

**Written Testimony Against Bill No. 607 (Raised)**

**An Act Concerning the Identification of Certain Firearms and  
the Criminal Possession of Firearms (Banning Sale of Semi-  
Automatic Pistols Not Equipped with Microstamping)**

**On behalf of**

**Colt's Manufacturing Company LLC  
West Hartford, Connecticut**

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Vice President, General Counsel and Secretary**

**And**

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**Before the  
Joint Committee on the Judiciary  
Connecticut Legislature  
On**

**March 17, 2008**

**Introduction**

Senator McDonald, State Rep. Lawlor, and members of the Judiciary Committee: Thank you for the opportunity to testify before this Committee on Raised Bill No. 607, specifically regarding the banning of Semi-Automatic Pistols not equipped with Microstamping capability. We are testifying on behalf of Colt's Manufacturing Company LLC of West Hartford, Connecticut, a manufacturer of handguns that include Semi-Automatic Pistols.

First, allow us to provide a brief introduction about Colt: In 1847, Hartford-born Samuel Colt founded a munitions company in Hartford that was a predecessor of the modern day Colt. In that year, the Texas Rangers placed an order for 1,000 Colt Walker revolvers, which was soon followed by the U.S. Army placing orders for revolvers to be

used by American troops during the Mexican-American War. Soon thereafter, Colt became the birthplace of Hartford's industrial age. Indeed, Colt has had a long and storied past as part of Connecticut's rich industrial history. Since 1847, Colt has provided small arms to the U.S. Military for every war in which the United States has been involved.

Today, Colt's Manufacturing, the handgun company, and Colt Defense, the military and law enforcement small arms company, are both situated in West Hartford. Combined, we employ a total work force approaching 600 employees, making us one of the larger manufacturing companies in the Hartford area.

## **Discussion**

In preparation for our testimony today, we at Colt have attempted to find out about this Microstamping technique and determine whether it will work; what it means to us as a firearms manufacturer if such a law were enacted; and the benefits and costs of equipping such firearms with the Microstamping feature, including whether it could be an effective tool for forensic firearm identification.

### **I. Microstamping Is Early Stage Technology**

This Microstamping invention is at an early stage of its technology that is proprietary to one company called Identification Dynamics, LLC. The U.S. Patent was issued less than a year ago.<sup>1</sup> We were not able to determine who is this company or what they do. While the concept of this technology has been described, this invention requires significant development.

At Colt, we have surveyed the availability of Microstamping equipment and a description of the manufacturing processes involved but could not find any off-the-shelf firearms Microstamping equipment available. All we could find are concepts, words and ideas, virtually all on the Internet.

Today, this Microstamping technique is commercially unavailable and appears to be years away from a reliable, practical and economical application. A proof of principle needs to be firmly established, and then, laser-engraving technology needs to further develop so that this

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<sup>1</sup> U.S. Patent 7,204,419, regarding a Method and Apparatus for Reading Firearm Microstamping, invented by Todd Lizotte and Orest Ohar, issued April 17, 2007, and assigned Identification Dynamics, LLC.

technology can become a readily available application for firearms manufacturing. At that point, legislation could be considered but not before.

## II. Microstamping Technology as Applied to Firearms Is Flawed

We have learned many reasons why this technology, as it stands today and for years to come, will not work. Some of these reasons include:

- Easily defeated
- Logistics
- State of existing technology (seen as concept stage only)
- Cost prohibitive
- Inefficient
- Ineffective
- High subjectivity to human error
- Neither endorsed nor supported by forensic firearms community
- Destroys useful toolmarks used in traditional forensic firearms identification

From a technical standpoint, we note the following:

A small laser mark (such as a Microstamp) at the tip of a Firing Pin would slightly anneal the surrounding surface and could disappear immediately when the Firing Pin strikes the Primer.

The ammunition type will have great influence on the ability for a stamp to transfer. Traditionally, certain primers are significantly harder than others. Some firearms will not leave a signature due to insufficient pressures. Certain types of ammunition have manufacturer stamps and marks that would obscure the microstamp.

The tip of a Firing Pin is subjected to high wear because the chimney effect of the Primer forces energy back to the tip of the Firing Pin, the area where the most wear occurs on an existing Firing Pin. On many firearms, the Firing Pin will scrape (firing pin drag) causing the stamp impression to be unreadable. The unlocking phase of many semi-auto pistols will cause sheering of the Firing Pin, which will obscure the microprints rendering it useless. Firing Pins are easily changed out, replaced and damaged.

Surface finish on the breach face of a Slide, another potential location for a Microstamp, is up to a 63 RMS (microfinish). This could easily render the Microstamp useless. Even with little use, the Breech Face

of the Firing Pin will smoothen out and wear from the cartridge sliding up the back of the Extractor causing wear and eventually render the mark unreadable. Slides, Barrels and Firing Pins are common firearm parts that are replaced. Firing Pins are often replaced due to breakage. Slides get replaced due to upgrade, corrosion and damage.

