



MODERN SCIENTIFIC TECHNIQUE IN INVESTIGATION UNDER CRIMINAL JUSTICE SYSTEM: ISSUES AND CHALLENGES

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Abstract

“The greatest danger in times of turbulence is not the turbulence- it is to act with yesterday’s logic”- Peter Drucker

Law changed as per the need of the society and same goes with technology as technology is developing at a rapid speed and the resourcefulness of criminals along with it, technology today plays a significant role in empowering law enforcement agencies. Now a days technology has been used in various field of criminal justice system including law and enforcement. To fight back against crime in digitalization, law executives must adopt new tools, techniques and equipment that keep pace with technological advancements. To prevent crime and protect the citizens, the Police in India require a compatible technical upgrade.

Therefore, law administrative authority must integrate technology into their operations as soon as possible because it can operate as a force multiplier. Technology and policing have been interconnected for years, dating back to the advent of the telephone, the automobile, and the two-way radio. Today, technology seems to be progressing at an ever-accelerating pace, as seen through the circulation of mobile and wireless technology, high-powered computing, visual and audio technology, advanced analytics, and other technological advancements.

Keywords- Police Investigation, Technology, Artificial Intelligence, Criminal, Speedy Trial

Introduction

Today technology has a special place in everyone’s life not only because it contributes to the growth of the individual but also to that of the nation and the entire planet. It already dominated all sectors of life, including our country’s law enforcement. These technologies give police officers and intelligence agencies unprecedented powers to crack down on criminal activity as they attempt to keep us safe. They also help to tackle the new forms of crime that are emerging as criminals become ever-more inventive in their own use of technology and data. Technology is the usage and knowledge of techniques or is systems of these things. Usage of technology in the criminal justice system is not new but more superficial today. Technology in criminal justice will continue to challenge us to think about how we turn information into knowledge. Due to new technology, criminal investigations are able to maintain and improve their processes.

Technology continues to improve law enforcement and, in turn, the relationship between law enforcement officers and the communities they aid. By providing various ways of dealing with crime, technology has made communities safer places to live and work in. With more advancements on the horizon, professionals who are seeking a criminal justice degree will find that technology will continue to play a large role in how the criminal justice field will look in the years to come.

In H.N. Rishbad case the Hon'ble S.C. held, the investigation generally consists of the following steps:

- i. Proceeding to the spot;
- ii. Ascertainment of the facts & circumstances of the case;
- iii. Discover and arrest the suspected offender;
- iv. Collection of evidence relating to the commission of the offence which may consist of (a) the examination of various persons (including the accused) and the, reduction of their statements into writing, if the officer thinks fit,
(b) the search of places or seizure of things considered necessary for the investigation and to be produced at the trial; and
- v. Formation of the opinion as to whether on the material collected there is a case to place the accused before a Magistrate for trial, and if so, taking necessary steps for the same by filing of a charge-sheet under section 173 of Cr.P.C. before the competent court.

Issues and Challenges to Police Investigation

Transfer during investigation: It has been seen in many cases that when police are about to find important clue related to case, they posted somewhere else and the case has been hand over to other police officer which loose loops and also distract police officer from that case causes delay in the investigation as the new officer has to understand the case & restart the investigation.

No public cooperation: The police-public relations relationship, which is crucial to effective policing, is troubled by a severe lack of confidence. To avoid crime and disturbance, police need the community's trust, collaboration, and assistance. In each crime investigation, police officers, for example, rely on community people as informants and witnesses.

Hostile witness: Sometimes after statement recorded witness turn hostile, reason may be threat or they don't want to be a part of that investigation or anything else. It also creates hurdle for police officer in their investigation.

Political instructions: Investigation in the cases where the prestigious people, VIP's as well political parties are involved cannot completed. Political connections play a large role in departmental inquiries and punishment proceedings of officials. Nowadays, politicians are influencing the way in which performance appraisals and awards are given to officers and staff,"

In Prakash Singh & Ors. v. U.O.I. & Ors, the S.C. given direction to State that, "Constitute a State Security Commission (SSC) to: (i) Safeguard that the State government does not exercise unwarranted influence or pressure on the police (ii) Lay down broad strategy or guideline and (iii) Assess the performance of the State police."

