AUSTRALIAN INSTITUTE OF CRIMINOLOGY

trends & issues

in crime and criminal justice

No. 271

Open-Street CCTV in Australia

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In Australia 'open-street' or 'town centre' CCTV refers to visual surveillance systems established in the main by local government authorities in cooperation with police to monitor public spaces such as malls and major thoroughfares. This paper is therefore not concerned with other uses of CCTV such as its deployment on public transport networks, within privately regulated commercial spaces such as casinos and shopping malls, or in retail outlets. The results presented are drawn from a wider study that collected data on all 33 Australian schemes (Wilson & Sutton, 2003). In-depth interviews were conducted with relevant personnel in 22 CCTV systems, and more detailed site inspections were undertaken in seven locations. The authors discuss the findings of existing research, and then consider the establishment, operation and management of current Australian systems. The paper concludes by considering pertinent policy issues for the future deployment of CCTV in public areas.

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Most developed countries, Australia included, are witnessing increased government and public concerns about crime and security. One indicator has been more widespread use of closed circuit television (CCTV) to monitor public space. The city of Perth established Australia's first open-street closed circuit television system in July 1991. Subsequently there has been rapid expansion. At the end of 2002 Australia had 33 such schemes, with the Northern Territory the only Australian jurisdiction without a CCTV-monitored streetscape or public mall.

Although CCTV has expanded rapidly in public spaces it remains a controversial measure whose outcomes and appropriateness are hotly contested. Advocates of CCTV claim it is effective in facilitating immediate responses to incidents, combating certain types of crime and reducing fear of crime. Moreover it is maintained CCTV aids in general town centre management (Horne 1996). Critics, however, suggest there are significant downsides to the use of CCTV in public spaces. A major concern is that CCTV may target already vulnerable sections of the population and result in social exclusion (McCahill, 2002). Other concerns relate to the possibility that CCTV surveillance will be used to undermine individual freedoms and facilitate oppressive forms of social control (Davies 1996, 1998; Norris, Moran and Armstrong 1998). These concerns (which have significant implications for policy formulation) are discussed in greater detail elsewhere.[1]

The purposes of the present paper are threefold. Firstly, we provide an overview of existing research findings. Secondly, given that our larger research project (Wilson and Sutton 2003) aimed to rectify what we perceived as a dearth of information about the extent and operation of open-street CCTV systems in Australia, we document the present deployment of open-street CCTV in this country and operational issues highlighted by interviews with managers. Pertinent areas covered include: reasons for installation; community consultation processes; funding, operator practices and communications with police; auditing and evaluation. Finally, we outline fundamental considerations that should be taken into account in the CCTV policy process.

November 2003

ISSN 0817-8542
ISBN 0 642 53827 1

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Is Open-Street CCTV Effective?

Results of research on the impacts of CCTV in open-street settings have to date been ambiguous. Welsh and Farrington's (2002) meta-analysis compared 13 evaluations in city centres and in public housing, seven located in England, five in the United States and one in Scotland. Eleven of the 13 sites were located in 'city centres', the remaining two located in public housing. Five found a positive effect (decrease in offences) and three an undesirable effect (increase in crime), while in the remaining five evaluations there was no effect or evidence was unclear (Welsh & Farrington 2002: 13). It should be noted, moreover, that attempts to directly link implementation of CCTV to changes in the overall crime rate are problematic. As Tilley (1998) has cautioned, crime rates may be subject to random fluctuations, and it would be a mistake to assume a fixed invariant relationship between the introduction of any one measure and either decreases or increases in recorded crime.

As is the case with most situational crime prevention measures, whether crime is prevented by CCTV coverage or is merely displaced to other locations remains contested (Brown 1995; Ditton and Short 1999; Skinns 1998). In the 13 evaluations overviewed by Welsh and Farrington more schemes showed evidence of diffusion of benefits than displacement (2002: 42). While opponents of CCTV often suggest an irrefutable link between cameras and displacement the statistical evidence is inconclusive. However the argument that CCTV will displace crime is difficult to counter, as it can never be proven that displacement has not occurred (Tilley 1998: 143).

