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National Integrated Ballistics Information Network (NIBIN) for Law Enforcement

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Summary

The National Integrated Ballistics Information Network (NIBIN) is a nationally interconnected, computer-assisted ballistics imaging system used by forensic firearms examiners to obtain computerized images of the unique marks made on bullets and/or cartridge cases when guns are fired. Through NIBIN, these images can then be compared rapidly with all other images in the system of about 220 federal, state, and local law enforcement laboratories. In this way, evidence from multiple crime scenes can be linked, identifying patterns of criminal activity, and leading to the apprehension of suspects. The Bureau of Alcohol, Tobacco and Firearms (ATF) has assumed the lead federal role in the further development and deployment of NIBIN.

As an investigative tool, ballistics imaging complements crime gun tracing. Crime gun tracing consists of tracking the history of a crime gun. By tracing crime guns, ATF assists state and local law enforcement agencies in solving firearms-related crime by, among other things, identifying suppliers of multiple-crime guns, and gun trafficking patterns.

Prior to NIBIN's establishment, the Federal Bureau of Investigation (FBI) and ATF established separate computerized ballistics imaging systems in 1993, called, respectively, "Drugfire" and "Ceasefire" (the latter now called IBIS). NIBIN was established in 1997 to unify these systems, a process that is still underway. When completed, NIBIN will use the ballistics imaging system of ATF and the secure, high-speed telecommunications network of the FBI. For FY2001, Congress nearly tripled funding for ballistics imaging, appropriating $26.4 million for ATF for NIBIN activities and $1.4 million for the FBI for telecommunications/interconnectivity costs. For FY2002, the Administration has requested the same funding for ballistics imaging that it received in FY2001.

As in the 106th Congress, bills introduced in the 107th Congress would require that all newly manufactured and imported handguns be ballistically imaged. These bills, if enacted, would significantly increase ATF's capacity to trace firearms that were subsequently used in crimes. Such measures could be controversial, however, if ballistics images were linked directly by a computerized system to the serial numbers of the imaged firearms and/or the identities of private citizens to whom the firearms were transferred. Gun control opponents would be likely to view such developments as a first step toward a national firearms registry, which they oppose. At present, the participation of federal, state, and local law enforcement agencies in NIBIN is restricted by law to the ballistics imaging of data associated with crime guns only. Supporters of stronger federal firearms regulations, many of whom may favor a national firearms registry, are likely to support ballistically imaging newly manufactured and imported firearms.

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National Integrated Ballistics Information Network (NIBIN) for Law Enforcement

Introduction

The National Integrated Ballistics Information Network (NIBIN) is a nationally interconnected, computer-assisted system for transmitting images of unique marks made on bullets and/or cartridge cases when fired in guns. The images of the bullet and/or casing marks then can be compared rapidly by forensic firearms examiners with all other such images in the system. The system's ballistics imaging equipment currently is located in about 220 of the nation's federal, state, and local law enforcement forensic laboratories.[1] Although two types of ballistics imaging equipment are in use in the system at present, ultimately the equipment developed under contract to the Bureau of Alcohol, Tobacco, and Firearms (ATF) will be used exclusively. The Federal Bureau of Investigation (FBI) is responsible for maintaining the telecommunications information system that interconnects the ballistics imaging system. While the FBI and other law enforcement agencies, such as the Boston Police Department, have played and continue to play integral roles in the development of NIBIN, ATF has assumed the lead federal role in operational development and deployment of federally supported ballistics imaging technologies.

This report provides a brief history of how the current NIBIN system evolved and operates. Issues that may be of concern to Members and committees of the 107th Congress are discussed. These include whether expanding NIBIN to include new gun purchases could be construed as a step toward a national gun registry system. Bills introduced in the 107th Congress related to NIBIN are summarized.

Ballistics Imaging Systems

Ballistics imaging systems compare marks made on all bullets (the projectiles) and/or cartridge cases by the handguns, rifles, and shotguns[2] from which they are fired. Because marks on the bullets or cartridge cases are unique to the firearm that fired them, an exact matching of such marks with a test bullet or cartridge case is accepted in court as proof that the bullet(s) and/or cartridge case(s) under investigation were fired in a specific gun. These unique marks sometimes are referred to as "bullet fingerprints" or "bulletprints." Although the marks on successive bullets

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[1]Personal conversation with representatives of ATF's Office of Congressional Relations, April 5, 2001.

