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Leon Hempel/Eric Töpfer

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**On the Threshold to Urban  
Panopticum.**

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**Objectives and Results of the "Urbaneye" Project  
on the employment of CCTV in Europe**

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ZTG-Themenschwerpunkt:

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Lebensqualität durch soziotechnische Systeme

Nr. 06/03 Leon Hempel/Eric Töpfer

On the Threshold to Urban Panopticum. Objectives  
and Results of the "Urbaneye" Project on the  
employment of CCTV in Europe

Zentrum Technik und Gesellschaft  
Sekretariat: HAD 38  
Hardenbergstraße 4-5  
10623 Berlin

Tel: (030) 314-23 665  
Fax: (030) 314-26 917

mail@ztg.tu-berlin.de  
www.ztg.tu-berlin.de

## **Zusammenfassung**

Die rapide Ausbreitung von Videoüberwachung (Closed Circuit Television – CCTV) in Europa ist Gegenstand des vergleichenden Forschungsprojektes URBANEYE. Dieses Papier gibt eine kurze Einführung in das Thema. Anschließend beschreibt es das Forschungsdesign des Projektes, um daraufhin die bisherigen Arbeitsergebnisse zu präsentieren: Der Aufstieg von CCTV wird im Zusammenhang mit den nationalen rechtlichen Rahmenbedingungen und den öffentlichen Diskursen diskutiert. Darüber hinaus wird die Verbreitung, der technische Entwicklungsstand und die Legalität von Videoüberwachung auf der Stadtebene untersucht.

## **Summary**

The rise of video surveillance (Closed Circuit Television – CCTV) throughout Europe is the topic of the comparative research project URBANEYE. This paper first provides a brief introduction into the subject. Secondly, it outlines the research design of the project. Thirdly, the results of the work that was done so far are presented: The proliferation of CCTV is discussed within the contexts of national legal frameworks and public discourses. Moreover, extension, technical sophistication and legality of CCTV surveillance are examined at the city level. <sup>1</sup>

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<sup>1</sup> The paper has been produced mainly on the basis of the national reports of the URBANEYE project, funded by the European Commission. It encompasses contributions of the partners of the seven countries. For the individual reports please see the "working papers" on the project's website: [www.urbaneye.net](http://www.urbaneye.net).

# Inhaltsverzeichnis

Zusammenfassung.....	1
Summary .....	1
Inhaltsverzeichnis .....	2
1 Introduction.....	3
2 Interpreting CCTV.....	4
3 Project Design .....	7
4 Results so far .....	8
4.1 The Rise of CCTV in Europe, Legal Regulations and Current Debates.....	8
The Rise of CCTV .....	9
Modes of Legal Regulation.....	11
Public Debates and Acceptances.....	13
4.2 Locations and Actors. CCTV in public accessible space.....	14
CCTV in Major Urban Infrastructure .....	15
CCTV in selected High Streets .....	16
5 Conclusion.....	17
References.....	20

# 1 Introduction

The rapid proliferation of video surveillance is a major trend all over Europe. More and more cameras trace and track the routines of our everyday life. The assessment of the new technology is, however, still underdeveloped. How CCTV works depends highly on a number of circumstances such as the size, the social and technological organisation of the systems, the practice of surveillance in relation to the spatial configuration of the monitored space and not to forget the attitudes of the observed. A diversity of systems exists all over Europe. The usage covers a wide range of observed places, users and intentions. Large public areas, such as parks or central places are observed by CCTV systems as well as semi-public places, such as shopping-malls or airports. Public surveillance networks exist beside privately run cameras or systems managed in public-private-partnership. Next to small and isolated systems large integrated networks can be found. Besides covert and overt systems also dummy systems pretending a surveillance measure by a sign or a fake camera exist. Next to simple camera-monitor-systems there are others which use recording devices, remote sensors or even image processing devices to aid the staff in coping the information flood. Meanwhile also intelligent systems are tested and increasingly used. There are applications for automatic license plate recognition as recently introduced in London. There are others for facial, behavioural and incident recognition. Facial recognition systems for instance are capable to compare shots of persons in the sight of the cameras with others that are digitally stored. Moreover, the number of observers and their shift times differ from system to system. The attention given to images varies from a casual event triggered monitoring to a permanent 24h observation. Monitoring time usually depends on the owner's budgets and intentions. CCTV is not only used for crime reduction and social control but also for purposes of process management and communication and often all these intentions are combined with the consequence that a clear objective can hardly be identified by the observed.

Furthermore, also the perception of benefits of CCTV differ a lot. Many politicians and police officer believe in video surveillance as an effective instrument in modern law enforcement. Profit-oriented business interests focus on the feeling of safety for potential consumers and, in addition, may use CCTV to study consumer behaviour. But advocates and promoters of the technology, which often refer to some kind of public acceptance, are confronted with at least three major lines of critique. From the civil rights point of view many critics see in the use of CCTV a threat to privacy in terms of autonomy. Its potential of self-disciplining the society raises the concern that the employment is violating democratic values. Non-criminals could change their behaviour according to certain norms determined by the practice of video surveillance. Above that, the exclusionary power of video surveillance is pointed out critically. Perceptions of insecurities determine the patterns of observation. Operators might be biased against certain social groups or styles of behaviour. It is doubted that video surveillance could be neutral technology.