Mixed findings in Britain as to the effectiveness of CCTV in preventing crime have led to a reformulation of research questions. Both Tilley (1998) and Skinns (1998) recommend methodologies that move beyond reliance on recorded crime statistics. Pawson and Tilley's (1997) 'realistic' evaluation framework, that takes account of context, mechanisms and outcomes of CCTV, is widely considered the most sophisticated evaluation methodology. A key advantage of this approach is that it enables the evaluator to focus on the ways CCTV does or does not work in specific contexts to generate specific outcomes (Tilley 1998: 145). Brown (1995) and Armitage et al. (1999) have applied principles of realistic evaluation to open-street CCTV. Even taking account of the need for realistic evaluation, however, evaluations of public space CCTV continue to return mixed findings (Phillips 1999; Welsh & Farrington 2002; Coleman & Norris 2000).

To date only two evaluations of open-street CCTV are publicly available in Australia: one of Fairfield, NSW and one of Devonport, Tasmania, (Fairfield City Council 2002; Goodwin 2002). Both evaluations review existing operations and make location specific recommendations for improvement. However in both cases insufficient pre-installation data was available to assess the impact of CCTV on offending. In light of the funds being committed to open-street CCTV implementation and maintenance, there is a clear need for more extensive Australian research and evaluation.

Table 1: Number of Open-Street CCTV Systems by State or Territory (as at October 2002)

	Total	Capital	Regional
NSW	11	4	7
Qld	10	2	8
WA	4	2	2
Vic.	3	2	1
Tas.	3	1	2
SA	1	1	0
ACT	1	1	0
NT	0	0	0
Total	**33**	**13**	**20**

Source Wilson and Sutton (2003)

Open-Street CCTV in Australia

While open-street CCTV systems were initially located in the central business districts (CBD) of capital cities, there is a notable trend toward public space surveillance in smaller regional and rural centres and in suburban locations (see Table 1). Systems currently range in size from the Perth system with 105 cameras and 24 hour monitoring through to record-only systems of two cameras (see Table 2).

Because the push to establish CCTV in Australia has come from local government, town centre systems display wide variation in administrative controls, funding models, operational practice and technology. When establishing new systems, local authorities have tended to rely on other councils and on security consultants rather than seeking advice from relevant state government authorities, but this may be changing.

While primarily a local government initiative, establishment of CCTV in Australian town centres has not been without state government involvement. This may well intensify in the near future. The Tasmania State Government funded 67 per cent of the installation cost of the Devonport CCTV system, and the South Australian State Government funded 33 per cent of the Adelaide CCTV system. In Queensland, State funding for CCTV is increasing. Since 1999 the Queensland State Government has administered a Security Improvement Program (SIP), which offers funding for local government security initiatives. A number of councils have used this program to install video surveillance. The Queensland Department of Premier and Cabinet has also recently released guidelines for councils considering the installation of CCTV (2002).

The NSW State Government has also demonstrated interest. The Crime Prevention Division of the New South Wales Attorney General's Department has sought to advise local governments on video surveillance, issuing Guidelines for CCTV (Crime Prevention Division 2000). State governments represent a valuable source of information, and in some jurisdictions potential funding, for local authorities contemplating open-street CCTV. They are also a potential source of regulation and accountability.

