

CRIME GUN INTELLIGENCE

Crime Gun Intelligence (CGI) utilizes evidence-based technology to provide law enforcement a unique tool to enhance comprehensive violent gun crime strategies.¹ CGI combines all available information on crime guns and shootings to identify and disrupt the shooting cycle. Crime gun intelligence concentrates on the ways firearms are diverted from the normal venues of regulated commerce to the criminal market, seeks to intervene to prevent that diversion, and establishes connections of crime guns that have already been used. CGI reveals leads not otherwise available to assist in identifying offenders who are illegally purchasing or transferring firearms and the offenders who use them to commit violent crimes.

Crime gun intelligence most often uses firearm and ballistic (ammunition casing and bullet) evidence, as well as other data sources (listed to the right).

The foundation for crime gun intelligence is the data associated with crime guns, which is exploited through the proper use of the Bureau of Alcohol, Tobacco, Firearms and Explosives' (ATF) National Integrated Ballistic Information Network (NIBIN) and firearm tracing through the ATF National Tracing Center and eTrace. NIBIN creates high-resolution, digital images of the unique markings left by a firearm on expelled cartridge cases.

NIBIN automatically compares captured images of these markings to all other entered casings in a specific geographic region or nationwide. The computerized process provides potential matches within hours, which are then reviewed by trained NIBIN technicians to make a final match determination. Through this process, NIBIN provides the ability to link shootings by ballistic evidence and link recovered crime guns to shootings.

SOURCES OF CRIME GUN INTELLIGENCE

- National Integrated Ballistic Information Network (NIBIN)
- Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) eTrace database
- National Instant Criminal Background Check System (NICS)
- Police crime and incident reports
- Forensic data
- Human intelligence
- State firearm data sources
- Information from state parole and probation
- ATF industry operations data
- Federal firearm licenses
- Secondary Markets
- Cell phone data and social media exploitation
- National Crime Information Center (NCIC)
- Other intelligence sources and databases

Firearms tracing is the manual process of researching, by hand, all legal transfers of a firearm from manufacturer to retail sale. Using information unique to the firearm such as make, model, and serial number, ATF's National Tracing Center can conduct research allowing law enforcement to identify the first retail purchaser of a firearm. This information is often valuable in identifying firearms trafficking schemes, which could not only provide relevant leads to current shooting investigations but can

¹ The information and language in the introduction section was taken from "Crime Gun Intelligence: Disrupting the Shooting Cycle." The National Crime Gun Intelligence Governing Board. August 2018. <https://crimegunintelcenters.org/wp-content/uploads/2018/09/CGI-Manual-Best-Practices-ATF-27-AUG-18.pdf>

² The National Crime Information Center (NCIC) is a national electronic clearinghouse of crime data including records of stolen, lost, and recovered weapons.

also inform policy-makers on how best to develop strategies for interdicting illegally trafficked guns. Other tools can also aid law enforcement agencies in developing and processing crime gun intelligence. These tools include fingerprint identification systems (e.g., Automated Fingerprint Identification System [AFIS]), gunshot detection systems (e.g., ShotSpotter), and criminal information databases (e.g., National Crime Information Center [NCIC]).

Crime gun intelligence can be integral to investigative efforts; however, a number of law enforcement agencies struggle to fully use it due to a lack of training, limited resources, or a lack of formalized crime gun intelligence procedures.³ To streamline the use of crime gun intelligence and improve NIBIN hit processing times, ATF and the Denver Police Department founded the first Crime Gun Intelligence Center (CGIC) in 2013.⁴

CGICs are regional clearinghouses for firearms intelligence and data regarding firearms-related crime. They are often partnered with other intelligence entities such as fusion centers and real time crime centers. Their core mission is to provide timely and accurate intelligence to assist in the identification of shooters and their sources of crime guns. To effectively meet this mission, CGICs operate under five core concepts:

- **Collect**
- **Analyze**
- **Refer**
- **Track**
- **Support**

The CGIC's top priority is to **collect** information from NIBIN, firearms tracing, and police investigative reports relating to firearm and violent gun crime events. Once the raw information is brought together into the CGIC, highly trained and skilled federal, state, and local personnel from intelligence, firearms industry operations, and criminal investigations work together to **analyze** and layer information to provide actionable leads. Timely and actionable **referrals** for investigative follow up are the hand-off point in the CGIC process. **Tracking** and documenting

the outcome of referrals is important to the CGIC. This process will help avoid referrals that are not timely, relevant or useful to investigators. Lastly, the CGIC provides ongoing **support** to criminal investigations. Beyond the initial referral, investigations routinely develop new leads and new direction. The CGIC can add value to investigative information as it develops, giving investigators every possible advantage to solve cases.