Its employment is seen as a means to sort out unwanted individuals and groups from the wider community, which indeed would imply that CCTV has an discriminatory effect. Last but not least critics also mistrust the actual effect of CCTV for example in regard to crime reduction and question the actual benefit in relation to the money spent for the implementation and maintenance of the systems. It is noted that unawareness, lacks of interest or the exhaustion of operators by the flood of monitored images limit the functioning considerable. The human mediation of technology is contingent. Practitioners confronted with this problem therefore try to fulfil the promised effects by increasing the number of staff or improving the technological sophistication of the systems.

## **2 Interpreting CCTV**

All these aspects are also addressed in the academic debate on CCTV. Major academic books on CCTV (Norris, Moran and Armstrong 1998; Norris and Armstrong 1999, McCahill 2002) have shown the ambivalence of its employment. While mostly advocates and critics belief that visual surveillance technology works, these studies explain that CCTV has to be seen in broader social and political contexts and that every optimistically belief in the effectiveness of the technology is pure fantasy. It also has to be kept in mind as Lyon has argued that surveillance always has two faces: "The same process, surveillance – watching over – both enables and constraints, involves care and control" (Lyon 2002: 3). There are several discourses in which CCTV is academically discussed. They give an idea of the complexity of the subject and underline the necessity that the rise of CCTV has to be analysed from different viewpoints. In the end its embeddedness in different social and political contexts requires a multidisciplinary approach.

A key dimension of understanding CCTV is the rapid social change caused by economic globalisation and the revolution in information technology. Already by the end of the 1980s Gandy mentioned that there is a close relationship between ICT and surveillance technologies. He reports "that the real source of growth in both the information work force and the development of information technologies is not to be found in any transformed consumer demand, but in the continually expanding surveillance requirements of multinational corporate enterprises. Indeed, for some observers, 'information society' is a misnomer that hides the extend to which industrial societies have in fact become surveillance societies" (Gandy 1989: 61). ICT connect people throughout the world, they provide new forms of communication, offer access to unforeseen sources of information and allow all actors, from individuals to cities, an infinite space to reach distant awareness of others. But at the same time ICT provides the basic technique for surveillance tools such as intelligent CCTV systems equipped with software capable to identify identities and behaviours.

A starting point has often been to describe the rise of CCTV as "panopticonisation" of urban space. Referring to Foucault' s explanatory recourse to Bentham' s architectural design of a model prison the panopticon

"has been one of the most powerful metaphors in locating the theoretical and social significance of CCTV in contemporary society." (Norris 2003: 249) By approaching the question if European cities are "on the threshold to urban panopticon" the Urbaneye project appeals to it, too. The design of the panopticon illustrates the mechanism of surveillance. It consists of a circular prison building including a central watchtower. It enables a single officer to control a multitude of prisoners. Its impressive clearness makes it an evident model for contemporary trends of surveillance. In form of modern CCTV systems – as for example in shopping malls – the panopticon suppose to celebrate its renaissance: The view of the camera´s eye is expected to be felt by the subjects regardless of the operation or even the existence of a CCTV system (see Davis 1990; Fyfe and Banister 1996; Reeve 1998).

However, just taking the above mentioned diversity of current forms of CCTV systems into account, it is obvious that the panopticon approach, stressing parallels to the industrial age of the 19<sup>th</sup> century, is highly questionable in regard to current social developments towards a post-industrial society based on mobility and information flows. Lyon considers: "Whatever one may learn from Jeremy Bentham's Panopticon or George Orwell's totalitarian telescreen technology, it is not clear if these are entirely helpful ways of understanding surveillance today." (Lyon 2002: 4). Thus McCahill states that one has to go "beyond Foucault" (McCahill 1999). Given the challenges of globalisation and the new patterns of living in a highly individualised society the panopticon has to be re-examined, combined with other discourses and models. Re-reading Foucault Norris has lately extended the understanding of it. He pointed out that in the end the panopticon is "far more than an architectural form of visualization". It implies at its "heart" already "the collection of individualized codified information". As the deviant is segregated from society, the panopticon is "exclusionary" as well as "inclusionary". It provides a "rationale for social classification" (Norris 2003: 251).

A further strand is to interpret the increasing use of CCTV in the context of the contemporary shift towards a risk society (Beck 1986). Thus, a changing perception of security can be observed all over the world. New sources of insecurities are located in terrorism, drug trade, growing social inequalities, transnational migration or the vulnerability of information and communication infrastructure. In this context CCTV is understood as a response to risks. The multifunctional potential of it makes it a management tool for all kinds of dangers and possible hazards, such as traffic jams, fire, tunnel accidents, crime, terrorists attacks etc. In this respect a shift from reactive to proactive policing can be considered. Moreover, it has been pointed out, that the management of risks is not only addressed to state agencies as the police but increasingly to a mixture of institutions and organisations within the security branch. In combination with neo-liberal political programmes and strategies risk management becomes more and more a responsibility of corporate and individual regulation. (McCahill 1999: 54) An installation of a CCTV system leads meanwhile probably in many countries of Europe to price deductions in insurance. The suicide plane attacks of September 11<sup>th</sup> have certainly roused a

world-wide concern for issues of risk and increased the sense of insecurity. It is likely it has intensified the public acceptance for the further installation of CCTV throughout the world.