Reasons for Installing Open-Street CCTV

The most common reason advanced for installing CCTV in town centres has been to combat loosely defined 'anti-social behaviour', although systems have also been installed to deal with more defined issues such as violence around licensed venues (Gold Coast) and street-level drug dealing (Fairfield). In Australia, as in Britain, attempts to reduce offending and anti-social behaviour through CCTV have been

Table 2: Year of Commissioning and Size of CCTV Systems (as at October 2002)

Location	State/Territory	Year	Initial Cameras	Current Cameras
Blacktown	NSW	2000	9	9
Bourke	NSW	1999	4	4
Dubbo	NSW	2002	11	11
Fairfield	NSW	1996	14	23
Lake Macquarie	NSW	1999	2	2
Lismore	NSW	1999	8	11
Lithgow	NSW	1997	3	3
Sydney	NSW	1998	48	48
Sutherland	NSW	2002	11	11
Walgett	NSW	1999	5	5
Willoughby	NSW	1998	6	6
Brisbane	Qld	1993	13	44
Cairns	Qld	1997	14	16
Gatton	Qld	2002	6	6
Gold Coast	Qld	1998	16	40
Ipswich	Qld	1994	13	44
Logan	Qld	2001	8	8
Rockhampton	Qld	2001	4	4
Toowoomba	Qld	1995	24	43
Townsville	Qld	1995	12	18
Warwick	Qld	1996	10	10
Bunbury	WA	1998	14	14
Claremont	WA	1997	9	5
Perth	WA	1991	48	105
Rockingham	WA	2002	2	2
Bendigo	Vic.	1998	6	6
Box Hill	Vic.	1998	8	8
Melbourne	Vic.	1997	10	23
Devonport	Tas.	2000	8	8
Hobart	Tas.	1996	4	7
Launceston	Tas.	1995	4	9
Adelaide	SA	1995	12	33
Canberra	ACT	2001	15	15

Source Wilson and Sutton (2003)

inextricably linked to attempts to rejuvenate town centres, stimulate local commerce and attract investment (Reeve 1998). This motivation was clearly articulated in the Perth CCTV Information Kit:

The Central Business District was suffering a retail decline in the mid 1980s and the best efforts of the Council to rejuvenate the area were often offset by emotional stories in the media which generated an undesirable image of the city (City of Perth 2000).

One British survey (Brown 1995: 1), found business interests did not agree that the introduction of CCTV helped increase visitors to their area and boost trade. Nevertheless such groups, particularly retailers, have been key players in the installation of CCTV throughout Australia. Their involvement ranges from simply offering in principle support through to full responsibility for funding ongoing operations.

Public support for CCTV is also occurring at the State level. In the lead up to the 1999 Victorian election, the then leader of the Labor opposition pledged to boost the number of surveillance cameras in Melbourne (*Herald Sun* 7/04/99). In NSW a promised five million dollars towards the funding of CCTV for towns in the west of the State was a key element of the National Party election platform (*Weekend Liberal* 2002: 3).

Economic and political pressures for CCTV systems can have negative consequences. Once the CCTV concept has gained sufficient momentum, alternative community safety measures, particularly social ones, are seldom considered. Councils may then be locked into substantial ongoing expenditures (for monitoring and so on). This may be no great problem for wealthier municipalities such as Melbourne or Sydney, but can represent a considerable burden for smaller regional centres. Finally, once commitment has been made there is a tendency for those with an investment in a system to make grandiose claims about its likely and actual achievements.

Researching the Installation of CCTV

Both the NSW and Queensland guidelines recommend research into the viability of CCTV prior to its approval. Such research can help avoid 'knee jerk' installation of CCTV following a sensational incident. It can also help identify alternative, possibly more cost-effective, measures. Thorough pre-installation research has not generally been the case in Australia however – although most local authorities have undertaken some assessment of CCTV in other locations. Where feasibility studies have been undertaken, CCTV has not always been pursued. In Manly for example, a feasibility study recommended security cameras would not be an appropriate response to problems of alcohol-related violence (Manly Council 2000). A feasibility study conducted for Alice Springs Town Council also recommended against installation (Wilson 2003).

The most frequent relevant studies, however, can be termed 'installation research'. This is where it has already been decided that CCTV will be implemented and studies are undertaken to ascertain appropriate technology and operating procedures. Security consultants have in some locations undertaken this work.