As of 2018, there are 25 ATF CGICs nationwide. In 2016, the Bureau of Justice Assistance awarded grants to three cities to replicate the Denver Police Department's CGIC model in Los Angeles, California; Milwaukee, Wisconsin; and Washington, DC. In 2017 two cities were awarded grants: Kansas City, Missouri and Phoenix, Arizona. There were seven grants awarded in 2018: 19th Judicial District Attorney, Detroit, Michigan, Albuquerque, New Mexico, Tulsa, Oklahoma, Memphis, Tennessee, City and County of San Francisco, California, and Indianapolis, Indiana.⁵

Developing an effective crime gun intelligence program requires commitment and cooperation. Law enforcement agencies represent the start of the crime gun intelligence process through collection of ballistic evidence and submission to the laboratory or NIBIN site. Effective programs throughout the nation have emphasized comprehensiveness and timeliness. Evidence that goes unprocessed, delays in ballistic screening, firearms not traced, and leads not acted upon result in unnecessary delays that allow the violent offender to reoffend. It is therefore vital that all partners in a region's crime gun intelligence strategy commit to the timely processing of ballistic evidence in order to enhance violent crime investigations.

The remainder of this document reviews the past 15 years of research on these strategies from the leading experts in the field. Also included are additional sources of information and guidance on CGICs and crime gun intelligence. These resources can be found on the National Public Safety (PSP) website at <https://www.nationalpublicsafetypartnership.org/Clearinghouse>.

³ Schwartzapfel, Beth. "This Machine Could Prevent Gun Violence - If Only Cops Used It." The Marshall Project. October 2016. <https://www.themarshallproject.org/2016/10/06/this-machine-could-prevent-gun-violence-if-only-cops-used-it>; Yablon, Alex. "The New Policing Initiative Connecting the Dots Between Small Gun Crimes - in Order to Prevent Big Ones." The Trace. September 2015.

⁴ Crime Gun Intelligence Centers: Connecting the Dots." Bureau of Justice Assistance. 2017. Accessed November 2018. <https://crime-gunintelcenters.org/>

⁵ Crime Gun Intelligence Centers: Connecting the Dots." Bureau of Justice Assistance. 2017. Accessed November 2018. <https://crime-gunintelcenters.org/>

RESEARCH

CGICs

The “Crime Gun Intelligence Center” Model: Case Studies of the Denver, Milwaukee, and Chicago Approaches to Investigating Gun Crime. Police Executive Research Forum (PERF).

May 2017. <http://www.policeforum.org/assets/crimegunintelligencecenter.pdf>

- PERF examined the implementation, use, and impact of CGICs in three locations: Denver, Colorado; Milwaukee, Wisconsin; and Chicago, Illinois.
- PERF researchers evaluated the centers through site visits, where they gathered information on local CGIC models and the use of NIBIN, eTrace, and other crime gun intelligence technologies.

Figure 1. Model of CGIC Process

Figure 1 depicts the Denver CGIC Process from evidence collection to providing feedback to all personnel on case outcomes.



- **Results:** The recent implementation of these centers and the limited quantifiable metrics hampered PERF’s ability to empirically evaluate the impact of the CGICs, but anecdotal evidence suggests that these centers are contributing to decreases in violent crime by leading to identification, arrest, and prosecution of violent repeat firearm offenders with criminal records. Yet the centers streamlined crime gun intelligence and greatly increased the sites’ ability to leverage NIBIN, eTrace, gunshot detection technology, and other crime gun technologies in criminal investigations. After implementing CGICs, these sites leveraged federal and local law enforcement and criminal justice system partnerships to increase resources and strategically address gun crime. All three sites saw a reduction in the time waiting for NIBIN results after implementing CGICs. Provided below are additional details for the three sites examined:
 - o **Denver, Colorado:** Between the establishment of the CGIC in 2013 and September 2016, CGIC investigations led to the arrest of 65 defendants suspected of committing more than 170 shootings. Additionally, 24 individuals were federally prosecuted for firearm possession and “straw” purchases. Almost three-quarters of individuals arrested based on NIBIN hits were repeat offenders.