Media trials: People nowadays rely on media a lot and it is the duty of media to give true information to the public but they don't. Media makes different perception about any case and declaring someone as the criminal even before the investigation is concluded. In fact, several newspapers and websites also play a vital role in providing biased information to the public.

Technical challenges: These are technology related challenges which are faced by the police officials. Where a hacker disrupts a traffic control at a local airport or a child pornographer sends computer files over the internet or when credit card numbers are stolen from a company engaged in e-commerce, investigators must locate the source of communication They have to trace the "electronic trail" leading from the victim to the perpetrator in almost every case.

Technical advancement ensures faster investigation

Today, police officers face a multitude of roadblocks that impede progress, and the technology used in law enforcement is often critical to their success and survival. Fortunately, police technology has advanced so that officers have more sophisticated tools at their disposal than ever before.

Facial Recognition Software: One of the latest technological advances to hit the criminal justice industry is facial recognition software. Facial recognition technology is capable of identifying identical human faces from video frames or digital images against a database of faces.

This technology acts as a quick and efficient verification system that is more expedient than other technologies, such as retina and fingerprint scans. Facial recognition also requires fewer touchpoints compared to entering pins or passwords. The goal of facial recognition software is that it will help improve safety and security in a number of instances.

Biometric: With the help of the forensic police have been using fingerprints to identify people. Now, in addition to facial recognition and DNA test, there is an ever-expanding array of biometric (and behavioral) features being utilized by law enforcement and the intelligence community. These include voice recognition, palmprints, wrist veins, iris recognition, gait analysis and even heartbeats.

Voice Technology: An officer's patrol car is like a mobile command center, meaning there are numerous computers and tools that an officer can use while on the road. But because there are so many different features, safely multitasking can be difficult. One of the latest innovations being incorporated into police cars is a new voice command technology that empowers officers to control many functions in their vehicle while driving and performing other patrol duties.

Video Doorbells: Video doorbells have been installed by thousands of homeowners as a way to improve home security and give them peace of mind.

HSRP Number Plate: 'HSRP' stands for High Security Registration Plate. An HSRP is an aluminium-made number plate that is fixed onto a automobile by a minimum of two non-reusable snap-on locks and has various identifiable features. A HSRP number plate has security benefits that help track the car more effectively and prevent theft of the plates.

Conclusion & Suggestions

The delay in the investigation of cases takes place because quite often the police officials concerned with the investigation have to be delegated on other duties relating to problems of law and order. Criminals utilise newer technologies to enable and maximize criminal activities, the new has arisen to turn the table around police investigation should utilize these technologies to minimize the criminal activities. With the help of these technology the investigation can be completed within time and also there will be no loops to temper with the evidence. Use of technology definitely can improve the fairness and may be helpful for speedy investigation of the case. These are some following suggestions which state should think:

Smart Home Devices: There are home devices such as Alexa, Google home, etc are available in the market which can be used wisely in investigation also. There must be some instructions by which if there is any threat to the victim then they can simply give a command to Alexa and automatically call should be transferred to the nearest police station so that a crime can be stopped.

Gunshot devices: There must be devices everywhere in the residential areas, this technology uses a network of microphones to detect a gun's unique explosive sound and then triangulates the source of the sound using GPS.

Sensor watches and Phones: Apple and Samsung watches and phones are nowadays very common and having unique features like sound, fall and heartbeat detection. It helps police in investigation, it will notify on the number which has saved by the individual.

Drones: Patrolling in person by police is very common but now it can be replaced by technical advancement. Drones can be used for patrolling and even it also gives a kind of threat to criminals as they will be under surveillance all the times. JOUAV CW-30E drone distance covered 100/200km with 600 min having maximum flight time, the CW-30E can also carry a dual night version of the gimbal camera, which can be used as a police drone for search and rescue, law enforcement, etc.¹ Drones with sensors play an important role like they can easily detect illegal movements as follows: Illegal Border Crossings, Human Trafficking and Vessels illegal Fishing.

¹ <https://www.jouav.com/blog/long-range-drone.html>

Robots: Nowadays robots are used for bomb detection so that human life can be saved. They are aiding in taking wounded police officer to the hospitals also.

