SURVEILLE

Surveillance: Ethical Issues, Legal Limitations, and Efficiency
Collaborative Project

SURVEILLE Deliverable 2.6 Matrix of Surveillance Technologies

Due date of deliverable: 31.07.2013
Actual submission date: 31.07.2013

Start date of project: 1.2.2012   Duration: 39 months

SURVEILLE Work Package number and lead: WP02 Prof. Tom Sorell (University of Warwick)

Author(s):

The UW team: John Guelke, Tom Sorell and Katerina Hadjimatheou
The EUI team: Martin Scheinin, Jonathan Andrew, Juha Lavapuro, Tuomas Ojanen, Maria Grazia Porcedda and Mathias Vermeulen
The MERPOL team: Brian McNeill
The TU Delft team: Coen van Gulijk, Simone Sillem, Pei-Hui Lin and Bert Kooij

1

Matrix of Surveillance Technologies

Table of contents

1. Introduction

In this paper we present a survey of surveillance technologies through the development of a multidimensional matrix. The matrix reflects (a) usability, understood in terms of effectiveness, cost, privacy-by-design features and overall excellence, (b) ethics, and (c) intrusiveness into fundamental legal rights.

Although assessments of one of these different aspects will sometimes have implications for assessment of another, they are conceptually distinct. A technology can be useful and usable towards a surveillance goal, but its use can nevertheless be morally problematic or intrude on fundamental rights. Furthermore, technologies can raise substantial ethical concerns not covered by law, and uses of technology that are prima facie morally justifiable can nevertheless be inconsistent with a state's human rights commitments or constitution.

The assessment in this deliverable is organised around a fictional but realistic scenario describing a police investigation. This scenario was constructed by the police partner in the SURVEILLE project, MERPOL. The scenario tracks the developments in a serious crime investigation where the deployment of various surveillance technologies is contemplated across 15 stages.

The technological assessment builds on previous SURVEILLE work in Deliverable D2.1, which surveyed 43 technologies and introduced a range of considerations relevant to technological assessment. D2.6 narrows down this wider range to focus on 14 technologies used in a typical serious crime investigation, and demonstrates how technological assessment can be summarised and related to normative assessment of actual dilemmas facing investigators and policy makers.

The ethical assessment builds on previous SURVEILLE work in Deliverable D2.2, and in particular its analysis of what features of crime justify what we term 'morally risky' investigatory methods. Morally risky action is action that ought not to be done under normal circumstances – action that is prima facie morally objectionable. For example the use of coercive force is usually objectionable – it is prima facie wrong to push someone to the ground. However, the risk of harm incurred by this action is justifiable if this is the only to prevent a person from being hit by oncoming traffic. Certain surveillance technologies are so intrusive that their use is overwhelmingly reserved for policing authorities alone. Even then there is a presumption against the taking of moral risk unless the seriousness of the crime investigated merits it. In section 3, these considerations, outlined in Deliverable D2.2, are related to particular technologies and a realistic police investigation.

The legal analysis builds upon previous SURVEILLE work in Deliverable D2.4 that outlined the way in which surveillance technologies intrude on fundamental rights. Deliverable D2.6 applies this work to specified uses of the selected technologies in the context of the policing scenario.

In section 2.1 the technologies surveyed in the matrix are briefly described. In section 2.2 the matrix is presented, with its assessment of usability, ethics and fundamental rights. This section also includes the main conclusions from the three assessments. Section 2.3 explains the methodologies for the three modes of assessment; section 2.4 includes further discussion of the scoring in the matrix, highlighting technologies that score well in one or more categories, but badly in another. The ethics section of the matrix reflects principled considerations that weigh in assessing a technology as more or less morally objectionable, coding dangers as moderate (green), intermediate (amber) or severe (red). The ethical considerations are relevant to the use of the technologies as specified in the scenario but they concern the use of the selected technologies in general and not only in the context of the scenario. The fundamental rights considerations calculate scores out of 16 for the intrusion into different fundamental rights represented by the use of the technology as proposed in the scenario. Usability assessments of the technologies are scored out of 10, summarising an assessment of the technology's performance in terms of effectiveness, cost and privacy by design.

Section 3 introduces an illustrative scenario for a serious crime investigation where a number of technologies surveyed in the matrix might be used for specific purposes. In 3.1 there is a detailed commentary on the ethical and fundamental right considerations facing investigators at each stage of the investigation – here we see how the ethical principles identified in relation to the technologies restrict their permissible use in practice, and how these compare to the legal analysis of the intrusions on fundamental rights, the rationale for which is explained and justified.

2.   A Matrix of Surveillance Technologies

2.1 Description of technologies (TU Delft)

A wide variety of technologies have been listed for examination in SURVEILLE Deliverable 2.1. The following technologies — a subset of those mentioned in D2.1 – are included in the matrix. They have been chosen for their perceived relevance to counter-terrorism and serious and organized crime operations by the police, in accordance with the policing scenario outlined by MERPOL. The following sub-sections summarize in layman's terms the most important defining technological elements of the technologies analysed.

2.1.1-3 CCTV and digital photography

Closed-circuit television (CCTV) is a setup of video cameras that transmit a signal from a specific place to a limited set of monitors. Today's high-definition 'smart' CCTV-cameras have many computer-controlled technologies that allow them to identify, track, and categorize objects in their field of view. Video Content Analytics (VCA) can also be used to detect unusual patterns in an environment, such as anomalies in a crowd of people.

CCTV technology can also be paired with a Facial Recognition System: a computer application that is able to automatically identify a person from a video source.