A further perspective of understanding the increasing use of CCTV is the current trend of commodification urban space. Its increasing employment is described as part of a broader transformation of contemporary cities throughout Europe. Within the reconstruction of the old industrial to the new post-fordist city, which is characterised not by a mixture of functions, but first by the management of leisure and consumption, CCTV is understood as a tool of economic restructuring space. Parallel to architectural revitalisation, declined city centres, e.g. around central stations, shall be "won back" through its employment. It is argued, that the aim is to create a 'commode'<sup>2</sup> space for tourists and consumers. In times of scarce urban financial resources a new emerging understanding of urbanism is suspected to immolate public space for pure economic interest. Reeve considers: "The danger is that this largely insidious move towards a particular and commercially driven conception of what public space is for may lead to management and even policing practices which reduce the social richness of public space and thereby reduces its potential to be genuinely civilising and civic" (Reeve 1999: 73).

Turning away from the idea of urbanism in terms of social difference it is assumed that public space is transformed to homogenised zones. But the purpose of commodification is not just the creation of pleasing and comfortable atmospheres. Within the entrepreneurial city, it is said, that the managing of urban space means to classify people according to their economic purchasing power. According to this visual surveillance could become a tool of social exclusion. It is argued, that people could be sorted out by operators if their appearance and behaviour is not in accordance with the commercial utilisation of space. Hence would follow, the commodification of urban space implies its segmentation according to certain social affiliations, which are negotiated not publically, but determined by commercial interests. In line with that, it is also seen that the commodification of urban space correlates secondly with an inner commodification of behaviour of those who want to belong to the favoured space. A certain behaviour and appearance is asked for in order to participate on the playground of leisure and consumption. Within this context the surveillance potential of CCTV turns out to be one of "social sorting" (Lyon 2003).

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<sup>2</sup> Taking the etymological heritage from the French word 'commode' into account the term 'commodification' offers some interesting semantic relationships between the wish and the way of re-shaping public urban space. The meaning of 'commode' implies the creation not only of a 'pleasing' and 'enjoyable' space. But it also indicates a certain 'functional' manner to do this. In analogy to the noun 'commode', the piece of furniture, space is divided into separated and well organised compartments. The term commodification emphasises this contemporary trend of spatial division by privatisation.

### 3 Project Design

In respect to the diversity of systems throughout Europe the analysis of CCTV first needs a detailed description of the phenomenon. In consideration of the mentioned approaches – others could be added – the Urbaneye project aims to improve the knowledge on the state of affairs in a comparative perspective. In the seven European countries Austria, Denmark, Germany, Great Britain, Hungary, Norway and in part Spain the project seeks to describe and analyse processes of video surveillance, their contexts, infrastructures and practices. What is the situation in Europe in terms of legal regulation, public debate and acceptance, extent, legality and technological sophistication? How does CCTV work in different national, institutional, social and spatial contexts? What are the political and social impacts of CCTV and how can they be assessed precisely? The project tries to contribute to studies of surveillance and social control by improving methods and refining theories. Nevertheless in the end it studies the rise of CCTV across Europe in order to find out whether there is a need to regulate its employment and if yes how this can be done. The aim is to devise strategies for regulation and to contribute to the debate for an appropriate political response at the national and the European level.

The overall research process is structured in the following six tasks.

Legal Framework and Current Debate: The aim of this work package has been to give a general overview of CCTV in Europe. It shall be outlined the common trends as well as the national differences in the modes of legal regulation, the most prominent uses and the dominant public attitude towards CCTV as reflected by selected print media.

Locations and Actors: The target here was to map locations of CCTV in selected urban areas of Berlin, Budapest, Copenhagen, London, Madrid, Oslo and Vienna in order to identify clients and suppliers, their intentions and the core features of located systems.

Structures and Practices: The objective of this work-package has been to examine technical the functions, the spatial configuration of control, the styles of management and the practice of surveillance in selected CCTV systems in each of the seven capitals (except Madrid).

The Social Effects: This work-package will study the social effects of CCTV surveillance in terms of changes in criminal and every-day behaviour by interviewing observed.

The Political Impacts: The project will assess the impacts of CCTV on politics of law enforcement, civil rights and the character of public space with the help of an expert workshop with stakeholders from politics and law enforcement agencies, data protectors, civil rights groups and urban planners in September 2003.

Strategies for Regulation: Based upon the findings of the research the Urbaneye project will finally outline strategies for the regulation of CCTV by collating and classifying existing and discussed mechanisms of control and devising good practices.



So far the first two tasks are completed. The research has started at the country level in order to provide first a general overview on the rise of CCTV in Europe. Afterwards the perspective was focused to the urban level of the capitals in order to study here exemplary the varieties of applications. When writing this paper, selected systems themselves are studied in detail, a task which is mainly completed.

## 4 Results so far

The following paragraphs summarise the findings of the first two research steps. This includes the objective to give a general overview of CCTV in Europe by focusing on the rise of CCTV, the legal framework of CCTV and the current debate about video surveillance. This also covers the second research step, which tried to identify and map locations and actors of CCTV in the capitals of the countries.

