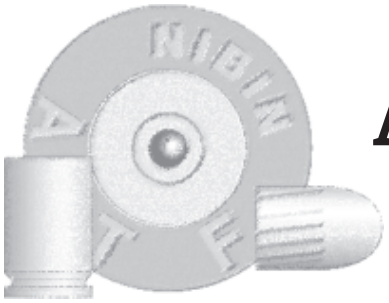
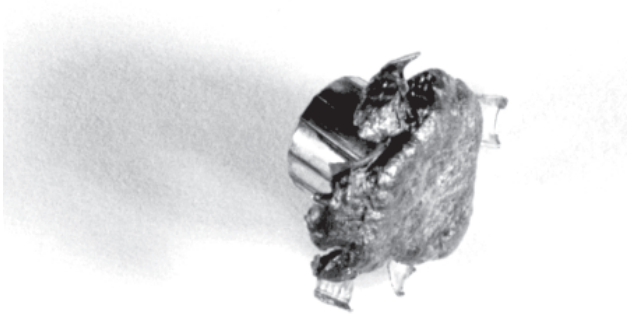


A Brief History

In **1992**, ATF developed and began to implement CEASEFIRE, an enforcement program aimed at addressing firearms-related violence. Early program plans called for entering into a national computer system all data obtained from firearms seized as a result of a criminal investigation by ATF personnel. ATF intended to allow State and local law enforcement agencies to use and retrieve information for investigative purposes, and to submit information from their own firearms-related criminal investigations. The system would serve as a repository for all data on crime guns.

In **January 1993**, ATF viewed a presentation by Forensic Technology, Incorporated (FTI) of its newest technology: Bulletproof. This equipment allowed firearms examiners to rapidly examine large numbers of fired bullets; Bulletproof systems could also be linked to share data, permitting efficient tracking of highly mobile criminals. ATF then leased a Bulletproof machine from FTI for installation in the ATF Laboratory in Rockville, Maryland, and began exploring other uses of the technology.



Though the bullet above is severely damaged, the land impressions on the side of the bullet are still visible, and it can still be entered into IBIS successfully.

From **1993-1994**, ATF financed the CEASEFIRE pilot initiative in Washington, DC, and Atlanta, Georgia. ATF began the CEASEFIRE program as an offshoot of its most successful firearms enforcement programs: Achilles. ATF's Achilles Program, active in 21 sites nationwide, had been implemented as a vehicle for enforcing the provision of the Armed Career Criminal and the Comprehensive Crime Control Acts. CEASEFIRE provided comprehensive and focused investigative assistance by integrating ATF's unique investigative expertise with the new state-of-the-art technology. These pilot project locations were used to measure the effectiveness of CEASEFIRE and to serve as a feasibility test for expansion to additional cities.

ATF recognized that the need for ballistic imaging technology was great within the law enforcement community. In order to ensure the most effective possible expansion, ATF formulated in **1995** the following principles for consideration of sites:

- Population – Units should be located where they will benefit the most people.
- Violent Crime – Units should be located in areas with significant numbers of violent crimes.
- Violent Crime Rate – Units should be located in areas with high rates of violent crime.
- Firearms-related Crime – Units should be located in areas with significant numbers of violent crimes in which firearms are used.
- Firearms Trafficking Patterns – Known firearms trafficking routes that cross jurisdictional lines should be considered in placing units.
- Geographical Location – This technology should be available nationwide.
- Working Relationship Between ATF and the State or Local Agency – Agencies that have proved willing to participate in joint investigative programs should be given priority consideration.

- Demand by State and Local Law Enforcement Agencies for the Technology – Agencies that have requested Federal assistance should receive priority consideration.
- Economic – Funding constraints should be taken into account in placing units.
- Technical/Expertise – Units should be located in jurisdictions capable of conducting firearms examinations.

ATF was able to achieve most of these objectives. However, due to the lack of special agent resources, State and local law enforcement agencies were responsible for doing the majority of the investigative work in cases that had no Federal jurisdiction. To ensure that its cooperating agencies were supported, ATF designated a special agent in each participating field division to coordinate activities between ATF and its partner.

ATF's CEASEFIRE partners and additional agencies interested in participating in the program all noted a shortage of qualified firearms examiners. Because a high correlation score must be confirmed by a qualified firearms examiner, a sufficient number of examiners is vital to the future success of ballistic imaging. In **1995**, ATF began to develop plans to form a firearms examiner academy, meeting the need for trained and qualified firearms examiners.

At the request of the Office of Management and Budget, the Office of National Drug Control and Police Counterdrug Technology Assessment Center organized an independent evaluation of the Bulletproof and the FBI's DRUGFIRE systems. Both ballistic imaging systems use computer-searching capabilities to match recovered crime scene evidence against information stored in a computer database. The project considered system performance and life cycle cost, redundancy, and potential for integration. It found that processing casings and projectiles on a common versatile platform would best fulfill ballistic imaging requirements. As a result of these recommendations, FTI developed Brasscatcher. This development provided a platform that could evaluate both projectiles and cartridge casings. FTI referred to the new system it developed as the "Integrated Ballistics Identification System (IBIS)." IBIS was comprised of Bulletproof and Brasscatcher.

Also in **1996**, ATF instituted mechanisms to track the performance of the CEASEFIRE Program. Coordinators in ATF field offices began submitting monthly reports on how much evidence was being placed into the system and how many hits were generated as a result.

The expended cartridge casings above illustrate the variety in shape of firing pin marks. Differences in firing pin shape assist the Brasscatcher system in finding a match.

By fiscal year **1996**, existing systems and new deployments included the addition of Brasscatcher. ATF received this enhancement as part of its services and maintenance agreement with FTI. IBIS provided for the first time a platform for analyzing projectiles and cartridge casings on the same system.