[2]Most projectiles fired from shotguns, unlike those fired from handguns and rifles, have few, if any, unique marks on them.

and casings, made by the same gun, change over time, studies have shown that enough suitable marks remain to identify all bullets and casings fired from that gun.

Criminals, however, could intentionally attempt to defeat ballistics image comparisons or prevent the matching of bullets or casings with specific crime guns. This could be done by replacing, where possible, those gun parts that make marks on bullets (the barrels of guns) or on the casings (firing pins,[3] ejectors,[4] etc.); by making additional marks on firing pins, ejectors, etc.; by using non-standard ammunition; or by permanently disposing of the crime guns.

From the 1930s to the early 1990s, comparisons of bullet and cartridge case marks generally were made by firearm examiners using comparison microscopes that could compare two bullets or casings simultaneously. This process, although accurate, was and is slow and laborious. Photographic snapshots of the images made in comparison microscopes then could be made and distributed but, generally, this was done only locally.

In the early 1990s, the ballistics imaging and matching process was computerized. Digital cameras were used to photograph bullets and cartridge cases and scan them into a computer. These images were then analyzed by a software program and stored in a database. That, in itself, made the ballistics matching process faster. In addition, all firearms examiners with access to the computerized system could compare, relatively rapidly, the marks on a large number of bullets or cartridge cases. When the computerized system was interconnected across a number of law enforcement agencies through a telecommunications system, it permitted the rapid comparison of bullets and cartridge cases (and thus the guns from which they had been fired) used in crimes in one jurisdiction with those used in crimes in another jurisdiction. This has contributed to the solving of many crimes, some seemingly unrelated, that, otherwise, probably would not have been solved before the system was computerized and interconnected in a telecommunications system. In addition, the use of computerized images of bullets and cartridge cases simplifies maintaining a proper chain of evidence custody, which is essential if the bullets or casings are to be used as evidence in court cases.

The FBI established a computerized ballistics imaging system, called "Drugfire," in 1993. The system was developed by Mnemonics Systems Inc. Originally, Drugfire compared only marks on cartridge cases. It later was expanded to compare marks on bullets also. About 171 law enforcement agencies have participated in the Drugfire system. Total program funding for Drugfire from its inception was not available from the FBI but, from April 1998 to April 2001, program costs amounted to $14.5 million. In addition, nearly $5.3 million in Department of Justice grants to state and

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[3]The firing pin is the firearm mechanism that strikes the impact-sensitive primer at the base of a cartridge, causing an explosive chemical reaction that ignites the propellent and propels the bullet through the barrel of the firearm.

[4]The ejector is the firearm mechanism that ejects spent cartridges.

local law enforcement agencies have been awarded for the purposes of acquiring Drugfire-related technologies over this period.[5]

Also in 1993, ATF established its computerized ballistics imaging system, developed by Forensic Technology Inc. Originally called "Ceasefire," it is now called IBIS (Integrated Ballistics Identification System). When initiated, IBIS compared only marks on bullets. It later was expanded to compare marks on cartridge cases also. About 103 law enforcement agencies have participated in the IBIS system. Of these IBIS system installations, ATF funded 70 at a cost of approximately $19.3 million since the inception of the program.[6]

Because the ATF and FBI systems contain different ballistics records, some federal, state, and local law enforcement agencies subscribe to both systems. Because this is inefficient for the users of the systems and because the two systems are duplicative in principal, ATF and the FBI agreed, in 1997, to move toward compatibility of the two systems.

Unification of the Drugfire and IBIS Systems

NIBIN (discussed more fully in the next section) was established in 1997 to unify Drugfire and IBIS. The operators of NIBIN soon acknowledged, however, that it was not technologically feasible to combine the two systems into one system, so efforts were then turned to making the two systems "interoperable."[7] Interoperability would permit users of one system to access the ballistics records of the other system.

The attempt to achieve interoperability, however, raised a number of other technological difficulties. In 1996, ATF and the FBI entered into a memorandum of understanding with the National Institute of Standards and Technology (NIST) of the Department of Commerce "to develop a standard for interoperability and to develop and oversee interoperability conformance tests."[8]

Although NIST made progress in its attempt to achieve the interoperability of Drugfire and IBIS, NIBIN administrators decided eventually to unify the system by using only one type of ballistics imaging system. After evaluating the two systems, ATF and the FBI entered into another memorandum of understanding, in 1999, to establish a unified system by using the ballistics imaging system of ATF (the IBIS equipment) and the secure, high-speed telecommunications network of the FBI. All significant Drugfire data will be reimaged into the IBIS format. NIST ceased its work

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[5]Telephone conversation with Dominic Denio, Director of the FBI Law Enforcement Online program, on April 27, 2001.

