



Ethical issues of CCTV monitoring and surveillance in road transport ITS applications

J. BARTCZAK

DEPARTMENT OF CHRISTIAN PHILOSOPHY, The Cardinal Stephan Wyszyński University (UKSW), Dewajtis 5, 01-815 Warszawa, Poland
EMAIL: juliabartczak@hotmail.com

ABSTRACT

In this paper a number of ethical implications of ITS monitoring and surveillance will be considered. Many people consider closed-circuit television (CCTV) monitoring and surveillance in public places, especially on the road or in the street, to be practically unavoidable, but also an infringement of important privacy-based rights of persons, e.g. drivers and passengers. It can raise a few privacy issues which, if left unsolved, could jeopardize the wider deployment of CCTV-based ITS. It could happen that CCTV systems are not used mainly for monitoring the flow of vehicles but rather to supervise some people. At what point does the monitoring and surveillance of persons become unethical? My article has to identify a few ethical conditions under which CCTV monitoring and surveillance in road ITSs may be considered to be morally justified. The paper refers to the following issues: problems with ITS monitoring and surveillance of persons, philosophical and ethical concepts of privacy, legal regulation on personal data privacy in EU and Poland, ethical issues of privacy in a few road transport ITS applications, and the problem of ethical justification of ITS monitoring and surveillance.

KEYWORDS: CCTV-based ITS, monitoring and surveillance, ethical implications, moral justification

1. Introduction

CCTV technology raises numerous ethical issues in the area of ITS applications in road transport. First of all, CCTV technology provides the increased road safety and efficiency of ITS, but also numerous concerns regarding to protecting the privacy of persons while travelling. Privacy [7] is often seen as a primary good, more similar to a personal dignity, instead of merely instrumental good. The basic ethical problem in the area is how to draw the line between road safety and security of travellers and privacy of their personal data as moral goods (values). In other words, how to practically compromise them? Ethics is seeking to answer the question, what *ought* we to do in such a situation? To fully understand the ethical problem of road safety versus privacy in ITS, we should, first of all, to analyze the notions and connections between person's privacy within CCTV systems and safety and security in a few chosen ITS applications.

2. Monitoring and surveillance of vehicles and persons in road transport

The words monitoring and surveillance have similar meanings. The word monitoring, from Latin, refers to the activity of a person who is charged with keeping order in some area, etc. The word surveillance, from French, literally means 'to watch from above'. Contemporary the two words are used in the United States and in other parts of the world in a special sense of a TV screen displaying the picture from a particular camera within Closed Circuit Television systems (CCTV).

CCTV serves as the "eye in the sky" for, for example, the government, especially police, businesses, and people, always watching from above. Video monitoring and surveillance in ITS are very useful to law enforcement to maintain social control and

monitor traffic order and threats on the road or in the street. But paradoxically they may allow to limit civil rights and privacy of drivers, etc. Hence the decision to use video-surveillance systems should not be taken easily and usually requires a careful assessment of the potential of its impact on the rights to privacy of those in the area of coverage.

The objects of CCTV monitoring and surveillance in the street or on the road can be vehicles and people. Each of them can be identify. It means that the image of a person or vehicle may be singled out in mass monitoring and surveillance. The exact information (data) on a given person or vehicles can be gathered, recorded, preserved and displayed within CCTV systems, and processed later for various purposes.

3. Technique of CCTV data collecting in ITS

Nowadays there are two basic techniques of data gathering in ITS applications though analog and digital CCTV systems. Analog CCTV systems use one of two main conduits to transmit visual data about the object of monitoring and surveillance. The most common is a wired configuration. In wired CCTV systems the image data runs a cable or wire between the camera and the monitor. In wireless CCTV the image data is transmitted when the distance between the camera and the monitor is too far to be practical for a cable run or when cables aren't practical because of other reasons, e.g. aesthetics. Digital CCTV often uses Internet Protocol (IP) cameras. Such a camera contains the camera and proper hardware and software in order to convert e.g. video signals into a stream of packets that can later be transmitted over a local area network (LAN) wide area network, (WAN), and over the internet. It is clear that the kind of used CCTV system in ITS applications has some impact on the quality of mass monitoring and surveillance of drivers and vehicles, especially the privacy of drivers and passengers.

