# Technological innovations essay examples

Law, Criminal Justice



### Introduction

Technology has completely changed the way crimes are handled by use of video surveillance and tracking systems. It has made work easy for law maintainers in capturing criminals who break laws thus, helping in bringing crime rates down. Surveillance and tracking technologies are evolving to more efficient and accurate systems than before and in future, the technologies will be of great benefit to users and people's privacy protection. This paper will look at the use of technology in surveillance and tracking field used by law enforcement agencies, discussing how these technologies have evolved using timeline and written materials. The paper will also discuss how people have been monitored in their daily chores and lastly, it will discuss communication as a social need that has changed due to technological innovations.

## Use of technology in surveillance and tracking field

Use of surveillance technology has been widely used in almost every institution such as schools, hospitals, public housing, among others.

According to the use of surveillance systems in law enforcement agencies is to monitor and protect citizens from criminals. Closed Circuit Television (CCTV) Video Surveillance systems are used to do the task. This CCTV video surveillance is mostly used in public schools to watch any faction of suspected students who participate in illegal activities within the school compound. In addition, CCTV video surveillances are used in conjunction with facial recognition systems to detect terrorist attack where by the police compare the facial aspect of the criminal with the law enforcement

databases. Businesses also use this surveillance technology to detect and protect crimes.

Also, tracking technology has been of great use to law enforcement agencies whereby they use Global Positioning System (GPS) technology to track movement of criminals. According to they did a survey that showed 69 percent of law enforcement agencies use Global Positioning Systems to track location of police vehicles in case of accident or if endangered by criminals. GPS are also used to monitor drug traffickers, child traffickers and potential criminals. Even in companies, GPS help law enforcement monitor employees who are not performing as required and helping them have enough information for drivers who over-speed when driving. These technologies have been of great help to detect and protect crimes that have, are, and about to happen.

# Surveillance and tracking technology history

According to stated that surveillance started in U. S. during trading in colonial history where people used published appeals and memorandum books for monitoring. In the year 1687, slaves started using rudimentary Identity cards. Later, during Civil war military passes were invented where characteristics of a person were indicated. In 1820, U. S. passports were introduced with photographs of the owner. Body measurement identification came into use in 1870. Telegraphone in 1906 was invented as a surveillance technology with magnetic recorder in it. In time of World War 11, phonograph-based recorder was introduced to be used when recording in telephone lines. Dictagraph devices were also in use for private detecting in police department. In 1945, wires and tape records were used to make

secret recordings for detecting crimes. To date audio surveillance are not widely used like video and internet surveillance technologies. The following is a timeline showing surveillance and tracking technologies.

# Pre historic period- memorandum books and published appeals were used for monitoring slaves

- 1687- Rudimentary Identity cards were used by slaves
- 1700- Military passes were used
- 1820- Passports were introduced
- 1870- Body measurement identification came into use
- 1906- Telegraphone were introduces
- 1944- phonograph-based recorder was introduced together with dictagraph devices
- 1945- Wires and tape records were used
- 1951- time-difference-of-arrival position-finding system was developed
- 1960- Global Positioning System was developed
- 1965-use of surveillance cameras
- 2002- CCTV systems were implemented in city wide in U. S.

People are being monitored on their daily chores such as when making a transaction in ATM systems, in public housing, pedestrian traffics, public schools to monitor students who commit illegal activities, in the street junction to monitor vehicles that are being driven against the traffic lights. Also, in the work place people are being monitored to have physical security of companies' assets. Other places include stores where valuable equipments are kept and in apartment buildings to have safety for tenants' properties. In addition, whatever one is doing in the Internet is being

monitored as well as when using cell phone where cell phone records are used to monitor you.

Technological innovation has greatly improved means of communication which was a difficult social need during pre historic time due to different races which did not have a common language to communicate. In prehistoric period, symbols were used such as cave paintings, pictograms, and writing came into scene where syllables and alphabets were being used. In year 1830, electrical telecommunication systems were invented, radio frequencies were discovered that enabled communication using television and radios for mass communication. Later telephone lines were used until networking came into scene which has led to several technologies that ease communication.

### References

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**Appendices** 

Fig 1. 1: Cave painting. Retrieved from http://en. wikipedia. org/wiki/File: AltamiraBison. jpg

Fig 1. 2: writing symbols. Retrieved from http://en. wikipedia. org/wiki/File:

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Fig 1. 3: telephone line. Retrieved from http://en. wikipedia. org/wiki/File: Cisco7960G. jpg

Fig 1. 4: Family watching TV. Retrieved from http://en. wikipedia. org/wiki/Television

Fig 1. 5: mobile phones: retrieved from http://upload. wikimedia. org/wikipedia/commons/1/11/Two\_Cell\_Phones\_2. png

Fig 1. 6: email communication. Retrieved from http://en. wikipedia. org/wiki/File: Mozilla Thunderbird 3. 1. png

Fig 1. 7: Facebook page for social communication. Retrieved from http://en. wikipedia. org/wiki/File: Facebookhomedecember2012. png