At the very best, Microstamping is a questionable and totally unproven technology when applied on a firearm.

### III. Serializing Multiple Firearm Parts Would Significantly Increase Cost and Inefficiencies in the Manufacturing Process

If this Firearm Microstamping bill were enacted into law, Colt would no longer be able to mass produce firearms with standardized parts in the current manner. Instead, each firearm would need to be custom fitted with each serialized Frame. The serialized Frame would need to match two or more parts consisting of a Firing Pin, Extractor, Ejector, and/or Slide, each of which must be microscopically laser etched with alphanumeric digits to identify the make, model and serial number of a firearm and somehow have the ability to repeatedly microstamp readable information onto a Cartridge Shell in more than one place for thousands of times without failure.

What would be the direct consequence to Colt? Our entire manufacturing process would need to be changed to accommodate micro serialization of multiple firearm parts, no doubt using expensive equipment, assuming it is even available. For example, we would rollmark the Frame or Receiver of the firearm to correspond with the ATF-approved array of serial numbers. With a new law, we would need precise coordination with outside vendors to furnish micro serialized parts or purchase expensive automated equipment capable of laser etching to make these parts in-house. We would no longer be able to order these parts as interchangeable or to hold common parts in the same crib. Each of our other manufacturing processes would stop as we wait for the corresponding micro serialized part to be assembled.

Each micro serialized part coming into the plant would be separately packaged, quarantined and handled to correspond with the serialized Frame or Receiver. Our workers would need to use high-powered microscopes to verify that each of the micro serialized parts match and might need to be hand fitted. Protocols would need to be established to take into account ammunition variations and primer hardness as well as acceptance parameters of what would be an acceptable mark.

For example, if there were five different types of ammunition, with three leaving readable marks and two that do not, would the firearm be acceptable for sale in Connecticut? Moreover, in the manufacturing process, if a micro serialized part were lost or damaged, its assembly would stall until replacement parts could be ordered and received. For example, since we do not manufacture Firing Pins, we would need to order a replacement micro serialized Firing Pin from a vendor.

We would need to institute additional manufacturing steps, including but not limited to performing function firing to ensure that the Microstamping feature works. We also would be unable to mass produce firearms and face potential disruption in material flow. Therefore, the increase in manufacturing costs of each firearm would be significant, in addition to a capital investment of millions of dollars for new equipment. Of course, this assumes that the conceptual technology works could be reduced to practice.

Unfortunately, all of these manufacturing processes become complicated when components are not interchangeable and are subject to human error. It is not easy to mix miniature components, such as Firing Pins, Extractors and Ejectors, even under the most careful conditions. Microstamping requiring a high-powered microscope to verify the serial number on the mixed components further complicates the problem. Even if the technology worked, the crime scene itself is at risk to human error due to mixed parts from the factory.

Beyond the existing Federal requirement that all firearms be serialized, a Microstamping requirement in Connecticut would create a massive logistical burden on the firearms manufacturer to require certain firearm parts to be micro serialized. Each semi-automatic pistol would require additional time and material that would result in astronomical costs to adopt a technology that is not commercially feasible.

It would be ironic that the very invention that Samuel Colt brought to Hartford, Connecticut over 160 years ago – a technique used in the American Industrial Revolution to make interchangeable parts for firearms would be outlawed by this legislation.<sup>2</sup>

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<sup>2</sup> The hallmark of the American industrial revolution was to make interchangeable parts that could be pre-manufactured and assembled on a production line, with spare parts available after sale. Then, when a corresponding part breaks down, it is replaced by a new, off-the-shelf part. Replacement parts for the automobile are an example of an interchangeable part system.

#### IV. Microstamping Could Interfere with the Work of Forensic Firearm and Toolmark Examiners

We have serious questions whether Microstamping could be an effective aid in firearm forensic identification. It is unsupported by any test data, particularly anyone from the forensic community who would be charged with identifying the impressions.

Using Microstamping would obscure the marks (Breech Face and Firing Pin) from which forensic firearm and toolmark examiners use to identify firearms. The Breech Face is the best source of random toolmarks that make up the class and individual characteristics used in firearms identification.

Microstamping offers no advantage over current gun traces. From a legal investigative standpoint, the microstamping of evidence cartridge cases will be used to trace serial numbers in the same manner presently done, which is to trace the firearm to its initial point of sale. Considering that many crime weapons are stolen, this will not lead investigators in any way closer to solving the crime.

Testing shows premature degradation in making the microprint markings, which is not even close to the life of the firearm. Corrosion found in many crime guns would further degrade the image.

Current firearms identification techniques using Firing Pin and Breech Face marks are a sound and proven method of identification. The destruction of these marks due to use of this microstamping technology could have defeat established forensic techniques in criminal cases.

#### V. The Costs to Colt Would Be Substantial

This Microstamping technology needs to be developed by someone else before bringing to our doorstep. The regulated firearms industry must not be the ones required to make this technology work in our manufacturing process. Otherwise, we risk spending potentially millions of dollars to try to make this technology work. The firearms industry should not bear the financial burden of developing this technology.