4. Personal, impersonal, and semi-personal data in ITS application

General speaking, the data which are collected by any CCTV system may be divided into three categories: personal, impersonal and semi-personal data. The personal data is the data which is strictly connected with a given driver. For example, the image of the face of a driver or passenger. It is the most privacy-sensitive data in a few ITS applications, and hence it should be partly protected according to the legislation (the protection of personal data regulations) of a country. The impersonal data has no value from the point of view of privacy. However it usually has a great practical value for traffic monitoring and vehicle surveillance, etc. Generally, it is some data on a vehicle as such. Vehicle surveillance refers to technologies collecting a variety of data (information) about specific vehicles. These technologies include weigh-in-motion devices, vehicle

identification, vehicle classification, and vehicle location. But the semi-personal data may be placed in the middle on a scale between the opposite: personal and impersonal data. A good example of the data is the number plate of a car within automatic number plate recognition system – ANPR.

In some IT systems it can be used to identify easily the owner of a given car, and later the driver of it. It helps law enforcement and monitor threats in the street and on the road. In sum the division of CCTV data into three categories is of great useful for discussing the problem of road safety versus privacy in a few road transport ITS applications. But now it is vital to explain a number of philosophical and ethical concepts of privacy, and legal regulation on data privacy in EU and Poland.

5. Philosophical concepts of privacy in public places

Even in a public place, this is, in the street or on the road, we feel that we have some privacy. But how much privacy do we actually have? To answer to the question is not easy. There are many opposite opinions among drivers and passengers. The broad dissemination of CCTV systems during the last years in many countries has caused that even philosophers have been analyzing the problem of privacy in public places. They have formulated a number of philosophical concepts of privacy [7] which can be applied to understand the privacy of drivers and passengers in road transport. Consider a few of them. One of them is privacy as nonintrusion in the sphere of a person's privacy. Another is conceived as freedom to act. Still another is the concept of privacy as control we have over information (data) about ourselves. The next one is the concept of privacy as restricted access to personal and semi-personal data about persons which are stored within CCTV systems in their data banks. At last we are not sure of how personal and semi-personal data will be revealed to others. It is impossible to consider in detail all the mentioned conceptions of privacy but the intuitions contained into them have a deep impact on our understanding the problem of privacy of personal data in CCTV within several road transport ITS applications. Additionally, the philosophical conceptions of privacy have a basic influence on legislation on personal data protection and ethical aspects of privacy.

6. Legal regulation on CCTV regulation and personal data privacy protection in EU

CCTV legal regulation [3] varies greatly across Europe. Its employment is regulated by quite different state data protection acts, by police laws and codes of criminal procedure, by specific laws on video surveillance and furthermore special regulations for locations such as banks or sport stadiums. In some countries regulation exists both in regard to private CCTV systems and public systems. However in some countries there exists a lack of CCTV regulation. Such a situation may have a great implications on ITS

deployment in Europe. According to Peter Hustings, the European Data Protection Supervisor (EDPS), may lead to different levels of data protection in Europe. What is more, a kind of data protection issues at EU level is needed. The deployment of CCTV-based ITS has considerable data privacy implications in the Member States of EU. The most important is the answer to the questions, who is the data controller in each of the EU countries, who is responsible for ensuring that CCTV systems, especially in road transport ITS, work properly as to personal data protection privacy?

It is worth noticing that there is a document entitled, *EPDS Video Surveillance Guidelines* [8], in which we can find a set of recommendations for European institutions and bodies on how to design and operate their video-surveillance systems. There are similar documents in a few countries on the same issue, for example, in Great Britain. It is clear that ITS constitute a “data-intensive areas” and raise a number of privacy and data protection issues.