[6]Telephone conversation with Patti Galupo, Director of ATF's National Integrated Ballistics Information Network (NIBIN), on April 25, 2001.

[7]Charles Spencer, Bullet Proof: Digital Matchmaking Speeds Crime Investigations, *Techgazette*, March 1999. 4 p. [http://www.gazette.net/tech/news/Mar99/company.shtml]

[8]Dominic F. Vecchia et al., Ballistic Imaging Interoperability Test Methods, September 21, 2000. 2 p. [http://www.itl.nist.gov/div898/pubs/ar/ar1999/node31.html]

on the interoperability of Drugfire and IBIS but continues its work on a "standard bullet." The standard bullet will be used to calibrate and provide quality control of the measurements of the Drugfire machines, until they are phased out, and of the IBIS machines, which will be used in all NIBIN sites in the future.

National Integrated Ballistics Information Network (NIBIN)

Establishment of NIBIN

Under a memorandum of understanding (MOU) between the FBI and ATF, dated December 2, 1999, the responsibilities of the NIBIN Executive Board, ATF, and the FBI are set forth in some detail. (The three-member NIBIN Executive Board is comprised of an ATF, an FBI, and a state or local level representative, the latter currently from the Boston Police Department). The interagency MOU sets forth the respective agency responsibilities for the NIBIN system as follows:[9]

NIBIN Executive Board Responsibilities

- Continuation of responsibility for the development and implementation of a global NIBIN strategy.
- Oversight of hardware, software, and networking technology.
- Convening and overseeing the NIBIN technical advisory group [that] will advise the Executive Board on matters related to technological changes and user preferences.

ATF Responsibilities

- Overall responsibility for [the regulation of licensed firearms manufacturers, importers, and dealers, and crime gun tracing].
- Hardware and software development and installation.
- Training, security, maintenance, user protocols and support, and quality control.
- Image database management.
- Design, implementation, funding, and support of the field architecture necessary to sustain a national ballistics imaging network.

FBI Responsibilities

- Overall responsibility for Network Operations.
- Establishment, maintenance, security, and funding of a high-speed integrated nationwide network to serve as the communications vehicle for Crime Gun Operations.

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[9]NIBIN, Key Features: FBI/ATF Memorandum of Understanding, dated December 2, 1999. 1 p. [http://www.nibin.gov/documents/120299mou.htm]

- ! Development and distribution of program support databases for forensic firearms examiners.
- ! Support and maintenance of Drugfire systems until replacement by a unified [NIBIN] system.

Joint Responsibility

- ! To provide the U.S. law enforcement and forensic science communities with the requisite tools to establish and maintain a truly National Integrated Ballistics Information Network.

The FBI is using its existing nationwide Criminal Justice Information Services-Wide Area Network (CJIS-WAN) as the telecommunications network for NIBIN.[10] CJIS-WAN already incorporates other well-known and effective FBI computerized criminal justice information systems, including NCIC (National Crime Information Center) 2000, IAFIS (Integrated Automated Fingerprint Identification System), and CODIS (Combined DNA Index System).[11] Currently about 220 state and local law enforcement agencies use NIBIN: 103 through ATF's IBIS system and 171 through the FBI's Drugfire system, with some agencies using both. To complete the deployment of NIBIN and the phase out of the Drugfire system, the ATF plans to install IBIS in about 200 additional sites.

Combined since March 31, 2000, the Drugfire and IBIS systems have produced more than 8,800 ballistics matches, linking over 17,600 crime scenes, according to ATF. These matches would not have been made without the use of a computer-assisted ballistics imaging system.[12]

Funding of NIBIN

As part of President Clinton's National Gun Enforcement Initiative, announced in January 2000, $30 million was requested for NIBIN in the Administration's FY2001 budget. Congress appropriated $26.4 million for ATF to expand its NIBIN-related activities and $1.4 million for the FBI for telecommunications/inter-connectivity costs. These increases effectively tripled federal funding for ballistics imaging, with ATF's proportion increasing as it became the lead agency in NIBIN with responsibility for phasing in its IBIS equipment and further developing the system.[13] For FY2002, the Bush Administration has requested the same funding

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[10]William Jackson, FBI's Data is on a National Net, *Government Computer News*, October 11, 1999, 2 p. [http://www.gcn.com/vol18_no34/com/788-1.html]

[11]See, for example, Congressional Research Service, *DNA Identification: Applications and Issues*, by Eric A. Fischer, CRS Report RL30717, updated January 12, 2001.