Community Consultation

Both NSW and Queensland CCTV guidelines recommend public consultation prior to the installation of an open-street CCTV system. However community consultation has not to date been widely undertaken in Australia. In most major capital city systems – Perth, Adelaide, Brisbane and Melbourne – no process of consultation preceded installation. Both Sydney and Melbourne consulted with civil liberties representatives rather than the broader community. Civil liberties organizations may raise specific concerns, but other community issues will not necessarily be articulated. Our research suggests, however, that community consultation is becoming more common.

Funding CCTV

The ongoing operational costs of CCTV systems are significant. The most common form of ongoing funding is through the general revenue of local government

authorities. Twenty-two out of 33 systems (67 per cent) are funded in this way. In Adelaide the council and the South Australian State Government share ongoing operational costs. In Canberra the system is funded entirely by the government of the ACT.

Ten systems (31 per cent) have some form of business funding for the ongoing operation of their systems. In all cases this funding is collected through a levy on businesses paid to council. Three councils (Brisbane, Gold Coast & Logan) fund the ongoing operation of the camera system entirely through a business levy. Business funding for CCTV raises a number of ethical questions. For example, will the system be used only for purposes that business interests see as appropriate – perhaps at the expense of the wider community? Can a local council maintain control over a system when it is dependent on sectional community interests for funding? It is important that local authorities address these issues.

Cost is primarily dependent upon the level of monitoring and maintenance costs. Monitoring is however clearly the most significant expense. A review of the Fairfield City Council system in Cabramatta/ Canley Vale states that monitoring staff accounted for 70 per cent of ongoing costs (Fairfield City Council 2002: 40). Some examples of the ongoing costs incurred by systems are given in Table 3.

Table 3: Annual Operational Costs of selected CCTV systems

Location	Annual Cost
Ipswich	$444,000
Sydney	$900,000
Fairfield	$340,000
Melbourne	$400,000
Adelaide	$310,000
Toowoomba	$ 85,000
Brisbane	$270,000

Source Wilson and Sutton (2003)

Operators and Monitoring

Monitoring is arguably the most crucial element of a public CCTV system. There are two broad modes of monitoring: 'active' (or 'dedicated') and 'passive' (or 'casual'). Precise definitions of what constitutes 'active' monitoring vary, but broadly this refers to operators systematically using the camera system to conduct dedicated 'patrols'. In the context of such active patrols, operators remain alert to potential incidents and/or respond to incidents following information received (usually from police). 'Passive' monitoring is where monitors are in view and are casually observed by operators (or other appointed staff), who may react if an alert is received or an incident is observed in progress. Those responsible for monitoring in a passive situation will normally carry out administrative or other duties while the screens display a preset camera 'tour'.

Table 4: Modes of Monitoring in Australia Open-Street CCTV Systems (as at October 2002)

Monitoring Staff	Number of Locations
No Monitoring/Record Only	6
Council Staff	4
Private Security Personnel/ Council Staff	1
Private Security Personnel Only	12
Police Only	7
Police/Volunteer	3

Source Wilson and Sutton (2003)

In locations where cameras are actively monitored (six locations only record incidents), work can be undertaken by one or more of four types of personnel. These are: council staff; private security personnel; police and volunteers. Table 4 gives a breakdown of the most common operational models.

Council employees monitor cameras in four locations: Perth, Sydney, Sutherland and Toowoomba. The advantage of council employees is that greater control can be maintained over camera operators, although greater council resources are also required for the hiring, training and ongoing management of staff. Fourteen locations use private security personnel to monitor cameras. Although this option has the advantage of relieving responsibility for the day-to-day management of operators, it can also result in a lack of control over operators and does involve substantial costs.

Police monitor cameras in ten locations and in seven of these the police monitoring role is exclusive. Three Tasmanian locations combine police monitoring with monitoring by volunteers recruited from Neighbourhood Watch groups. Policy makers have generally discouraged the use of police personnel to monitor cameras. The arguments against police monitoring are that the public will be lead to believe the system is a police rather than local government measure; that monitoring cameras will divert police from core policing duties; that using police to monitor cameras will lead to function creep and the use of cameras for general intelligence gathering, and that police will view the system as their property with councils meeting costs but having little control over the ways the system is utilised.