- o **Milwaukee, Wisconsin:** Milwaukee Police Department (MPD) did not track outcomes resulting from NIBIN and the CGIC such as prosecution. However, between November 2013, when they acquired the NIBIN equipment, and May 2016 MPD's intelligence fusion center tripled the number of cases the Wisconsin State Crime Lab (previously responsible for MPD's NIBIN entries) created compared to the previous ten years. Additionally, from November 2013 to December 2015, MPD inputted 6,248 NIBIN entries and created 734 cases from NIBIN-initiated investigative leads.
- o **Chicago, Illinois:** Chicago Police Department (CPD) saw substantial growth in the number of shell casings entered into NIBIN from the start of its program in 2013 through 2016. For example, In 2014 CPD submitted 5,509 shell casings to NIBIN, resulting in 295 Ballistic Information Alert (BIA) reports compared to 8,098 shell casings resulting in 825 BIA reports in 2015. The firearms laboratory generated 950 BIA reports from January to October 2016. The CPD firearms lab now leads the nation in quantity of NIBIN entries.

White, Robert C., and Luke Franey. "Denver Crime Gun Intelligence Center: Locked On Target." *Police Chief Magazine*. October 2014. <http://cgici.wpengine.com/wp-content/uploads/2017/01/DCGIC-Locked-on-Target.pdf>

- This report details the development, implementation, and impacts of the Denver, Colorado CGIC developed in January 2013 by the Denver Police Department and the ATF. The goal of this CGIC was to improve the development and investigation of NIBIN hits. The Denver CGIC is a multi-jurisdictional collaboration of regional municipal police departments, federal law enforcement agencies, and other criminal justice system offices. The report highlights the successes of the Denver CGIC in improving the timeliness of NIBIN results and the importance of a strong team and standardized processes and protocols.
- At the time the report was written, the CGIC had been in operation for only one year. Using NIBIN, the Denver CGIC team linked 40 shootings that resulted in 25 state arrest, 8 U.S. federal firearms violations prosecutions, and 18 referrals to the joint criminal enforcement group. The CGIC and ATF partners also generated 20 officer safety bulletins regarding shooting suspects, facilitated the revocation of five paroles, and provided three referrals for targeted inspections of federal firearms license holders identified as sources of crime guns.

CRIME GUN INTELLIGENCE

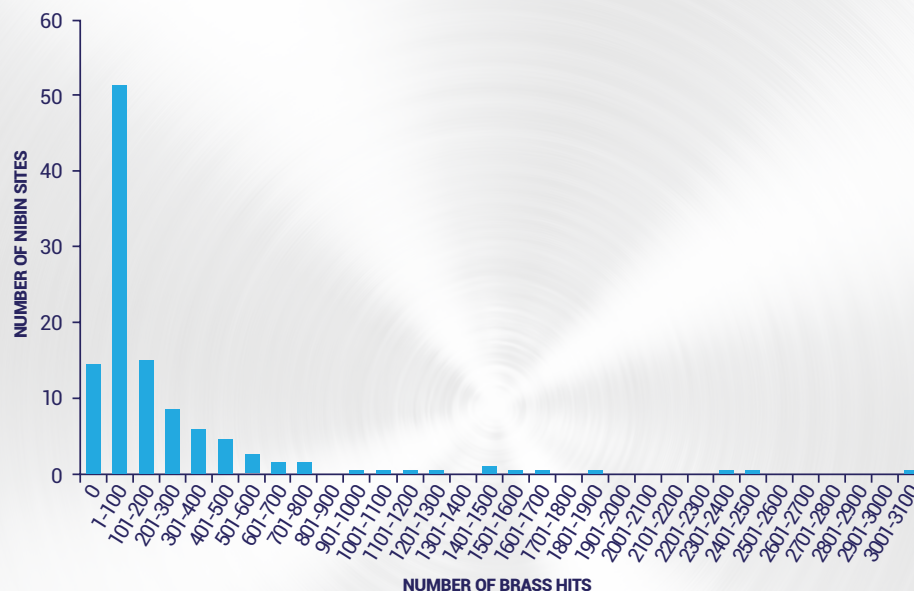
King, William R., Bradley A. Campbell, Matthew C. Matusiak, and Charles M. Katz. "Forensic Evidence and Criminal Investigations: The Impact of Ballistics Information on the Investigation of Violent Crime in Nine Cities." *Journal of Forensic Sciences* 62, no. 4 (July 2017). <https://onlinelibrary.wiley.com/doi/full/10.1111/1556-4029.13380>

