

# Blockchain in Weapon Tracking

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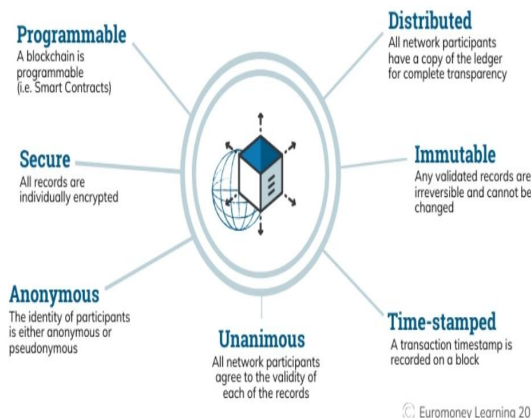
**Abstract:** Blockchain technology is the most precise system to track a gun flow from manufacture to end-user. By creating a global database that cannot be altered once recorded, this database could primarily record every transaction and purchase. In this technology we provide a simple solution of how the transfer of guns can take place between the dealer and the seller using digital signatures and a gun safe just like a bitcoin (BTC) wallet which stores each and every information about an individual securely and it helps in identifying whether a person who has a weapon holds an original arms license or has a fake one and also check whether that person has a previous criminal record on his name. Since blockchain is immutable and hack proof, this technology can be used to get rid of the above claims, to improve the ownership and traceability of the weapon and to keep the records securely inside the digital world.

**Keywords:** Block Chain in Weapon Tracking

## I. INTRODUCTION

Blockchain alludes to an innovation that gets the answer for the deep rooted human trust issue. It arose in the market with the eminent digital currency Bit coin. It gives an architecture that permits us to trust a decentralized framework (Internet or Web) rather than confiding in any entertainer inside it. It runs on top of a shared organization and holds indistinguishable duplicates of the record of exchanges. This assists with keeping away from any mediator, and the whole course of exchange happens through machine agreement. It is a record that is divided among different elements that everybody can review, yet no single client can handle it. It is a disseminated cryptographically gotten data set that keeps the record of each exchange from the extremely beginning one reason for death in 2014, with most of them because of gun injury.

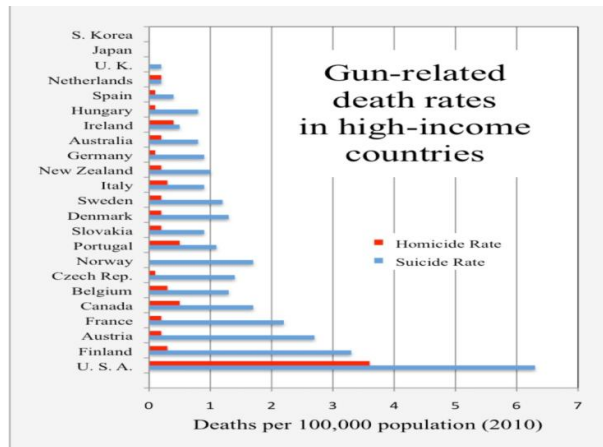
### The Properties of Distributed Ledger Technology (DLT)



The methodology proposed here is to apply blockchain innovation comprehensively in a manner explicitly intended to decrease gun related wounds. Applying blockchain innovation to firearm control enactment won't just further develop authorization, it probably will likewise permit better enactment to be passed in light of the fact that it would address security issues which are critical to weapon privileges proponent. Moreover, embracing blockchain conventions into the monetary area is likewise suggested as a result of the general wellbeing impacts of an unstable economy. Despite the fact that there is certainly not an unmistakable relationship universally, in the US, blockchain innovation can assist with the seventeenth driving self-destruction is impacted by financial conditions. As most of gun related deaths are because of self-destruction, procedures to diminish precipitators of self-Reducing gun related dismalness and mortality by further developing individual verification, firearm enrolment, and diminishing financial tensions. In the US, weapon related deaths and crimes were destruction, for example, joblessness and a helpless business environment should be executed. As such, blockchain application in focal banking ought to appropriately be considered to be likely method for diminishing gun cruelty.