### 4.1 The Rise of CCTV in Europe, Legal Regulations and Current Debates

The first research step can be divided into three parts. Firstly it was carried out research according to certain categories of comparison. In brief these categories were supposed to include general background information providing the national context of CCTV. The aim was to give an overview of the history and to present facts and figures on the current state of affairs for each country in terms of market, estimated number of systems etc. Secondly, each partner was requested to outline the legal context framing CCTV, in particular data protection legislation, police acts and codes of criminal procedure. To fulfil this all partners carried out a textual interpretation of relevant literature, media reports and legislation. In addition, some partners interviewed key stakeholders such as data protection officers, criminologists and law enforcement practitioners. Thirdly, an analysis of the current debate was undertaken by a content analysis of three to four newspapers per nation for a period between November 2000 till November 2001. Electronic full-text-archives of these newspapers were searched for relevant key words such as CCTV, video surveillance or surveillance cameras. All founded articles were coded and analysed according to a list of typical contexts, the topic of texts, the orientation towards CCTV, discussed

#### History of CCTV

- CCTV is used in the public and private realm since the 1950s
- Its presence exploded since the 1970 due to technological progress, the shift from informal to formal social control in risk society and the commodification of urban space.
- In the 1990s it became a prominent instrument for combating street crime in most European countries regardless of the political orientation of the ruling parties.
- The UK has been the frontrunner in this trend and this experience served as pattern in other countries

intentions, locations and named targeted groups.

## **The Rise of CCTV**

In the 1950s the first cameras were installed for traffic management purposes. Based on the camera-monitor-principle in 1958 a traffic management system was for example established in Munich with fixed cameras at 17 key junctions (Weichert 1989: 7). After the invention of the Video Cassette Recorder in 1956, which provided a cheap and simple method of recording and storing images, suppliers launched video surveillance systems for banks and shops selling luxury items. In the UK the first system for the retail sector was launched by the company Photoscan in 1967 (Moran 1998: 279). Even though these systems had been primarily deployed for the deterrence and apprehension of robbers and shoplifters they were soon found to be useful instruments for consumer surveillance in order to rationalise business resources, e.g. by devising "shopping routes" that could be found more stimulating. In the subsequent years CCTV was especially refined for workplace surveillance: it became possible to improve the control of equipment security, regularity of labour performance and quality. During the 1980s its usage was also increased in urban public transport for crowd management and combating vandalism. In metro systems CCTV was implemented in order to co-ordinate the intervals of trains and to guarantee a smooth customer clearance. In 1985 a first open-street system was launched in Bournemouth in Great Britain. It lasted another couple of years that CCTV reached his breakthrough. Since the 1990s the public presence of it grew, not only in Great Britain but in many European countries by utilising cameras against street crime. By this development CCTV has left private and semi-public space to which it was confined from the 1970s till the mid-1980s. (Butarelli 2000)

The findings of the national reports show that the expansion of public CCTV took various paths in European countries. Britain is the nation with the highest video surveillance intensity in the world. On the continent the British case also serves often as negative or positive experience for political decision makers. Regarding open-street CCTV Hungary seems to follow the British way of implementing CCTV. Similar arguments and strategies can be found. In both countries recorded crime rose dramatically. In Hungary after 1989 recorded crime increased up to 50%. In 1992 crime climaxed its peak value on which the numbers have stabilised now (Bodnàr 2000: 80). In the UK between 1979 and 1992 it doubled from just three million of offences per annum to over six million. While CCTV served in Britain as a quick technological fix to spiralling crime rates, in Hungary, especially in Budapest, the technology has been introduced as a western 'miracle' of combating crime. Furthermore, in both countries there is a remarkable public funding of CCTV schemes. Finally, in Britain there has been an absence of legal regulation which could have limited the introduction of CCTV. The chief commissioner of the Budapest police also reported that it has been an advantage that there had been a lack of direct legal regulation in Hungary.

In contrast, in Austria video surveillance in public space has not become integrated into the political agenda as response to crime control and fear of crime at the national level, although a first open-street system was launched at Villach. Since 1994 the police monitors the area of the central station, since November 2002 the inner city. In Spain, where the spread of systems is not very intense, CCTV is first of all a tool in defending terrorism. Germany and Norway have taken a different way of implementing CCTV within public space. In these countries video surveillance is seen as an effective measure against crime among other crime prevention instruments, but it is also publicly declared that an extensive use is not wanted. Due to the specific history of data protection in Norway each data processor, e.g. companies using CCTV systems at their stores, must be registered. A critical public as well as sceptic politicians in Germany still seem to prevent to copy the British example of implementing CCTV in public areas. In Denmark, an open-street system can not be verified, although there is wide-spread use of systems in the private area.

Despite of this restraint in the two Scandinavian and the two Central-European the acceptance of open-street CCTV seems to rise. Though the deployment of CCTV against street crime was initially advocated by conservative parties. Meanwhile it has been adopted as law-and-order-strategy by parties of all political affiliations. In Great Britain Tony Blair's "New Labour" follows the course of John Major's Tory government and continues funding CCTV schemes.