[12]Fact sheet provided by the Director of ATF's National Integrated Ballistics Information Network (NIBIN) on April 25, 2001.

[13]President Clinton Unveils Largest Ever National Gun Enforcement Initiative, Hails New Prosecutions Data, *Fact Sheet on National Gun Enforcement Initiative*, The White House, January 18, 2000: 2; *Budget*: Budget of the United States Government, Fiscal Year 2001,

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(adjusted for inflation and other factors) for ballistics imaging that Congress appropriated for ATF and the FBI for FY2001.

Ballistics Imaging and Crime Gun Traces

Ballistics imaging is an investigative tool that complements crime gun tracing. Crime gun tracing, however, is a separate and distinct process that consists of tracking the *history* of a crime gun. As described in greater detail above, ballistics imaging captures a computerized image of bullets and cartridge cases that are recovered from crime scenes or are test-fired from firearms recovered at crime scenes. By storing these images in a database, they can be compared with images of evidence collected at other crime scenes. By analyzing these images, investigators can link multiple crime scenes, identifying patterns of criminal activity and producing new leads. If a firearm is recovered, it too can be linked to crime scenes through ballistics imaging. NIBIN is essentially a repository for ballistically imaged crime scene evidence. Composed of several interconnected regional computer networks, NIBIN data can be shared nationally. ATF has three laboratories where NIBIN equipment has been installed: in Atlanta, San Francisco, and Washington, D.C. These facilities can be accessed from more than 80 ATF offices.

Crime Gun Tracing

Crime gun tracing, as opposed to ballistics imaging, consists of tracking the history of a crime gun. Again, this process begins with investigators gathering crime scene evidence, such as spent cartridge cases and bullets. By analyzing this evidence, investigators are usually able to determine the caliber, make, and model of the firearm. In addition, if a firearm is recovered and its serial number has not been obliterated, and the firearm moved through legal commercial channels, as opposed to being illegally manufactured or imported, the firearm's serial number will lead ATF agents to the Federal Firearms Licensees (FFLs) who dealt in that firearm. FFLs are required by law to maintain firearm transfer records. The serial number is the common thread linking these transfer records maintained principally by FFLs.[14]

By examining the FFLs' transfer records (bound log book and ATF Form 4473s), which all FFLs are required by law to maintain, ATF agents can determine to whom the firearm was transferred.[15] This process begins when ATF agents contact

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[13](...continued)
Washington, GPO, 2000: 110.

[14]As is discussed in greater detail below, firearms transfer records are maintained by FFLs, rather than the federal government, because current law prohibits the "registration of firearms" or the "centralization" of these records. When FFLs go out of business, however, they are required by law to send their transfer records to ATF. These records are put on microfiche for ease of storage, and the originals are destroyed.

[15]Within 24 hours of an ATF firearms trace request, FFLs (manufacturers, importers, and dealers) are required by law to provide the following data: 1) the date of the firearm's acquisitions; 2) the make, model, type of firearm, caliber or gauge, and the serial number of
(continued...)

the FFL that either manufactured or imported the firearm. From the manufacturer/importer, ATF agents can determine the FFLs that wholesaled and/or retailed the firearm. By following the transfer record trail, ATF agents are often able to identify the FFL that last dealt in the firearm by transferring it to another commercial entity or an individual. This trail usually generates additional investigative leads.

Through crime gun traces, ATF assists state and local law enforcement agencies in solving firearms-related crimes by, among other things, identifying suppliers of multiple crime guns and gun trafficking patterns. While this process is often time and labor intensive, ATF's National Tracing Center, in FY1999, conducted over 209,000 gun traces.[16] The National Tracing Center is the repository of crime-gun traces and related data from all jurisdictions nationwide. In its third annual *Crime Gun Trace Reports*, ATF published the following statistics that were, in part, collected through crime gun traces and ballistics imaging:[17]

- Of 64,637 crime guns traced in FY1999, 78% were handguns.
- Four handgun types accounted for 62% of traced crime guns: 9mm semiautomatic pistols, .380 caliber semiautomatic pistols, .25 caliber semiautomatic pistols, and .38 caliber revolvers.
- Long guns accounted for about 20% of traced crime guns.
- The median time-to-crime for these traced crime guns was 5.7 years.
- About one-third of those traced crime guns were purchased in 1996 or later.
- Only 11% of these traced crime guns were recovered from the persons who had purchased them, either legally or illegally,[18] from a FFL.