## II. IMPACT'S OF WEAPON VIOLENCE

The essential financial effect of weapon related violence is broadened lengths of potential life lost (YPLL), or in monetary terms, opportunity costs. America has a massive gun violence problem, about 14 students and three teachers were dead due to shooting in parkland, Florida in 2018. And there were many other such gun violence problems. Despite comprising just 4.4% of world's population the us account for 31% of mass shooters. In United States government at every level is trying to maintain a balance in critical hospital, fire and police.. due to the after effect of this weapon related violence. They are spending about \$40.0 million each day to deal the after effect produced by such violence.



## III. VIABILITY OF WEAPON CONTROL LAW

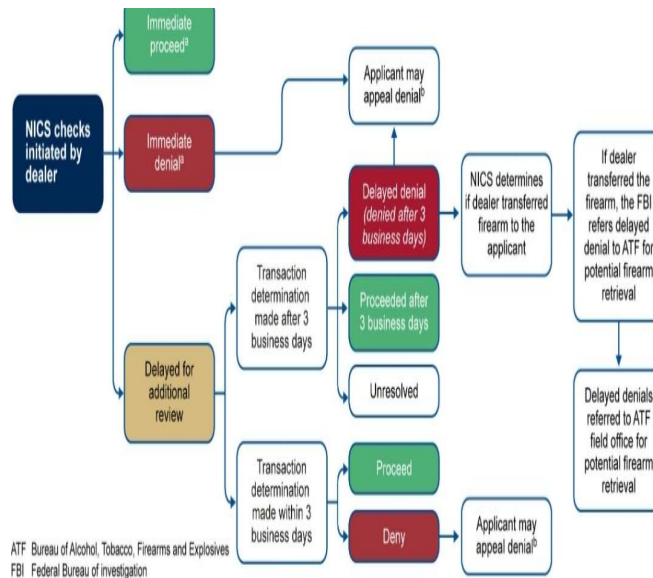
The effectiveness of gun control is not much strong that it reduces the gun related mortality at the same time we can't say this weapon related law didn't have any effect on gun control. According to the study there is a mild decrease in number gun related violence due to these laws. There were some weapon bans which restricted some of the right of dealers and Owner according to the federal gun control, and gun transactions involving licensed dealers are heavily regulated. Even though there are several loopholes were many people legally sell weapons without registering as dealers, and authorities didn't even do background check.

## IV. BLOCKCHAIN APPLICATION IN WEAPON CONTROL

Effectiveness of blockchain application can be guaranteed if they help to facilitate to track the flow of guns, background check and also help to create a stable economic climate. Blockchain technology helps in improving the transfer of guns from manufacture to dealer then to end-user.

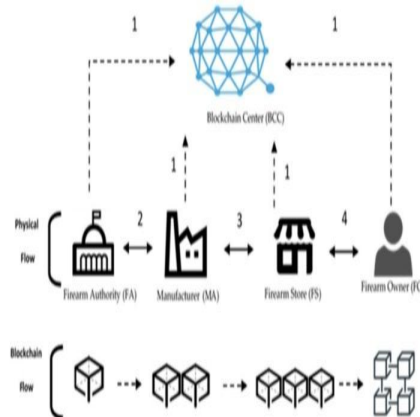
The NICS framework is a unified, centre and talked sort of information base. The NICS is a progression of information bases kept up with by the Federal Bureau of Investigation (FBI). In the event that an inquiry turns up bad, then, at that point, the weapon move is endorsed commonly in practically no time. Notwithstanding, in the event that the individual craving to buy the weapon appears on the information base, the law takes into consideration three days to additionally explore before permitting the deal.

The whole inquiries generated must be made into central database and also it's maintained by single database. This sort of information base construction has a low adaptation to internal failure in that it presents a solitary place of assault for a programmer and a solitary point for human mistakes in information section and the board. Completely appropriated data sets, for example, the disseminated bit coin ledger, are more strong against assault, are simpler to refresh, more straightforward to keep up with, and could likewise follow the progression of firearms from producer to end client.