<b>country</b>	<b>first inception</b>	<b>cities</b>	<b>cameras</b>
UK	1985	500	~ 40.000
Spain	mid 1990s	>1	n.a.
Germany	1996	15	~ 50
Norway	1999	1	6
Hungary	1997	2	~ 200
Austria	1994	>1	n.a.
Denmark	no	no	no

Also in France local authorities headed by Gaullists as well as Socialists order the installation of cameras. In Germany's for instance largest state North Rhine-Westphalia a coalition government of Social Democrats and Greens paved the way for video surveillance in public space by revising the police act in 2000. Thus, the proliferation of CCTV is a common trend in private as well as public space all over Europe largely independent of the general political conditions.

Meanwhile first evaluations of the crime control effects of CCTV have been carried out. These are known by the authors in particular from the UK and Germany. Most of them were usually carried out by the operators of a system, e.g. the police. They highlight crime statistics in order to justify the efficiency of CCTV. Hence they have to be seen as part of public relations strategies of advocators. However, their scientific value is highly questionable. Not only is the explicit focus on changes in crime rates insufficient but the statistical procedure itself is often weak. Pawson and Tilley point out for the UK that most of those standard evaluations are "post hoc shoestring efforts by the

untrained and self interested practitioner" (quoted in Norris/Armstrong 1999: 94). But they have a high authorial impact on the public and political decision making processes.

In contrast, scientific evaluations, that take statistical problems into account, show that "CCTV is not a universal panacea" to combat crime (Ditton and Short: 1999: 217) The impact of CCTV is contingent upon the circumstances of its employment. Thus, the local environment, integration in police deployment practices etc. are determining outcomes. According to Pawson and Tilley the "contexts" of CCTV are the basis for a "realistic evaluation" in order to understand "mechanisms" of its use and the "outcomes" of crime effects (Pawson and Tilley 1997).

Comparative reviews of the evaluations have shown that the findings of evaluations show inconsistent outcomes (Phillips: 1999; Coleman and Norris 2000). There are success stories next to examples of mixed as well as negative outcomes. The crime reduction effects of CCTV are often much less than claimed by its advocates. Moreover, its introduction does not necessarily reduce the fear of crime. A recent comparative study on 30 British CCTV evaluations on behalf of the British Home Office has stressed once more the limits of the effectiveness of CCTV systems in reducing crime (Welsh and Farrington 2002). Another review summarises that CCTV as a crime prevention instrument appears to have a live cycle. Unless publicity is maintained, any initial reductions in crime can fade. CCTV has least effects upon public order offences, and most when used in car parks. It can be very beneficiary in combination with other crime reduction measures and when tailored to the local setting. Furthermore, the employment in the UK has shown discriminatory effects (Armitage 2002: 5-6).

## **Modes of Legal Regulation**

Modes of legal regulation of CCTV vary greatly across Europe. Its employment is regulated by federal and 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. Also copyrights provisions touch the usage of CCTV. In some countries strict regulation exists in regard to private CCTV systems. In other countries mainly public systems are legally regulated. However, the findings demonstrate that although the spread of video-surveillance was partly determined by the lack of regulation in some countries, it is not simply the case that legal regulation has limited the rise of CCTV. Since the law has served to stem the growth of CCTV in some contexts, due also to specific facts of the individual political systems, one has to keep in mind that the law serves also to legitimise the use of CCTV.

At the European level CCTV is largely outlined in the context of privacy and data protection: in particular by Article 8 of the European Human Rights Convention, the European Convention on the Automated Processing of Personal Data of the Council of Europe and the Data Protection Directive (95/46/EC) of the European Union. Especially the latter, which is binding for

all member states of the union, has influenced the national regulation of CCTV during the last years throughout Europe. Passed in 1995 it came into force in October 1998 with the aim to harmonise European data protection legislation. Although it is not in the EU, but nonetheless affiliated with the Union through the Agreement on the European Economic Area (EEA) of 1992, also Norway has replaced its privacy legislation in line with the EU-Directive. Similar, the accession state Hungary revised its 1992 Privacy Law in June 1999. Mainly the directive has led to a lot of similarities among the countries in regard to central definitions of terms like "personal data" or "sensitive data", "data subject" or "data controller", "data collecting" or "data processing".

Signifying the political pressure towards the European national governments to update their provisions in respect of new technologies it has led to first more or less direct regulations of video surveillance in the countries.

Different acts govern the employment be differentiated according to its use for public safety and the prevention of disorder or crime on the one hand and to all other areas on the other. The former employment is regulated by specific laws as police acts or codes of criminal procedure. The latter use is mostly regulated within the framework of the data protection legislation. Some countries such as Spain have explicit laws for CCTV-surveillance by the police in the public realm. In Denmark the 'Law on the ban against TV-surveillance', which came into force on July 1<sup>st</sup> 1982 forbids the private use of CCTV in public areas. In other countries such as Germany explicit sections on CCTV by non-police actors can be found in the data protection acts. From case to case this variety causes major differences, for example in regard to the demand of transparency data protection is asking for. In Great Britain there is no explicit CCTV law and there is also no explicit regulation of video surveillance in the British Data Protection Act. But meanwhile there is a "Code of Practice" issued