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[15](...continued)
the firearm; and 3) the date of disposition and the identity of the transferee (FFL or private citizen). In turn, the ATF enters these data into the federal firearms tracing system.

[16]ATF's National Tracing Center, located in Falling Waters, West Virginia, handles crime-gun traces. It is also the central collection point for all information regarding multiple firearms sales, suspect guns, stolen firearms, and firearms with obliterated serial numbers. Co-housed with the National Tracing Center is the repository for all business records of licensed firearms manufacturers, importers, and dealers that have gone out of business.

[17]U.S. Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms, *Crime Gun Trace Reports (1999)*, November 2000: ix.

[18]Examples of illegal firearm purchases from an FFL may include ineligible persons: 1) assuming another person's, or a false, identity by using counterfeit or altered documents; 2) misrepresenting themselves by not admitting to disqualifying eligibility factors that may not be in background check databases; or 3) having another person, who is not disqualified from purchasing a firearm, purchase a firearm in their stead. All these acts would be felony offenses under 18 U.S.C. 922(a)(6): making a materially false statement to a licensee to obtain or attempt to obtain a firearm. Such offenses carry penalties of a fine, imprisonment for not more than ten years, or both under 18 U.S.C. 924(a)(2).

Imaging Newly Produced or Imported Firearms

Expanding NIBIN to include the ballistics images of test fired cartridges and/or bullets of newly produced or imported firearms would increase ATF's crime gun tracing capabilities. First, ATF agents could more quickly identify firearms when criminals had obliterated the serial number. Second, by using the ballistics images of cartridge cases and bullets recovered at crime scenes, ATF agents could identify the firearm used in the crime without actually recovering that firearm. The ballistics images of imaged firearms would lead to the firearm's serial number. As described above, the serial numbers would lead agents to the firearm's manufacturer. Thus, the ballistics images of the cartridge cases and bullets of newly manufactured or imported firearms would essentially become unique firearms identifiers that would open new investigative options and accelerate crime gun traces.[19] As discussed below, however, such a system could be construed as a national firearms registry.

In the 107th Congress, there are several legislative proposals to require that all newly manufactured and imported handguns be ballistically imaged. These bills are discussed below. Such measures, if enacted, would significantly increase ATF's capacity to trace firearms that were later used in crimes. ATF, moreover, would be able to identify firearms, when gun traffickers had obliterated serial numbers. To attempt to ballistically image all firearms in the civilian stock, however, would be an undertaking of immense magnitude. According to ATF, there are an estimated 215 million firearms in civilian hands in the United States. Of these firearms, 37 million, or 17%, entered the civilian gun market during the years 1993 through 1999. In recent years, about 4 million new firearms entered the civilian gun market annually. About 1.2 to 1.3 million of these firearms were handguns.[20]

Issues for Congress

Ballistics Imaging and Firearms Registration

The ballistics imaging of crime scene evidence and crime guns as a law enforcement tool is not controversial. Ballistically imaging newly manufactured and imported firearms nationally, however, could be controversial because some gun control opponents are likely to view such a development as a first step toward a national firearms registry unless stronger statutory prohibitions against basing such a registry on ballistics imaging were enacted. The Gun Control Act of 1968, as amended in 1986, prohibits the establishment of "any system of registration of

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[19]In FY2000, Glock G.m.b.H. – a leading manufacturer of handguns – initiated a feasibility study to ballistically image newly manufactured handguns. Glock initiated this study because the firm viewed ballistics imaging as a more viable alternative than proposals being considered by the Clinton Administration to require that serial numbers be etched onto the inside areas of gun barrels, so that the serial numbers could not be obliterated. The imaging equipment and data rights being used in this study belong solely to Glock, and ATF does not have access to the images generated by this study.

[20]*Crime Gun Trace Reports (1999)*, op. cit.

firearms, firearms owners, or firearms transactions or dispositions...."[21] This provision may prohibit directly linking ballistics images through a centralized computer database to both the firearms themselves (a firearms registry) and the identities of the private citizens who possess imaged firearms (a firearms owners registry).