Driverless Cars: Robotic cars use AI and computing power to navigate from one point to another, sensing their environment and making decisions in real time to avert mishaps. Robots has already taken the place of human being while operation of machinery and after substantial success of the robot science, human brain started thinking of replacement of humans as much as possible.²

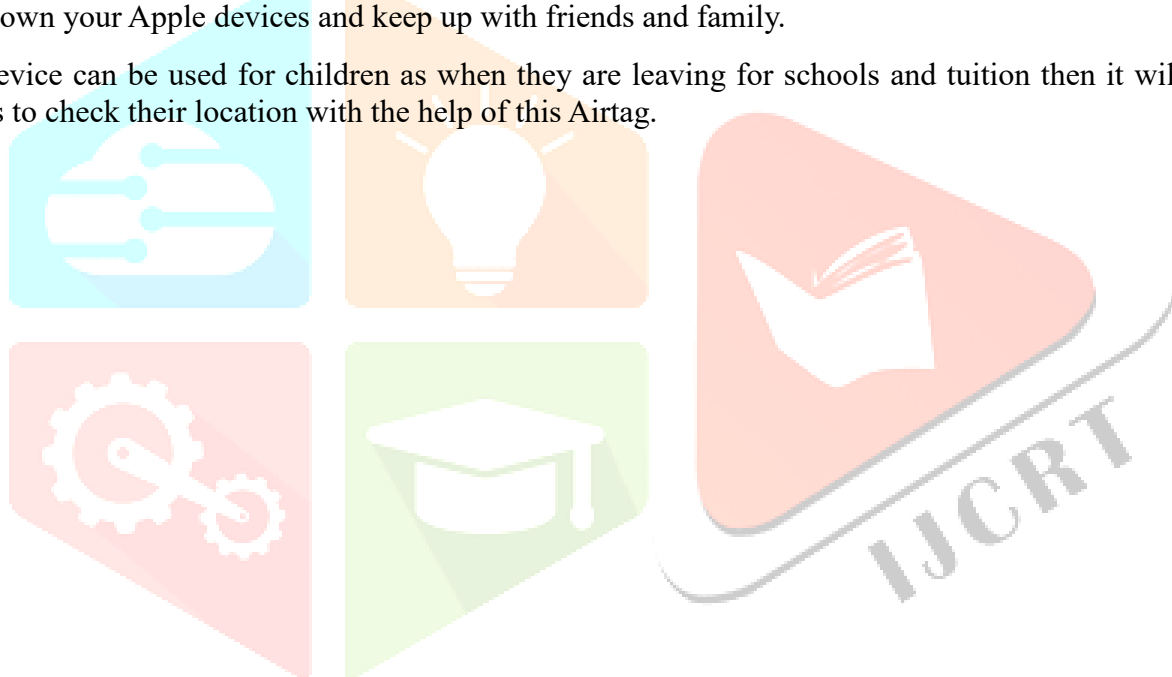
Ammunition Detection on Toll Plaza: While paying road tax on toll plaza the automobiles should be detect for ammunition at the same time so that the risk of crime can be prevented.

Automatic License Plate Recognition with GPS Feature: GPS number plate will be great aid for police in surveillance. In cases such as kidnapping or Human Trafficking this can be used for tracking any automobile by the police. For example, CCTV cameras are installed in everywhere and if there is any case where a vehicle has been used then it can be traced easily with the help of number plate.

Unique Identification Number/Aadhar: If there is any unclaimed dead body then it can be identified with the help of Biometric. Finger prints can be used by police to find information of that unclaimed dead body for identification.

Airtag: AirTag is a super-easy way to keep track of your stuff and it can also use for tracking your child. Attach one to your keys. Put another in your backpack. And just like that, they're on your radar, where you can also track down your Apple devices and keep up with friends and family.

This device can be used for children as when they are leaving for schools and tuition then it will be easy for parents to check their location with the help of this Airtag.



² Prof Vaibhav Goel Bhartiya, Dr. Prem Chandra and Dr. Aditya Kumar Tyagi, Accident by Automated Car-A Vanishing Point of Law, Indian Bar Review, Vol 46(3) 2019.