### Three European norms concerning the employment of CCTV

1. **European Human Rights Convention** guarantees by Article 8 the right to respect private and family life. According to the second paragraph "there shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or the rights and freedoms of others."
2. **European Convention on the Automated Processing of Personal Data 1981** specifies the general provisions of the EHRC and regulates the processing of any personal data relating to natural persons that have been collected with surveillance activities.
3. **European Data Protection Directive** came into force in October 1998. Binding for all Member States of the EU Article 3 is applicable if personal data are stored in a "file" except for the case that the processing affects public security, defence, state security and the activities of the state in areas of criminal law. Article 2 defines a "file" as "every structured collection of personal data which is accessible to certain criteria".

by the British Information Commissioner, that sets a framework on how the Data Protection Act of 1998 should be put into practice in regard to CCTV. As this code does not have any independent legal character it is unknown how effective it is. Nevertheless, besides this formal diversity of legal regulations there are different regulatory tools such as the registration of systems as it is known from France, Norway and Sweden or the notification in order to guarantee transparency. But if and how they meet the purpose to protect the human right to privacy has still to be evaluated.

## Public Debates and Acceptances

One of the main findings is that legal regulation in its own is not sufficient to reconcile video surveillance with the necessary preservation of the human right to privacy. The comparison shows that also the public discourse has its regulative effect, even when this is more indirect. While there is a high standard of regulation in Norway caused by the legally binding duty to register CCTV systems, the public awareness is rather low. In Denmark a stronger public debate is verifiable due to the engagement of the Danish Crime Prevention Council. The extent to which CCTV is an issue in the public debate differs from country to country. If there has been one at all, in the UK the public debate has passed its peak long ago. Events like the abduction of the two year old James Bulger in 1993 chronicled by security cameras in the UK promoted public awareness which however was supportive and not critical. According to our sample of four newspapers (two national and two regional newspapers) most stories still can be found in Britain. This is again not due to a critical debate, but indicates the fact that in England CCTV is a matter of everyday life. In Norway and Austria its use just becomes a topic of public interest while in Germany a debate is recognisable to some degree, which is however limited to open-street CCTV. It is polarised between advocates of the surveillance technology, often convinced of policies of law-and-order, data protectors and civil rights activists.

Country	Papers	Stories
Austria	4	154
Denmark	4	179
Germany	4	280
Norway	4	114
Spain	/	/
UK	4	668

All news stories and events can be set in a wide range of discursive frameworks. The question is which discourse is prioritised and in whose interest does it operate? It was the aim of a newspaper analysis to study dominant orientations, typical policy actors and their positions and perceptions in order to identify major discourse strategies. The crucial question has been at what point of public perception video surveillance becomes an issue. In all countries where there is some critical debate on CCTV, it is noticeable that they refer to different realms. In Denmark it is the private use of cameras within the public that causes concerns. In Germany it is the use of CCTV by the police, and in Great Britain the use of cameras to enforce speed

restrictions on the roads. In contrast to other countries CCTV in Britain is not contested as a crime prevention measure. The variations can be explained by cultural and historical differences. Beyond this, one can conclude, that the sensibility for surveillance measures is contingent upon cultural and individual norms and values. A thesis for further research could be: The closer the surveillance is to pester not only the others but oneself, the less enthusiastic one is about it. Depending on age, sex, profession etc. there are a lot of different perceptions about the benefits of CCTV. A prostitute might welcome the gaze while the suitor might probably feel disturbed.

In addition it has to be mentioned, that although the rise of CCTV in Europe proves the growing demand and opinion polls often indicate a high public acceptance, its rapid proliferation has caused public resistance in many countries. Established organisations raising the issue such as Privacy International which initiated the "Big Brother Awards"<sup>3</sup> exist besides loose networks such as the UK CCTV Surveillance Regulation Campaign<sup>4</sup> or the Surveillance Camera Players<sup>5</sup> engaged in entertaining bored controllers by short performances in front of the cameras.

## **4.2 Locations and Actors. CCTV in public accessible space**

For the second research step data on CCTV were collected in each capital at three levels. At the urban macro-level a set of "major urban infrastructure" such as public transport, airports, railway stations and motorways was selected for each capital in order to give an overview of CCTV networks. By media research, semi-structured interviews with security managers and police officers the data was ascertained. Also e-mail and telephone inquiries at press offices of relevant authorities and institutions and visits of CCTV control rooms helped to complete the research. At the micro- and meso-level of a selected high street and the neighbouring area in a multi-functional central district the national research teams carried out a "door-to-door survey" of CCTV in public accessible premises and institutions such as small shops, chain stores, cinemas, post offices, schools, hospitals etc. Thus, the team collected data for 1365 public accessible premises and institutions in the selected high streets. In addition at the meso-level, each national team collated data of 31 types of institutions in the district in which the high street is situated. Thus, the consortium collected and analysed two data sets (high street / 31 institutions) for each surveyed city. The analysis of these data sets served as the empirical basis for the identification of common patterns and differences in coverage, legality and technical sophistication of CCTV systems in a variety of national and/or institutional settings.

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3 Privacy International – The Big Brother Awards.