The problem is in front of the people who are responsible for the deployment of road transport ITS applications in Poland. The Polish Act on Personal Data Protection of the 29 August 1997, which implemented EU Directive 95/46/EC, is regarded as the first dedicated legislation in this area. This is also reflected in Articles 47 and 51 of the Constitution of the Republic of Poland of 1997. Article 47 ensures the legal protection of the private and family life of citizens, and Article 51 limits the circumstances in which the state can gather the personal data. In Article 1 of The Polish Act on Personal Data Protection we find the following general provisions that any person in Poland has a right to have his/her personal data protected, and the processing of personal data can be carried out in the public interest, the interest of the data subject, or the interest of any third party, within the scope and subject to the procedure provided for by the Act. However it is difficult to find any Polish document similar to, for example, EPDS Video Surveillance Guidelines, to be used for creating a guidelines on personal data protection in CCTV-based road transport ITS in Poland. Maybe it is too early taking into consideration the real level of ITS deployment in Poland.

7. General ethical aspects of persons' privacy in CCTV-based ITS

Many ethicists consider human dignity to be a vital ethical norm. It seems to them that CCTV monitoring and surveillance constitute a threat to their dignity and personhood, that is, to treat them like “physical” objects to be observed. Additionally, CCTV monitoring and surveillance often enables in some situations to gather confidential personal data and dissemination of them without their consent. The data are collected silently, even without the awareness of drivers and passengers. In sum, invasion of privacy is best understood by some people as a kind of affront to human dignity.

Another objection of a number of ethicists is related to taking and using personal data and images of persons without their permission. The concerns about unauthorised images have

exploded with the ease and accessibility in newspapers or online publications. “Surveillance” means often secret observation of the activities of another person for the purpose of spying upon and invading the privacy of the person.

For some ethicists it is a kind of stealing of somebody's property. What makes stealing wrong? It seems that it hurts other persons. It takes something from them that belongs to them. The images of a person fully belong to him or her. Besides, the personal data and images may be used against a given person.

Still another potential moral is voyeurism that CCTV may bring. Voyeurism is a kind of psychosexual disorder in which a person (an operator of CCTV system and sometimes third persons) derives sexual pleasure and gratification from looking at the some “hidden” parts of other persons' body. However, such a situations could especially occur when a body scanner is applied as at a few airports.

In sum the ethical issue is how to avoid CCTV cameras from potentially monitoring every move of person and her or his body, and diminish a few negative moral consequence for a travelling person.

8. Particular ethical issues of privacy in a few road transport ITS applications

There exists a number of ITS applications in road transport that can be discussed about from an ethical point of view on privacy. First of all, it is enforcement of speed limits by using speed cameras within CCTV-based ITS. However, when using CCTV section control is used, all drivers have to be photographed by cameras, while today only drivers who are speeding are photographed. The next one is enforcement of paying for the usage of road infrastructure, e.g. within toll monitoring and surveillance [9]. The last one in the situation of road accident when quick help is needed. We can see that the reasons of applying of CCTV cameras are sometimes various, that is, enforcement of legal regulation on the driver and a quick medical service to save a injured person's life. In the three situation driver's privacy may violated, however, in a various degree. It is impossible here to discuss the cases in detail.

9. The ethical justification of privacy violation in ITS monitoring and surveillance

For some ethicists it is obvious that the violation of person's privacy should be justified by giving one or few ethical reasons. Generally speaking, the basic reason in the ethical justification of privacy violation is the good of monitored people, e.g. drivers and passengers. Their safety in the road or road traffic is given as the main reason of applying surveillance of them and their vehicles with CCTV. Furthermore, in many countries by adding

the threat of terrorism has only increased the feeling of insecurity in public places, that is, on the street and on the road. That creates worldwide an additional push for camera monitoring and surveillance systems.

10. Concluding remarks

Today, people are often unaware when they are being monitored by CCTV systems in road transport, and, it is a pity, that they may never have the chance to stop this unlawful and unethical intrusion in a number of situation. It seems that privacy in today's and future society is becoming more of a luxury rather than a human right to be observed. However, we must agree with the opinion that CCTV monitoring and surveillance should be appropriate only in certain restrictively-defined situations. In sum, it is the ethical responsibility of the drivers and passengers to protect their own privacy by not allowing unethical uses of CCTV monitoring and surveillance in road transport ITSs.

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