Supporters of stronger federal firearms regulations, on the other hand, are likely to support ballistically imaging newly manufactured and imported firearms. Many of these supporters also may favor a national firearms registry based on ballistics imaging. This may require, however, the exemption from, modification of, or exception to the provision of current law cited above.

At this time, moreover, the participation of state and local law enforcement agencies in the NIBIN system is restricted to ballistics imaging of data associated with crime guns – that is, guns, cartridge cases, and bullets recovered during criminal investigations. Indeed, the standard memorandum of understanding between ATF and state and local law enforcement agencies states that:

> Ballistic systems deployed by ATF to Federal, state, or local authorities shall not be used to capture or store ballistic images acquired at the point of manufacture, importation, or sale, or any other data associated with such images, including information about the purchaser, the firearm type, model, caliber or gauge, the serial number, or the date of manufacture. Nothing in this agreement shall preclude state or local parties to this agreement from capturing or storing such information in local ballistic imaging systems, provided that such local imaging systems shall not be connected to NIBIN without ATF's specific approval, which must be consistent with current ATF appropriations restrictions.

The appropriations restrictions referenced in the above paragraph have been included in the statutory language of ATF's annual appropriations since FY1979.[22] This language states that:

> [N]o funds appropriated herein shall be available for salaries or administrative expenses in connection with consolidating or centralizing, within the Department of the Treasury, the records, or any portion thereof, of acquisition and disposition of firearms maintained by Federal firearms licensees . . .

As discussed above, expanding NIBIN to include ballistics images of newly manufactured or imported firearms would increase ATF's crime gun tracing capabilities. The ballistics images would serve as unique firearms identifiers, as do serial numbers today. If the barrel of the gun were not changed, or the barrel, firing pin, or cartridge ejector were not altered, ballistics images of spent cartridge cases and bullets collected as evidence at crime scenes would lead ATF agents to the FFLs (manufacturers, importers, and dealers) who dealt in that firearm. The end of this transfer record trail would likely lead ATF agents to the first retail purchaser or other useful investigative leads.

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[21] 18 U.S.C. 926(a).

[22] P.L. 95-429, the FY1979 Treasury-Postal Appropriations Act, October 10, 1978.

Directly linking the ballistics images of newly manufactured or imported firearms to the imaged firearm's serial number by a centralized computer database, however, might be construed to be a national firearms registry. It also follows that directly linking ballistics images and the imaged firearm's serial number to any transfer records and/or other personal identification data, most notably the identity of the private citizen to whom the firearm was transferred (the retail purchaser), might also be construed to be a national firearms owners registry.

The states of Maryland and New York recently enacted laws that require the establishment of state ballistics imaging systems that directly link these images to firearm ownership. Under the Responsible Gun Safety Act of 2000, the state of Maryland requires manufacturers that ship or transport handguns to be sold, rented, or transferred in the state to provide cartridge cases from those handguns for storage in the state's ballistic identification system. This law became effective on October 1, 2000. Similar legislation was enacted by the state of New York and becomes effective on March 1, 2002.[23]

As stated in the ATF-state-local law enforcement agency memorandum of understanding regarding NIBIN, current federal law prohibits centralizing the records of the receipt and disposition of firearms by FFLs and, therefore, prohibits the linkage of state systems – such as those in Maryland and New York – with the NIBIN system. Interconnecting state ballistics imaging systems that could be construed as gun registries with NIBIN is likely to be an issue for Congress because the data contained in state systems are likely to be useful to ATF and other law enforcement agencies.

Another criticism of expanding a ballistics imaging system to new gun sales involves the requirement that manufacturers provide fired cartridge cases and/or bullets from each new gun. Such a requirement, according to critics, would impose a burden on manufacturers, would increase significantly the costs of guns, and would not be justified by the limited contributions to crime solving that would be likely to result.[24] Several gun manufacturers, for example, have withheld shipments into Maryland "because they could not supply the spent shell casings and 'fingerprints' required under the new law which went into effect Oct. 1."[25] Some proponents of expanding the system might counter that such costs to manufacturing, and ultimately to consumers, would be justified in terms of the advantages gained for law enforcement in the areas of crime gun tracing. Other proponents might suggest that states pay the costs of making and shipping test bullets and cartridge cases because of likely benefits to state law enforcement agencies gained through the ballistics imaging of new firearms.