ATF Bureau of Alcohol, Tobacco, Firearms and Explosives  
FBI Federal Bureau of investigation  
Source: GAO analysis of FBI data | GAO-16-483

**V. EXECUTION**



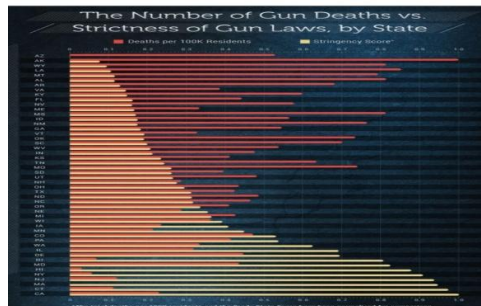
A blockchain answer for firearm control would work like current cryptographic money executions of blockchain innovation. When a person buys a weapon like a bitcoin wallet it get attach to biometric information. All exchanges would require both the vender and an authorized firearm seller to support the deal. Just like in multi-sig wallet, both

player sign the exchange. Before the verification is done the recipient of the weapon must pass a historical verification and thus possession is moved. Only after passing the personal investigation the exchange is passed otherwise it gets denied and gets recorded in that particular person's electronic firearm.

The substance of the electronic firearm safe would not only include the weapon's distinguishing proof by ballistic fingerprinting it also include person's information. Electronic firearm safe also include a wide scope of information like history of criminal behaviour, parole status, abusive behaviour at home feelings, and emotional well-being issues. This information could be implanted in the electronic weapon protected in a way significantly more private than existing data sets can accomplish. Despite the fact that protection concerns might disallow extra information being put in the electronic weapon protected, a few nations might think that it is satisfactory to likewise insert information from Internet perusing, like advertising information Facebook, Google, and Amazon right now gateman individual's perusing data is as of now being broadly followed financially, and this data could be fused into the electronic firearm safe. The No-Fly List could be merged into the blockchain. An obsession with weapons or gun viciousness may not subsequently trigger a refusal of gun ownership, but it could fundamentally trigger a more cautious assessment of the logical buyer going before the arrangement being done. Complete number of guns asserted could be even more constantly followed. This may really perceive high risk of individuals. Executing blockchain innovation into weapon control is both vital from a general wellbeing outlook and is monetarily practical. Essentially making a blockchain record of exchanges would save a gigantic measure of cash by diminishing the measure of work needed to perform weapon follows. Execution would be direct, as the hidden innovation is now all around created. People would have their own, special electronic firearm safe which would work like a BTC wallet. Weapon exchanges would be like spending and getting bit coins. Utilizing multiuse wallet and shrewd agreement innovation, the protected exchange of weapons between lawful proprietors fulfilling current laws could be dependably performed. Security concerns could be accomplished utilizing mysterious innovation that has as of now been executed in Cash, Montero, and DASH. Executing better innovation, not simply more laws, is vital to accomplishing better firearm control and diminishing weapon related viciousness.

Using shaded coins, the proposition spread out above could be based on top of the set up bit coin blockchain. Hued coins tie meta-information to a particular bit coin exchange, adequately transforming the bit coin into a token by "shading" it with the meta-information. This meta-information can contain data on resources like firearms, and extra information portraying the weapon proprietor.

**A Side-by-Side Look at Firearm Deaths and Gun Laws**



At last, putting individual verification data, weapon move data, and firearm proprietor data onto a blockchain framework, in US and all there are more prominent capacity to decide the general firearm possession. By setting up a firearm administrative board a legal right to hold guns can be traced along with the availability of public health concern of excessive gun availability. This firearm administrative board could accordingly work freely like a national bank, restricting the importation or production of new weapons when the general number of weapons in the public arena surpassed a specific level. Despite the fact that weapon proprietorship is a protected squarely in the US, firearms additionally are the specialist, the vector maybe, of a set up general wellbeing pandemic. Following firearms with cutting edge blockchain conventions will to assist with deciding in general weapon trouble upon society, so sensible weapon control measures can be carried out.

#### **VI. CONCLUSION**

Blockchain protocol guaranteed to track gunflow from manufacture to end user which help in tracking sales from one gun owner to otherone. This blockchain technology thus provide better privacy than the current background check system. Maintaining privacy ,improving gun control and improving the establishment of current gun laws are some of the features of this technology in weapon tracking. Tracking of guns, undergoing sales and improvement in screening of high risk individual provide a distributed ledger technology which helps in improving background checks and tracing the individual who is performing weapon based crime .Thus we can say this is an effective firearm registry system. Since record information is decentralised and provide a unalterable ledger this technology provide a transparency, authenticity and traceability thus making a powerful and efficient weapon tracking system.

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