seized for cause during a routine car stop in one city can potentially be linked to a murder or series of murders that occurred in a different city miles away.

### **GUNFIRE DETECTION/LOCATION SYSTEMS**

Gunfire detection/location systems utilize acoustic sensors placed strategically around a defined area to immediately pinpoint and record the sounds and locations of gunfire and dispatch law enforcement to the site of confirmed gunfire. While NIBIN depends upon comprehensive collection - you can't collect evidence of gunfire if you are unaware that it occurred. Studies have shown that

gunfire incidents are commonly under-reported by the public. These technologies help to bridge the information gaps caused by under reporting, and accurately pin-point the locations of the gunfire for responding officers - in some cases even leading them to victims needing emergency medical treatment.

Section 11.2.2, of the 2020 President's Commission on Law Enforcement and the Administration of Justice, states that: "Law enforcement agencies should consider implementing acoustic gunshot detection technologies to combat firearm crime and violence."

The commission report points to a 2016 Brookings Institute study reported that more than 80 percent of gunfire in the two cities studied went unreported to police. As a result, police lack a full awareness of shots-fired incidents, which may include failed shootings that may be attempted again, and the community may assume that police are notified but do not care enough to respond.

<https://www.justice.gov/file/1347866/download>

### **ELECTRONIC TRACING SYSTEM (ETRACE)**

ATF's eTrace, is a paperless and secure web-based platform available to law enforcement to initiate and access the results of a trace of a crime gun. The 2023, ATF National Firearms Commerce and Trafficking

Assessment, Volume 2, reported on the ATF eTrace system. It allows a law enforcement agency (LEA) to conduct comprehensive traces of recovered crime guns and establish an information platform for developing the best investigative strategies to reduce firearms-related crime and violence. The application is available 24/7 and is provided at no cost to authorized LEAs. Each participating LEA enters a memorandum of understanding (MOU) with ATF. The benefits of eTrace include the ability to (1) develop investigative leads; (2) significantly reduce the turnaround time required to process a trace request; (3) improve the quality of trace-related information because of real-time data validation that helps to prevent incorrect entries; (4) monitor the status of traces; (5) view/print/download completed trace results; and (6) generate statistical reports and perform online analytical research. The eTrace system also has greatly reduced duplicative and manual data entry required by the NTC to process trace requests and has correspondingly reduced the time required by law enforcement agencies to submit a trace request. Overall, eTrace has increased the investigative value of firearm trace information and the efficiency of the tracing process. The utility of eTrace for law enforcement is reflected by the number of LEAs participating in the program. The assessment found that the number of LEAs participating in the eTrace program has increased steadily since its inception in 2003.

By 2021, 8,782 LEAs throughout the U.S. and in 47 foreign countries actively used eTrace in support of their investigative work. Consistent with the steady growth of the eTrace program, the assessment found that the proportion of trace requests entered via eTrace (excluding National Tracing Center [NTC] users) has also increased. Moreover, the proportion of trace requests entered via eTrace relative to the total trace requests received by the NTC increased from 27% (71,967) in 2004 (the second year of the program) to almost 91% (512,978) in 2021.

<https://www.atf.gov/firearms/docs/report/nfcta-volume-ii-part-ii-ntc-overview/download>

For eTrace data to be of most value, it must be comprehensive - every crime gun - every time.

### **NATIONAL CRIME INFORMATION CENTER (NCIC)**

The FBI's NCIC, is a computerized index of criminal justice information. The NCIC Gun File includes records on firearms that have been stolen, lost, recovered, or used in the commission of crimes. The value of the Gun File is tied to the detail and accuracy of the firearm description the gun's owner provides to police. Therefore, ATF and many local police agencies are undertaking public awareness campaigns to encourage responsible gun owners to properly record the descriptions of their firearms and preserve them for safe keeping.

### COMBINED DNA INDEX SYSTEM (CODIS)

The FBI's CODIS, is a software program that operates local, state, and national databases of DNA profiles from convicted offenders, unsolved crime scene evidence, missing persons, and arrestees, where applicable. CODIS enables authorized agencies to compare DNA profiles electronically. Using CODIS, DNA profiles from crime scenes can be linked to DNA profiles from other crime scenes, as well as to DNA profiles from known individuals (e.g., convicted offenders, arrestees, known suspects). In terms of CGI, ATF and many state and local crime labs have had significant success in collecting workable DNA from fired cartridge cases and firearms as well.

### INTEGRATED AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (IAFIS)

The FBI's IAFIS, is the U.S.-wide computerized system for storing, comparing, and exchanging fingerprint data in a digital format that permits comparisons of fingerprints in a faster and more accurate manner. Many labs have had success in developing readable latent fingerprints from firearms - most often from the surfaces of the detachable magazines.

### ADDITIONAL TECHNOLOGIES

Investigators should look to all available technology systems as potential sources of CGI to help advance their investigations, including, but not limited to, home and commercial security camera systems, automatic license plate readers, cellphone locators, facial recognition systems, and intelligence management software. When available, the data they generate should be "layered" into the CGI operations and leveraged along with other CGI data elements.

From practical experience, one thing is clear, unless we are able to collect and analyze accurate information about the criminal misuse of firearms across a city, state, province, or country, we cannot begin to apply effective law enforcement tactics and design new strategies to address the problem. Without this critical information gathered in a timely manner, we are destined to use inefficient work processes resulting in misdirected and wasted resources. Without timely information and tools that can generate actionable CGI, we are left blindfolded and with one hand tied behind our backs.

#### SOURCES:

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2. EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES, REPORT OF THE PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND THE ADMINISTRATION OF JUSTICE (WASHINGTON, DC: EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES, 2020). SECTIONS 8.1, 12.3)



**NEXT UP ON DETECTIVE PERSPECTIVES:**  
**Part Five of Twelve: Cross-Jurisdictional Teamwork**