- The authors explore the impact of ballistic imaging hit report information on investigations of violent crime. The study explores the relationship between the existence of a hit report and outcomes using interview data collected from detectives that received hit reports in 65 gun-related violent crime investigations spanning 9 US cities.
- **Results:** As a result of delays in production of hit reports, taking 181.4 days on average, finding "rarely contributed to identification, arrest, charging, or sentencing of suspects." Additionally, hit reports contained information that requires additional follow up and investigation.

King, William, William Wells, Charles Katz, Edward Maguire, and James Frank. "Opening the Black Box of NIBIN: A Descriptive Process and Outcome Evaluation of the Use of NIBIN and Its Effects on Criminal Investigations." National Institute of Justice. 2013. <https://www.ncjrs.gov/pdffiles1/nij/grants/243875.pdf>

- This study examines NIBIN implementation, challenges and successes, and the extent to which NIBIN aids in identifying suspects and increasing firearms crimes–related arrests, as well as best practices for NIBIN implementation.
- To understand NIBIN implementation and the role of NIBIN in criminal investigations, the researchers analyzed ATF-provided NIBIN usage data, NIBIN hit files from 19 NIBIN sites, survey data of publicly funded U.S. crime labs and firearms sections in crime labs, and information gathered from visits to NIBIN sites.

Figure 2. Total Number of Brass Hits for 223 NIBIN Sites

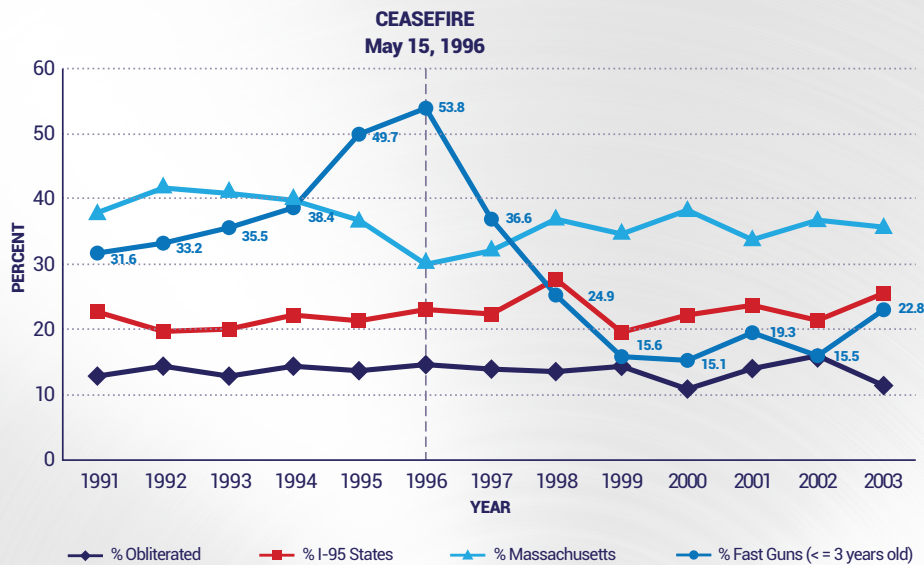


- **Results:** Researchers found sizable variation across the NIBIN sites, with many sites experiencing substantial delays in hit identification. These delays and other factors hinder the role of NIBIN hit reports in investigations. Despite the delays, researchers identified several NIBIN sites using the tool effectively and stressed that while it is seldom used strategically, "NIBIN has tremendous potential as a tactical and strategic tool."