Communications and Relationships with Police

Communications between police and control room operators are vital to any actively monitored system. The common practice is for there to be some form of direct telephone link between control room operators and police, allowing operators to inform police of incidents and vice versa. In addition operators commonly have a radio tuned into the police frequency in the control room, to enable them to focus on relevant incidents and provide video evidence that may later be required in prosecutions.

Where a control room is separate from police, law enforcement authorities have found it invaluable to have a screen in a police facility capable of displaying incidents being tracked by operators. In Townsville and Adelaide police have monitors with keyboards, and can assume active control of the cameras. In the absence of clear rules, however, police assuming control of the cameras can result in friction with civilian operators. This can damage a relationship crucial to the efficient operation of a system. It is important therefore that clear procedures be developed and agreed upon. This should ideally form part of a more general memorandum of understanding between police and the relevant local government authority clearly stipulating the commitments and obligations of each party.

Management, Accountability and Public Awareness

All managers participating in this research confirmed that the ongoing administration of CCTV is both complex and time consuming.

CCTV programs bring with them substantial responsibilities for contract management and design, staff supervision, and routine administration (such as tracking and releasing videotape as evidence), in addition to the ongoing task of cultivating and maintaining partnerships with stakeholders.

Our research also confirmed that accountability for the operation of open-street CCTV systems could be improved. As the UK Data Protection Commissioner points out, 'public confidence has to be earned and maintained' (2000: 3). In Australia, the main relevant mechanisms are voluntary codes of practice: there is no direct legislation covering public CCTV surveillance. Of the twenty-two councils participating in in-depth interviews for this study, only two did not have a formal code. 'Operating Procedures' are also widely used to provide detailed instructions to control room staff, and to regulate program operation and the release of visual material from programs.

The 1996 UK Model Code recommends that codes of practice be made available to the public (Kitchen 1996: 32). Both the City of Sydney (2001) and Lismore City Council (2001) have taken this approach. It would be helpful if it became more widespread. The community has a right to know how a system is being operated, not merely that it exists or how many cameras it consists of. There would seem to be no compelling argument for a code to be confidential.

Audit committees are another important accountability mechanism. These have been established in Sydney, Melbourne, Canberra, Fairfield and Dubbo. An audit committee's objective is to provide a mechanism of accountability and external review. In theory it provides reassurance to the public that a system is operated transparently and ethically, and that self-regulatory codes and protocols are being observed.

As state government interest in CCTV grows, it may become feasible for audits to be conducted by a state government agency, either the Privacy Commissioners or the Crime Prevention Divisions of various state governments. Annual audits would seem sufficient to ensure that procedures and protocols were being adhered to. Publication of subsequent reports would ensure a level of transparency across open-street CCTV systems, and provide assurance that the technology was subject to oversight beyond the local level. Audits could possibly be tabled in respective State parliaments to ensure results were on the public record.

Another possible accountability mechanism is, of course, a workable complaints procedure. These are not common in Australia: in most instances a private individual with a grievance related to CCTV really only has the option of contacting the relevant council. One reason few if any complaints are made is that the public lacks access to relevant information.

Ensuring adequate public awareness should be another important consideration for administrators of CCTV, as it can influence both its deterrent effect and its role in reducing fear. Admittedly this relationship is by no means straightforward. Nevertheless it would seem important enough to warrant regular research into the public's knowledge of the system. There have been some relevant Australian studies.