In a **January 1996** MOU, ATF and the FBI acknowledged the need for IBIS and the FBI's DRUGFIRE to be interoperable. "Interoperability," as defined in the MOU, exists if the systems are able to (1) capture an image according to a standard protocol and in conformity with a minimum quality standard and (2) exchange images electronically in such a manner that an image captured on one system can be analyzed and correlated on the other. In **June 1996**, the National Institute of Standards and Technology (NIST) issued a report to define the minimal specifications for this interoperability. The report provided the manufacturers of IBIS and Drugfire with specifications to make hardware and software modifications to their systems in order to achieve interoperability.

During **fiscal year 1997**, current IBIS systems were upgraded with IBIS (The Next Generation) technology in keeping with the contract between ATF and FTI. As new machines were built and upgraded, IBIS units were no longer using DOS but Windows NT. With the Next Generation upgrade, firearms examiners and technicians at the remote Data Acquisition Station sites could compare the results of their correlated images. Prior to the upgrade, this function could only be performed by personnel at a hub site. This upgrade process took approximately 2 years to complete.

Also during **fiscal year 1997**, ATF's Firearms Programs Division developed standard operating procedures (SOPs) for the operation of the program. The SOPs serve as a guide for coordinators, ATF field divisions, and State and local partners. The SOPs contained coordinator responsibilities, standardized MOU, points of contact, and administrative procedures.

In **May 1997**, ATF and the FBI entered into an agreement to clarify and amend a previous MOU concerning ballistic imaging systems. In the NIBIN Concept Paper, both agencies pledged to work together in the best interests of law enforcement to address concerns raised regarding having the two divergent and competing programs. Each agency pledged that it would make no modifications to existing systems that would exacerbate the differences in the technology. Another feature of this agreement was the first use of the term "National Integrated Ballistic Information Network" or "NIBIN." As part of the agreement, ATF agreed to stop referring to its ballistic imaging program as "CEASEFIRE," and the FBI agreed to stop using the term "Drugfire" for its program.

As part of the same agreement, the NIBIN Board was created to unify Federal efforts to deploy ballistics technology. The NIBIN Board's objectives are to assist State and local police with violent crime reduction efforts, to foster cooperation in the best interests of law enforcement, and to ensure a unified approach to developing future networking technologies in order to create a national ballistics system. The board has three members: one senior representative of ATF, one senior representative of the FBI, and one senior representative of other law enforcement. The current members are John Malone of ATF, Robert Sibert of the FBI, and William Casey of the Boston Police Department.

ATF's Firearms Programs Division disseminated to ATF field divisions the standardized MOU it developed to support this initiative. In **July 1998**, each ATF field division that currently had a NIBIN partner within its area of responsibility was requested to execute the new MOU. The new MOU replaced any existing agreements between ATF and its NIBIN partners, and described in detail each agency's responsibilities related to the NIBIN Program.

Also, ATF continued to review and evaluate the proposal submitted by FTI for a networking pilot project in the Mid-Atlantic States. After a careful analysis of the proposal, ATF funded a 1-year pilot project in **fiscal year 1998**.

In **summer 1999**, after extensive testing and research by NIST into the potential for interoperability, the NIBIN Board made the decision to pursue the single-network goal in a different way, through interagency cooperation and joint deployment of only one system.

On **December 2, 1999**, ATF and the FBI signed a Memorandum of Understanding delineating each agency's role in the creation of the NIBIN network. ATF was responsible for field operations, including purchase of equipment and training of users, and the FBI for providing a communications network.

In **February 2000**, ATF completed its strategic plan to support the rollout. The plan included the creation and staffing of the NIBIN Branch as part of the Firearms Programs Division at the ATF, to support NIBIN field operations. It also became clear that it would be necessary to enable information sharing among more sites in the same region, necessitating the creation of regional servers capable of correlating and storing more data and of communicating with more sites than under the previous hub configuration. FTI began developing a regional server to meet this need.

The strategic plan also included notional decisions on which State and local law enforcement agencies would be offered IBIS equipment and on the order of the deployment. Criteria used to evaluate agencies for participation in the program included population served, firearms-related crime rate, and number of fire-

arms recoveries, as well as age, condition, and usage of existing systems. Geographical locations as they relate to local area network configurations were also considered. The following is the priority that was created.

1. California – Nevada
2. Oklahoma – Texas
3. Florida – Puerto Rico
4. Connecticut – New York
5. Illinois – Indiana
6. District of Columbia – Maryland – Virginia
7. Michigan – Minnesota – North Dakota – South Dakota – Wisconsin
8. Arizona – Colorado – New Mexico – Utah – Wyoming

   (During the first half of the rollout, the IBIS equipment in North and South Carolina will be connected to the national network.)
9. Ohio – West Virginia
10. Iowa – Kansas – Missouri – Nebraska
11. Delaware – New Jersey – Pennsylvania
12. Alabama – Georgia
13. Kentucky – Tennessee
14. Arkansas – Louisiana – Mississippi
15. Alaska – Guam – Hawaii – Idaho – Montana – Oregon – Washington
16. Maine – Massachusetts – New Hampshire – Rhode Island – Vermont

In **April 2000**, sufficient IBIS units to complete the California deployment were purchased by ATF.

During the **summer and fall of 2000**, several options were explored for the networking of NIBIN. Research on several options, including frame relay and virtual private networks (VPNs), was carried out. In **early 2001**, the decision was made to handle the first two regions of deployment (California-Nevada, Texas-Oklahoma) by a frame relay network financed by ATF, and to network the third (Florida-Puerto Rico) via the FBI's Criminal Justice Information Services Wide Area Network (CJIS). The ATF frame relay network is an interim solution allowing for the expeditious deployment and earliest functionality of NIBIN.