Braga, Anthony, and Glenn Pierce. "Disrupting Illegal Firearms Markets in Boston: The Effects of Operation Ceasefire on the Supply of New Handguns to Criminals." *Criminology & Public Policy* 4, no. 4 (November 2005). <https://doi.org/10.1111/j.1745-9133.2005.00353.x>

- This report explores various law enforcement strategies aimed at disrupting illegal firearms markets including Boston's Operation Ceasefire. The authors conducted a one-group time-series design analysis of the impacts of Operation Ceasefire and a nonrandom post-test comparison of ATF firearm trace data for gun recoveries in Boston with similar data in 14 other large U.S. cities.
- **Results:** The Operation Ceasefire supply-side handgun diversion intervention that targets illicit firearms traffickers supplying guns to youth resulted in a statistically significant decrease in the percentage of new handguns recovered by Boston police. As a result, researchers found ATF firearms trace data can have positive impacts on the illegal supply of new handguns to criminals when it is used to inform focused enforcement efforts.

Figure 3. Key Characteristics of Handguns Recovered in Boston (1991-2003)



Crime Gun Information Sharing: The ATF i-Trafficking Project. International Association of Chiefs of Police. https://www.theiacp.org/sites/default/files/all/c/Crime_Gun_Info_Sharing.pdf n.d.

- This report examines the ATF initiated Interstate Trafficking Program (“iTrafficking”) that was implemented in the northeast I-95 corridor to aid state and local law enforcement agency efforts against firearm trafficking. IACP researchers evaluated the program through site visits and surveys of fusion centers and developed a state-level crime gun tracing intelligence sharing strategy report. The report includes discussion of the pilot-site assessments, findings, promising practices, recommendations for reducing gun violence, recommendations for implantation of iTrafficking projects, and a summary.
- **Results:** The researchers found that the iTrafficking program had a positive impact on firearms trafficking investigations and the frequency and accuracy of firearms tracing. The iTrafficking program facilitated improved collaboration between the ATF and state and local law enforcement. All iTrafficking states that did not previously have ATF firearms tracing saw an increase in the quantity of firearms traced from 2010 to 2011 and successful traces back to the federal firearms licensee also increased in most states.

INFORMATION AND GUIDANCE

The CGIC website contains a plethora of additional resources and useful information for law enforcement agencies and can be found at <https://crimegunintelcenters.org/>. A best practices guide for Crime Gun Intelligence can be accessed through the above listed website and found at <https://crimegunintelcenters.org/wp-content/uploads/2018/09/CGI-Manual-Best-Practices-ATF-27-AUG-18.pdf>. A sample of the resources available is below.

Police Foundation, "5 Things You Need to Know About Crime Gun Intelligence Centers," May 2017, <https://crimegunintelcenters.org/wp-content/uploads/2017/07/5-THINGS-CGIC.pdf>

- This document provides brief guidance on Crime Gun Intelligence Centers.

"Regional Crime Gun Processing Protocols," International Association of Chiefs of Police, October 3, 2012. <https://crimegunintelcenters.org/wp-content/uploads/2017/07/2012-Resolutions-Regional-Crime-Gun-Protocols.pdf>

- This document is a compilation of Regional Crime Gun Processing Protocols.

Walsh, John F., and Luke Franey. "ATF Crime Gun Intelligence Centers." United States Attorneys' Bulletin 63, no. 6 (November 2015). <https://www.justice.gov/usao/file/794586/download>

- This article provides guidance on prosecuting firearm offenses.

Ronald Nichols, "Coordinating NIBIN and Forensic Science Laboratory Efforts," <https://crimegunintelcenters.org/wp-content/uploads/2017/05/Coordinating-NIBIN-and-Forensic-Science-Laboratory-Efforts.pdf>

- This document provides guidance on facilitation of effective coordination between NIBIN and forensic science laboratory efforts.

In addition to its website, ATF provides a few helpful factsheets:

- CGICs: <https://www.atf.gov/resource-center/fact-sheet/fact-sheet-crime-gun-intelligence-centers-cgic>
- NIBIN: <https://www.atf.gov/resource-center/fact-sheet/fact-sheet-national-integrated-ballistic-information-network>
- eTrace: <https://www.atf.gov/resource-center/fact-sheet/fact-sheet-ettrace-internet-based-firearms-tracing-and-analysis>

Other useful resources for information and guidance on the use of crime gun intelligence and CGICs are listed below.