Even if the Microstamping technology were advanced, and it is not, new equipment to accommodate Microstamping would cost millions of

dollars, not to mention substantial increases in direct labor and material costs to be borne by Colt.

The alternative would be to no longer sell these firearms within the State of Connecticut. At that point, we and other firearms manufacturers doing business in Connecticut would need to seriously consider whether we should completely move ourselves out of Connecticut and relocate to a friendlier State. The upshot would be a loss of thousands of jobs when including in-state vendors that support firearms production in Connecticut.

#### VI. This Feel-Good Legislation Will Do More Harm than Good

Microstamping technology, sometimes erroneously referred to as "Ballistics Fingerprinting," can gain headlines but has the enormous potential to waste taxpayer and firearms industry time, money and effort. Microstamping is an unproven technology at best that is filled with question marks, including the threshold question of whether Firearm Microstamping is even feasible.

There is simply no advantage for Connecticut to be out in front of this issue. A Firearm Microstamping requirement was recently enacted into law in the State of California.<sup>3</sup> Let us watch California wrestle with all of the practical, legal and technological problems that have been discussed today. After they have done so, Connecticut will be in a better position to evaluate Microstamping more intelligently. To adopt this Microstamping bill based on what we know today would be premature and wasteful.

Enormous time and money are at stake in implementing any legislation that relies on an undeveloped technology. Witness the mistakes made by New York<sup>4</sup> and Maryland.<sup>5</sup> Each state implemented their CoBIS (Combined Ballistic Identification System) requiring that a shell casing of a bullet from a fired round be shipped to their state police when a gun is sold. Each state spent over \$30 million to set up a system based on the so-called "Gun DNA" bill that was enacted into law. Six years later, CoBIS has not been credited with solving even one crime.

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<sup>3</sup> California AB 1471, Crime Gun Identification Act of 2007. See also S.2605/H.R.5206, National Crime Gun Identification Act of 2008, introduced on February 7, 2008, by Sen. Edward Kennedy (D-Mass.) and Rep. Xavier Becerra (D-Calif.), which would apply to all models of semi-automatic pistols.

<sup>4</sup> N.Y. Gen. Bus. Law §396-ff.

<sup>5</sup> Md. Code Ann., Pub. Safety §5-131.

In another situation, New Jersey Gov. Jim McGreevey signed into law "Smart Gun" legislation<sup>6</sup> to eventually require new handguns to contain a mechanism that allows only their owners to fire them. The owner would have his Grip programmed and a Microchip in the weapon would remember the Grip and determine in an instant whether the user is authorized or the gun would not fire. Similar to what is being proposed here, that smart gun law provided that the technology would be required in all new handguns sold after the state attorney general determines a smart gun prototype is safe and commercially available. The Smart Gun law was enacted in 2002. Now, years later, this ill advised law has not gone into effect because the technology still remains undeveloped.

## **Conclusion**

We will continue to review Raised Bill No. 607 and provide additional feedback but, in the meantime, here are some concluding comments:

- This draft assumes that this patented Microstamping invention offers an effective means of identifying a spent Cartridge with the gun from which it was fired and yet there are major unanswered questions concerning its use and practicability.
- The forensic community needs to investigate the feasibility and the practicality of this legislation to verify if the technology will assist them in their jobs. The people charged with using this technology, not the politicians, should be consulted.
- This draft fails to consider how or whether Microstamping can realistically be reduced to practice in commercial firearms manufacturing, let alone issues involving sales and distribution.
- Not even the sponsors' staff has contacted Colt to find out how this draft would affect our operations and business yet the sponsors to introduce this draft apparently have partnered with outside forces that advocate banning private gun ownership and destroying the firearms industry.
- Mandating a Microstamping feature on semi-automatic pistols sold in Connecticut would dramatically increase our efforts and

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<sup>6</sup> N.J. Stat. Ann §§2C:39-1dd, 2C:58-2, 2C:58-2.2 – 2C:58-2.5. See also Md. Code Ann., Pub. Safety §5-132, requiring Maryland's Handgun Roster Board to review the status of personalized handgun technology and annually report its findings to the Governor and the General Assembly.

costs, which we would need to be passed along to the consumer, without any benefit of solving crimes committed by guns.

- If this draft becomes law, we must seriously determine whether we should discontinue offering Colt semi-automatic pistols for retail sale in Connecticut or even move our entire manufacturing operations out of the State.
- We question why this draft should be introduced now at the infancy of this Microstamping technology, particularly with the gloomy prospects of an economic recession for Connecticut in 2008.
- We believe that proponents of this draft have not considered the adverse effects that this draft would have on Connecticut business and jobs that heavily contribute to the tax base and the quality of life that we enjoy.

To conclude, it is too premature to introduce this bill. A thorough review to determine the practicality of this invention should have been conducted but it was not. This feel-good legislation will do more harm than good. Let us not make a mistake with the unintended consequences of driving businesses and jobs out of Connecticut.

We respectfully request that this Microstamping bill be defeated.

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