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[23]Governor Glendening, Board of Public Works Approve Funds for Ballistic Fingerprinting System: Maryland Gun Database Will Be First of Its Kind, Used as National Model, *Press Release, State of Maryland Governor's Press Office*, August 2, 2000: 1; and Lori Montgomery, Md. State Police Enter Breach Over Gun Law, *The Washington Post*, February 22, 2001: B3.

[24]Joseph P. Tartaro, Ballistic 'Fingerprint' Scheme Far from a Magic Wand, *Hindsight from The New Gun Week*, April 1,2000. [http://www.saf.org/pub/rkba/hindsight/HS040100.htm]

[25]Md. State Police Enter Breach Over Gun Law, op. cit.

Specific Issues for Congress

The following is a list of issues that may emerge if Congress considers proposals to expand NIBIN to include the ballistics images of newly manufactured or imported firearms:

- Could the expansion of NIBIN (to include, for example, newly manufactured guns) be construed as the basis for a national firearms registry system and is such a system desirable? Interpretations could depend upon how the system would be set up. If there were a direct linkage in the system from ballistics images to the imaged firearm's serial number, such a system might be construed as a national firearms registry. Furthermore, if ballistics images were linked to the retailer and to the first retail purchaser, the system might be construed as the beginning of a national firearms owners registry.
- NIBIN currently is an interconnected, computer-assisted system of federal, state, and local agency equipment for ballistically imaging bullets and cartridge cases with no central ballistics record storage capability. Would an expanded NIBIN system (to include, for example, newly manufactured guns) require or lead to the development of a central ballistics record storage capability under federal control? Or, should ballistics images be maintained by manufacturers and importers as firearms transfer records are today?
- If NIBIN is expanded to newly manufactured guns, which firearm components – cartridge cases and/or projectiles – should be imaged? This has cost implications for manufacturers since imaging projectiles is more expensive than imaging cartridge cases and imaging both is more expensive than imaging only one.
- Should all new handguns, rifles, and shotguns be ballistically fingerprinted? Alternatively, should only handguns, or certain types of handguns most often involved in crimes (for example, auto-loading), be fingerprinted? (See crime gun trace statistics on page 7.)
- Should NIBIN be interconnected with state ballistics imaging systems that some might construe as gun registries?
- Who should test fire new firearms for ballistics images – the manufacturer, importer, or state or federal agents?
- Manufacturers and importers are likely to incur costs related to ballistics imaging if they are required to provide fired cartridge cases and/or bullets from each newly produced gun. Would these costs constitute a financial burden to some or all of them? Should these costs be absorbed by the manufacturer or importer, passed on to the consumer, or should the federal government provide financial assistance to manufacturers or importers?
- Should ballistics imaging on a national scale be the basis for greater cooperation between the firearms industry and the federal government in determining the annual growth, in terms of numbers and type, of the civilian gun stock?
- Would the additional costs to manufacturers and/or the federal government, associated with establishing and maintaining an expanded ballistics imaging system, be justified by the contribution to crime solving that such a system might make?

Selected Legislation in the 106th and 107th Congresses

106th Congress

In the 106th Congress, several bills were introduced that contained provisions related to establishing federal ballistics testing of new guns and the storage of the records of such testing in computerized databases. Examples of such provisions are listed below. Although none of the bills listed below received any action, bills containing provisions similar to some of those of the 106th Congress have been introduced in the 107th Congress.

The "Effective National Firearms Objectives for Responsible, Commonsense Enforcement Act of 2000" (the "ENFORCE Act") was introduced in similar bills (H.R. 4066 and S. 2338). Included in Subtitle B, "Ballistics Testing," of Title I of each bill is section 412, which provides that "A licensed manufacturer or licensed importer shall not transfer a firearm to any person before (1) test firing the firearm; (2) preparing forensic ballistics records of the fired bullet and cartridge casings from the test fire; and (3) making the records available to the Secretary [of the Treasury] for entry in a computerized database." Civil penalties are provided for violation of this provision. Other sections include provisions that assistance for manufacturers and importers in acquiring the requisite equipment and in hiring personnel to carry out the intent of the bill is to be provided through the Attorney General and the Secretary of the Treasury. State and local law enforcement agencies can access this information through computer technology.