Findings are reasonably consistent. In Fairfield, Sydney and Melbourne, where CCTV has been introduced along with other initiatives, surveillance cameras have been the most recognised prevention measure (Swinbourne 2001: 11; Coumarelos 2001: 22). In Fairfield and Sydney cameras were found to have a significant impact upon feelings of safety. An evaluation of the Sydney Safe City strategy found 85.4 per cent of those aware of the safety cameras initiative reported it made them feel safer in the CBD (Coumarelos 2001: 22). In Fairfield 61 per cent of those surveyed reported cameras made them safer (Swinbourne 2001: 12). Results from KPMG research conducted for the City of Melbourne in 1998 were less conclusive. It found the cameras did not significantly affect public perceptions (Parliament of Victoria 2001: 55)

If one of the key purposes of CCTV is to enhance feelings of safety, it would seem important that administrators develop strategies to remind the public of the cameras' presence. Very few Australian systems have a policy for maintaining ongoing media awareness. Guidelines prepared in NSW and Queensland both stress the importance of utilising the media as a means of publicising CCTV schemes.

Our research revealed system administrators were extremely wary of media exposure – feeling it could have the unwanted side effect of drawing attention to real or perceived crime problems in an area. The risk of some negative coverage should not, however, outweigh the important role the print media can play in increasing public awareness, and thereby the effectiveness, of CCTV schemes.

Another way of reminding the public of the presence of cameras is, of course, on-site signs. Signage alerting the public to the presence of video surveillance is widely recommended for public space CCTV systems (for example in the 1996 U. K. Model Code of Practice – Kitchin 1996: 35). Such recommendations have now been included in the legally enforceable code of practice issued by the UK Data Protection Commissioner in 2000. In Australia, CCTV Guidelines issued by the NSW Attorney General's Department recommend that local authorities alert the public to the presence of cameras through signage (Crime Prevention Division 2000: 19-20).

Signage is common in Australian town centre CCTV schemes, but by no means ubiquitous. Of the 33 systems surveyed, 21 had some form of signage while 12 had none at all. We see signage as a key to ethical operation. The public have a right to know they are being observed, and signage also has the positive benefit of increasing public awareness of a system.

Conclusions: the Future of Open-Street CCTV

Open-street CCTV systems have expanded remarkably in recent years, and there is little reason to assume this trend will be reversed. Relevant technology is decreasing in cost and improving in functionality, and CCTV continues to appeal to business and political interests. With systems already established in all Australian capital cities except Darwin, future expansion is likely to be in regional centres and suburban locations. Digital technology is also likely to become the industry standard.

As CCTV systems continue to expand, there needs to be a more thorough investigation into the desirability of statutory regulation. Currently there is no specific state or territory legislation covering CCTV in public areas. Overt surveillance, of which open-street CCTV systems are

one form, has recently been the subject of inquiry by law reform commissions in two Australian States (NSWLRC 1997; 2001; VLRC 2001). Statutory regulation has the potential to increase the accountability of CCTV systems and may increase public confidence in their operation as a result.

More Australian research is needed on the ways public space CCTV is used and its impacts on crime, perceptions of safety and civil liberties. Such research may prove that CCTV can be effective in reducing the incidence of some types of crime. However it remains to be established in what locations and under what conditions. CCTV should also continue to be assessed against other crime prevention measures that might produce superior or equivalent outcomes.

Imperfect knowledge about the effects of CCTV does not justify jettisoning the approach altogether – particularly when one considers that, in the absence of such systems, ordinary citizens may become even more inclined to abandon public space. However policy formulation must avoid the tendency to become preoccupied by purely technical questions. Important research in the UK has revealed the significant social impacts of CCTV (Norris and Armstrong 1999).

It is therefore necessary for policy makers to remain alert to the negative potential of CCTV to discriminate against and exclude individuals who are legitimate users of public areas. Those responsible for implementing and managing open-street CCTV should not simply conceive their mission in terms of making streets and malls comfortable and risk free. They must also be conscious of all Australians' rights to use public space. Rigorous research-backed policy development is needed to ensure that CCTV is used in ways that observe the need for public space to be open and inclusive, as well as safe and secure.

Notes

[1] For greater discussion of theoretical issues and a detailed bibliography of the literature relative to Closed Circuit Television see D. Wilson and A. Sutton 2003, Open-Street CCTV in Australia: A comparative study of establishment and operation, A report to the Criminology Research Council (CRC Grant 26/01-02) available at www.aic.gov.au

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