Chapter 54
Video Surveillance:
Privacy Issues and Legal Compliance

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ABSTRACT

Pervasive usage of video surveillance is rapidly increasing in developed countries. Continuous security threats to public safety demand use of such systems. Contemporary video surveillance systems offer advanced functionalities which threaten the privacy of those recorded in the video. There is a need to balance the usage of video surveillance against its negative impact on privacy. This chapter aims to highlight the privacy issues in video surveillance and provides a model to help identify the privacy requirements in a video surveillance system. The authors make a step in the direction of investigating the existing legal infrastructure for ensuring privacy in video surveillance and suggest guidelines in order to help those who want to deploy video surveillance while least compromising the privacy of people and complying with legal infrastructure.

INTRODUCTION

Use of video surveillance, both by public authorities and the private sector, is spreading fast amid the increasing demand to build infrastructure to protect against harm to people or property. This development has been further accelerated by the decreasing cost of the hardware (Cavallaro, 2007) and the ubiquity of relatively cheap communication infrastructure. Video surveillance is considered a valuable tool to protect people and property from harm. Law enforcement agencies worldwide rely on closed circuit TV (CCTV) systems to help prevent, detect and investigate attacks against public safety. It is also used to detect and investigate attacks against property, e.g. vandalism. The private sector also uses CCTV to protect public safety in the private sphere mostly to protect against intrusions, theft and vandalism. Video surveillance is particularly attractive because it allows people in one location to supervise activities in other locations. This means that law enforcement community can extend the reach of the police

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forces by having police officers in one location survey the activities of several locations and alert rapid mobile police officers when imminent crime is suspected or detected. This increases the presence of the police force in the community or it allows the same quality of policing with a smaller police force. As the costs of hardware and communication infrastructure has come down, whereas the costs of police officers training management and pays have generally increased, so considerable savings can be achieved through a model with video surveillance and a rapid reaction force. Similar arguments hold for the private sector, where cost reduction and the possibility of outsourcing security services to external companies are important factors in the rapid uptake of video surveillance technologies. As a consequence of these trends, in many developed countries, surveillance cameras are now frequently found in office buildings, shopping malls, housing estates, streets, squares, parks, busses, trains, stations, airports and many other public places, as well as in an increasing number of private companies and homes.

The pervasive use of video cameras in public places captures the activities of people and allows officials to see the daily activities of a target individual. Such pervasive surveillance may impact negatively on the democratic rights of people to freely express their thoughts and to associate freely to share those thoughts. People might not feel comfortable to express their views or to take part in protests against the government policies if they know that they might be identified for such activity later on. Moreover, the output of these surveillance systems may also be abused for other nefarious purposes, such as stalking individuals or used by paparazzi to learn the whereabouts of celebrities.

Contemporary video surveillance systems utilize advanced techniques, such as object-identification and object-tracking, which allows tracking of an individual spanning over multiple cameras distributed throughout a larger area, e.g. an entire city (Moncrieff, Venkatesh, & West, 2009). Compared to contemporary video surveillance solutions, traditional CCTV systems are simple recording systems that have to be constantly monitored by human observers without automated technological assistance. Yet there have been reported incidents, in traditional video surveillance, where the operators were involved in unauthorized collection of data on the activities of individuals. For instance, in a report by BBC News (2005), a group of council employees in the UK spied on a woman's apartment using surveillance cameras installed in that area. Possibilities for such misuse are further increased with the advent of contemporary video surveillance systems that facilitate rapid data retrieval enabled by searching and advanced imaging technology. Such advanced technology in pervasive video surveillance may enable linking the activities of a target individual across multiple video streams.

As criminals and terrorists increasingly make use of new technology to mount attacks on public safety and cause incidents like 9/11 and the Madrid and London bombings, the public and law enforcement agencies must continuously increase their technological capabilities to protect innocent individuals. However, the need for increased security does not mean that privacy has any less importance. Privacy advocates and civil libertarians consider video surveillance a serious threat to the privacy of non-criminals who may be captured by cameras in public places several times a day (Kumagai & Cherry, 2004; Solove, 2002). Employment of video surveillance systems in public areas might cause deterrence, not only for criminals and terrorists, but also for individuals who want to raise concerns against government policies or simply meet with friends or beloved ones without being observed. Regardless of these privacy threats, the importance of video surveillance systems in combating the security threats is considered very important (Buttarelli, 2010), so surveillance systems must be designed and used in ways that protect individuals against crime, without compromising their democratic rights to privacy and freedom against technological measures.