"Using NIBIN to Target Shooters and Solve Crime." United States Department of Justice, Bureau of Alcohol, Tobacco, Firearms, and Explosives. 2016. <https://crimegunintelcenters.org/wp-content/uploads/2017/07/Using-NIBIN-to-Target-Shooters-and-Solve-Crime.pdf>

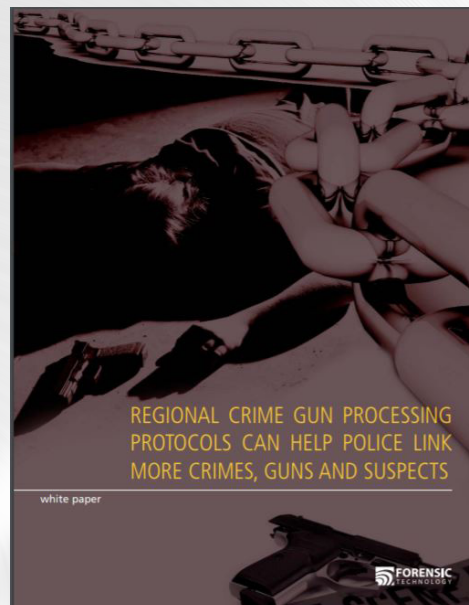
- This document contains a quick guide to using NIBIN and creating a sustainable NIBIN program.

King, William, William Wells, Charles Katz, Edward Maguire, and James Frank. "Opening the Black Box of NIBIN: A Descriptive Process and Outcome Evaluation of the Use of NIBIN and Its Effects on Criminal Investigations." National Institute of Justice. 2013. <https://www.ncjrs.gov/pdffiles1/nij/grants/243875.pdf>

- The researchers provide recommendations to strengthen NIBIN and increase and encourage strategic and tactical usage of the tool based on the research findings of this report discussed in the "Crime Gun Intelligence" section above.

Regional Crime Gun Processing Protocols Can Help Police Link More Crimes, Guns, and Suspects. Forensic Technology. 2008. http://cdn2.hubspot.net/hub/71705/file-2121559736-pdf/_DOCUMENTS/RCGPP_WhitePaper.pdf?t=1425239677994

- This white paper from Forensic Technology explains regional crime gun processing protocols, how to implement them successfully, and the impacts they can have on firearm crime. ATF pioneered the concept of a regional crime gun processing protocol as part of its CGIC work.
- The report explores this approach through a case study of Palm Beach County, Florida's work with the ATF on a regional crime gun processing protocol. Palm Beach law enforcement and ATF developed the countywide crime gun processing protocols to ensure that evidence is accessible across agencies. Their protocol involves collection of ballistic evidence, forensic testing of seized firearms, and interface with NIBIN and ATF's eTrace.
- The author describes a 2007 instance of a case that was solved due to multi-agency collaboration in the region facilitated by their crime gun processing protocol.



U.S. Department of Justice, Office of the Inspector General. "The Bureau of Alcohol, Tobacco, Firearms, and Explosives' National Integrated Ballistic Information Network Program. Appendix II: NIBIN Program History." Audit Report 05-30. U.S. Department of Justice. 2005. <http://www.usdoj.gov/oig/reports/ATF/a0530/app2.htm>

- This document details the history of NIBIN from its start as Operation Ceasefire in 1993.

Golden, Megan and Cari Almo. Reducing Gun Violence: An Overview of New York City's Strategies. Vera Institute of Justice. 2004. <https://www.ncjrs.gov/App/publications/Abstract.aspx?id=206148>; https://storage.googleapis.com/vera-web-assets/downloads/Publications/reducing-gun-violence-an-overview-of-new-york-citys-strategies/legacy_downloads/Reducing_gun_violence.pdf

- In the early 2000s, while gun violence was rising nationally, New York City saw decreases in gun violence. This study examines the New York Police Department's (NYPD) gun violence strategies, gun intelligence initiatives, multi-agency collaboration, and data-driven approaches to crime reduction.
- The report highlights an anonymous tip program called "Operation Gun Shop"; the Integrated Ballistics Imaging System; the Firearms Investigation Unit; collaborative policing partnerships, including a Joint Firearms Task Force, a "Gun Court," a federal prosecution effort called "Triggerlock," and a data-driven crime reduction effort called "Operation Impact."