<http://www.privacyinternational.org/bigbrother>

4 Watching Them, Watching Us – UK CCTV Surveillance Regulation Campaign.

<http://www.spy.org.uk/home.htm>

5 Groups are indexed at New York Surveillance Camera Players.

<http://www.notbored.org/the-scp.html>

## CCTV in Major Urban Infrastructure

It is evident that there are buildings in each capital that are seen as high risk locations. Governmental, ministerial buildings and airports deploy a CCTV system. For these institutional settings surveillance cameras are state of the art. Another strand of CCTV employment is transport. Roads and motorways, Railway stations, undergrounds and urban railways, busses and trams and also taxis are often equipped with cameras. For example in all cities of the survey the underground or urban railway network is capable of a system. From city to city they are used for diverse tasks such as train clearance, train driver assistance, passenger information and emergency services. In addition, in Berlin and Oslo (as trial) also a number of vehicles are equipped with cameras to deter vandalism.

In contrast, in Berlin, Copenhagen and Vienna open-street systems do not exist. Berlin is one of the last four German states where the employment of CCTV is still legally not authorised, even there are strong efforts since years by the conservative party to permit the use at crime hot spots. If seen as a larger urban agglomeration rather than as an administrative unit, there exist three small open-street CCTV systems in the outskirts of Berlin: Beyond the borders of the city in the neighbouring state Brandenburg the police started systems in Bernau, Erkner and Potsdam in winter 2001/2002. In Vienna there are just two sites, one at the 'Stephansplatz', the city centre (since 1999), and one on the Kärntnerstraße / Opernring (since 1989/1990), the central high street, where cameras are installed. However, the Police of Vienna does not use them for permanent observation but for the monitoring of events such as the annual demonstration against the opera ball (König 2001: 44).

London is currently the unrivalled world capital for CCTV in public streets and places. Norris and Armstrong estimate that in a single day a citizen of London could expect to be 'filmed by over three hundred cameras on over thirty separate CCTV systems'

capital	number of systems	number of cameras	First system
Berlin	no system, but 3 in the larger agglomeration of Berlin/ Brandenburg	10	2001
Budapest	14 systems in 9 of 23 districts	200 cameras	1997
Copenhagen	no system	/	
London	22 of the 32 Boroughs plus several other systems	> 1000	N/A
Madrid	Few system in the larger agglomeration of Madrid	N/A	N/A
Oslo	1 system	6 cameras	1999
Vienna	No system	/	/



(1999: 42). It is guesstimated that about 500.000 cameras monitor the UK, whereas 40.000 are used for open-street CCTV. In respect to open-street CCTV in London more than 1.000 cameras trace and track the routines of the everyday life of its approximately 7.2 million residents. 22 of the 32 boroughs deploy an own system. The CCTV system of the Borough of Newham integrates an intelligent system that is equipped with a facial recognition device.

Next to London Budapest is the Urbaneye sample with the most systems. The first open-street system in Budapest including five cameras was installed in the 5<sup>th</sup> district in 1997. In 1999 the municipal assembly of Budapest funded the installation of CCTV in further six districts with an amount of 16 million Forint (app. 66.390 Euro). In 2000 again 10 districts received 31.8 million Forints (app. 132.000 Euro). In April 2002 there are in Budapest 14 larger open-street CCTV schemes with about 200 cameras. 7 more are planned. Between 5 and 90 digital cameras per system monitor the areas. Compared to those the only system of Oslo is rather small. It consists of six cameras operated by the police in the area around the railway station.

### **CCTV in selected High Streets**

The findings of the high street sample show the following: From all 1365 cases 29% have a CCTV system and 4% deploy dummy cameras or pretend by a sign that CCTV is in operation. Thus in one third of all sites there is in a sense a surveillance measure.

The existence of systems varied between different institutions. CCTV is most likely to be found in metro stations as mentioned above. Transport locations in general seem to be a focal point for CCTV. Not only the history of CCTV underlines this, but also the fact that the first open-street system in Norway and most of the public systems in Germany are located nearby stations. Most of the systems of our sample are private ones. 74% were found in small shops, chain stores, and banks. However only 18% of all small shops, 40% of chain stores or large retailers and 83% of all banks use a system. It is very likely to be filmed at every financial institute, banks and post offices. One may assume that in those locations the camera implies also a symbolic value. The money at these places is safe. Striking is, that only 50% (4 out of 8 cases in our sample) of all shopping malls – often thought to be prototypes of controlled urban space – deploy surveillance cameras.

Another matter of interest has been the legality of the systems. In Norway and Germany an adequate warning is legally obligatory to indicate the existence of video-surveillance. In both cases the legislation demands that the conducting of a CCTV scheme and the authority in charge of it has to be made visible by appropriate means. The mentioned British "Codes of Practice" goes even one step beyond. According to the interpretation of the Data Commissioner the demand on notification of the British Data Protection Law requires a number of information in respect to CCTV. In order to fulfil a "fairly and lawfully processing of personal data" people must be aware of the measure and

therefore an adequate signage of the conducting of CCTV is requested. All systems should provide details about the identity of the data controller and the stated purposes.