The "Bullet Tracing Act To Reduce Gun Violence" (H.R. 4150) would have prohibited the transfer of certain firearms by licenced manufacturers or importers until they test fire and prepare ballistics records of the fired bullets and cartridge casings, and provide the records to the Secretary of the Treasury. Other sections include provisions that violators may have their licenses suspended or revoked and that they are subject to administrative remedies. The Attorney General and the Secretary of the Treasury shall assist qualified firearms manufacturers and importers in obtaining equipment and hiring personnel to carry out the intent of the bill. This is similar to H.R. 422 of the 107th Congress, see below.

The "Gun Ballistics Safety Act of 2000" (H.R. 4148) would have mandated that gun manufacturers provide ballistics information, to be determined by the Director of ATF, to the federal ballistics database. Criminal penalties and license revocation are prescribed. This is similar to H.R. 408 of the 107th Congress, see below.

The "Ballistics Law Assistance, and Safety Technology Act" ("BLAST") (S. 2324) provides that licensed firearm manufacturers and importers shall test fire firearms as specified by the Secretary of the Treasury, prepare ballistics images of the fired bullets and cartridge casings, make the records thereof available to a federal computerized database, and store the bullets and casings as specified by regulation. The Attorney General and the Secretary of the Treasury are to assist firearms manufacturers and importers in obtaining equipment and in hiring personnel to carry out the intent of the bill. The bill requires that NIBIN be certified as operable so that

mandatory ballistics testing of new firearms is possible. This federal computerized ballistics information system shall be available to state and local law enforcement agencies. Section 103 provides that "Ballistics information of individual guns in any form or database established by this Act may not be used for prosecutorial purposes unless law enforcement officials have a reasonable belief that a crime has been committed and that ballistics information would assist in the investigation of that crime." This is similar to S. 16 of the 107th Congress, with the exception that S. 16 adds a second paragraph stating that this information may not be used for "the creation of a national firearms registry of gun owners." See S. 16 of the 107th Congress, below.

The "Ballistic Fingerprints Act of 2000" (S. 2715) would have required that a licensed handgun manufacturer include a bullet, casing, and any other information required by the Secretary of the Treasury in a separate sealed container inside the container in which a handgun is shipped to a licensed dealer. Upon sale of a handgun by a dealer, the dealer is to transfer the sealed container to the Secretary of the Treasury.

107th Congress

H.R. 408 (Andrews)

The "Gun Ballistics Safety Act of 2001" was introduced on February 6, 2001 and referred to the Committee on the Judiciary. Section 2 requires that the Director of ATF establish the "National Firearms Ballistics Database." Section 3 requires that firearms manufacturers provide ballistics information, to be prescribed by the Director, to the database. Criminal penalties and license revocation are prescribed for violators.

H.R. 422 (Becerra)

The "Bullet Tracing Act To Reduce Gun Violence" was introduced on February 6, 2001 and referred to the Committee on the Judiciary. Section 2 prohibits a licensed manufacturer or importer of firearms from transferring a listed firearm (from a list of the 50 firearms most frequently used by criminals) before test firing the gun and providing the ballistics records of the fired bullets and cartridge casings to the Secretary of the Treasury. Suspension or revocation of licenses or civil fines are imposed for violators. Section 3 provides that the Attorney General and the Secretary of the Treasury shall assist qualified firearms manufacturers and importers in obtaining equipment and training personnel to implement effective ballistics testing.

S. 16 (Daschle)

The "21st Century Law Enforcement, Crime Prevention, and Victims Assistance Act" was introduced on January 22, 2001 and referred to the Committee on the Judiciary. Subtitle E of Title I is the "Ballistics, Law Assistance, and Safety Technology Act" ("BLAST"). The bill requires licensed firearms manufacturers and importers to test fire firearms as specified by the Secretary of the Treasury, prepare ballistics images of the fired bullets and casings, provide the records thereof to the Secretary of the Treasury for entry into a computerized database, and store the bullets and casings as specified by regulation. The Attorney General and the Secretary of the Treasury shall assist the manufacturers and importers in, for example, acquiring equipment and hiring personnel to carry out the intent of the bill. The bill requires

that NIBIN be certified as operable so that mandatory ballistics testing of new firearms is possible. This federal computerized ballistics information system shall be available to state and local law enforcement agencies. Section 1505 provides that "Ballistics information of individual guns in any form or database established by the Act may not be used for (1) prosecutorial purposes unless law enforcement officials have a reasonable belief that a crime has been committed and that ballistics information would assist in the investigation of that crime; or (2) the creation of a national firearms registry of gun owners."