However taking the results of the survey into account slightly more than 50% of all inspected systems were not notified by signs at all. Many systems operate in a illegal or at least in a grey legal area as they do not satisfy the demand on notification. One must assume that the idea of notification is either unknown or not taken serious and therefore ignored. One might argue – as the Federal Government of Germany did when asked for the notification practice at federal buildings that are under video surveillance – that the clear visibility of a camera is a notification. However, the employment of CCTV is an intransparent phenomenon as in most cases it is not identifiable by whom, how, and for what purposes the system is used for.

This intransparency is also underlined by the response rate of the survey. 43% of the premises operating CCTV denied detailed information, in particular in Budapest (87%), in Berlin (72%) and Vienna (55%).

Another item of the survey has been the organisation and technological sophistication of CCTV systems. 74% of the systems are monitored by observers who, however, often have to fulfil other tasks (90%). Thus, the effectiveness of CCTV in imposing a panoptical gaze is likely to be very limited. Given this it is not surprising that 76% of the systems record the images.

Over half of the systems in the overall sample are small isolated systems with very little technological sophistication. 53% of the system are equipped with not more than 3 cameras, just 11% with more than 10 cameras.

But the study shows that for larger systems there is a trend to integrate these by the implementation of new technologies and also by the rationalisation of management and organisation of surveillance practices. 1/3 of all systems employ a linkage to other systems. 50% of all systems with more than 10 cameras are linked to others by either switching images (33%) or some kind of communication link (46%). In contrast, just 8% of all the small systems with less than 4 cameras are able to switch images and only 23% use a communication link. Hence follows the likeliness that a big system (>10 cameras) uses a device to switch images is four times higher than for small systems (<4 cameras), and that it uses a communication link twice as high.

## **5 Conclusion**

When comparing the rise of video-surveillance in individual countries, it is obvious that its diffusion is very unequal, and it is apparent that different countries in Europe are following different paths. The public awareness and also the academic knowledge about the development of CCTV varies highly from country to country. The extent of CCTV in public space in the individual countries seems to be dependent on different factors: the socio-economic contexts, the political constellations and their dealing with urban problems such as crime and also legal traditions.

Obviously there are some significant similarities between the UK and Hungary in regard to the perceptions of benefits and the implementation strategies of open-street CCTV. Both countries have undergone a more rapid socio-economic transformation process in the last decades than all other countries. With the economic crisis of the 1970s unemployment increased in Britain, poverty became visible, and rising crime rates alarmed politicians. New strategies of control such as "zero tolerance" or "community policing" emerged in the changing political climate of the 1980s, which combined "economic liberalism, reduced public expenditure and an emphasis on individual moral responsibility, with populist law and order politics." (Coleman and Norris: 2000: 149) The focus in crime prevention shifted from the offender and his social background to the offence and its proactive management. In this context CCTV was seen as an adequate tool of such proactive strategy of social control. In Hungary after the fall of the iron curtain the economy of the country collapsed with the consequences of immense fiscal problems, decreasing incomes and increasing crime rates. Confronted with public demands to combat crime and the sudden need to position Budapest in international urban competition CCTV appeared as a promising 'silver bullet' of the west against the 'evils' of a new era. In addition, in both countries, the lack of explicit legal regulation enabled the rise of open-street CCTV.

While the extent of open-street CCTV differs extremely throughout Europe, it is spreading in the semi-public and private realms in similar ways and likewise dimensions. Moreover, according to the results of the Urbaneye project show that the rise of CCTV is following two trends. On the one hand larger systems show an increasing tendency of being linked. Not only indoor alarm systems of banks or museums are connected to private security services or the state police, but also CCTV systems of railway stations or shopping malls. Formal and informal exchange of information connects different schemes and consequently the boundaries between public and private spheres are blurred. In his study on the operation of CCTV across a whole domain of an English city McCahill argues that in the end not only a separate and discrete system has to be taken into consideration in order to understand the impact of visual surveillance systems, but at least for the British case meanwhile a whole "surveillance web." McCahill argues: "A combination of public and private CCTV systems linked with pager systems, panic alarms, radio links and mobile and fixed telephone networks is facilitating the development of surveillance webs which weave unseen through the fabric of contemporary cities." (McCahill 2002: 99) In contrast to cameras and a demanded signage for the single system the web stays invisible. It resists in the end every demand for transparency. The cross-linking causes the purposes of systems to manifold and in the end it is impossible for the average citizen to discern the real intentions of a surveillance measure.

On the other hand there is a trend towards small and technologically rather simple and isolated systems. How can this be interpreted? As for big systems, also for those not very sophisticated, the demand for new strategies of social control provide a plausible way of understanding. As Garland (1996) has

worked out, the sovereign state has reached its limits to control crime and thus reacts to its fading capability of effective protection by downsizing responsibility for crime control. These so-called "responsibilisation" strategies empower non-governmental organisations and institutions. Examples are public-private-partnerships, security co-operations or different approaches of community policing. But these strategies of citizen empowerment programs are not only leading to the development of surveillance webs but also stress the responsibility of each individual to defend its personal security. In his own interest every resident is responsible to manage the risks by himself. While the state concentrates on the protection of strategic hot spots, focal locations and places of symbolic value, the citizen becomes the manager of the risks and dangers that might occur to her or him. In the end each individual turns out to be the 'sovereign' in its immediate radius equipped with proactive tools such as CCTV. The threat is, as for the big webs, that new forms of private justice could emerge.

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