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Director of publication – Susanne Nikoltchev
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Editorial supervision – Maja Cappello
Head of Department for legal information, European Audiovisual Observatory

Editorial team – Francisco Javier Cabrera Blázquez, Maja Cappello, Sophie Valais
European Audiovisual Observatory

Authors – Britt van Breda, Nico van Eijk, Kristina Irion, Tarlach McGonagle, Sander van Voorst
Institute for Information Law (IViR), University of Amsterdam

Editorial assistant – Olivier Mabilat, Snezana Jacevski, European Audiovisual Observatory

Marketing – Markus Booms, markus.booms@coe.int, European Audiovisual Observatory

Press and Public Relations – Alison Hindhaugh, alison.hindhaugh@coe.int, European Audiovisual Observatory

Translators / Proof-readers – Aurélie Courtinat, Johanna Fell, Julie Mamou, Maco Polo Traductions, Stefan Pooth, Roland Schmid, Sonja Schmidt, Lucy Turner, Anne-Lise Weidmann

Publisher
European Audiovisual Observatory, 76, allée de la Robertsau F-67000 Strasbourg, France
Tél. : +33 (0)3 90 21 60 00, Fax : +33 (0)3 90 21 60 19
E-mail: info.obs@coe.int, www.obs.coe.int

Contributing Partner Institution
Institute for Information Law (IViR), University of Amsterdam, Vendelstraat 7, 1012 XX Amsterdam, The Netherlands
Tel: +31 (0) 20 525 3406, Fax: +31 (0) 20 525 3033
E-mail: ivir@ivir.nl, www.ivir.nl

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Britt van Breda

Nico van Eijk

Kristina Irion

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Foreword

A man walks through a shopping centre. His eyes are flashed by a multitude of cameras equipped with eye-recognition software. Immediately the shop windows start to show on flashy screens advertising specially tailored to him…

This is obviously a scene taken from a science-fiction film (Steven Spielberg's "Minority Report"). However, it is not so far away from what we can experience today. In the age of the Internet, connected TV sets and "second screens", the possibilities of obtaining personal data of media users – in both legal and illegal ways – have multiplied exponentially. Such data is a very important commodity for advertisers, which can be used to provide individually targeted ads on online services and on various kinds of connected devices. Furthermore, personal data obtained via search engines, social media and connected devices can be used as a means to provide a better experience for the user of an online service.

However, the obtaining and use of personal data by third parties, whether provided willingly or inadvertently by the users, can also have a very intrusive effect on their personal lives. Moreover, there are situations in which the insight into a user's life exceeds what a user is prepared to accept.

This becomes particularly evident in the case of audiovisual consumption through Smart TVs, which are becoming a common equipment in our homes. Their worldwide presence has doubled from 2011 to 2015, and their average penetration will soon reach the majority of European households.

According to a very general definition, a Smart TV is a TV that possesses a variety of connective capabilities, including in any case an internet connection. When connected, these devices are able to collect a variety of information about their users, including social backgrounds and financial profiles, which can be used to influence online user behaviour for direct marketing purposes or for the profiling of the users for advertising activities. Their functions include voice and facial recognition, motion sensing, account creation and many other interactive capabilities.

Considering the constant substitution process of traditional broadcasting with non-linear interactive (and smart) consumption of audiovisual content, it becomes more and more important to have adequate tools capable of ensuring an effective balance between the providers' wish to optimise their offers and give recommendations based on the personal choice of the users and the increased need to protect the latter against the risk of reduction of choice, information isolation and, in the worst cases, manipulation.

The current regulatory framework in this domain is particularly scattered and includes a variety of sources: a special media regulation in the audiovisual media services directive; sector-specific rules in the e-communications framework, the e-commerce directive and the e-privacy directive; a general privacy framework in the data protection directive and the general data protection regulation; and an umbrella regulation including the consumer protection framework and the human rights dimension.

Against this multifaceted legal background, various interpretative issues are rising at national level as to the processing of personal data by Smart TV operators. This IRIS *Special*, which has been

written by the Institute of Information Law (IViR) of the University of Amsterdam, provides an overview of the specifics of Smart TVs compared with other forms of audiovisual media. It further examines the regulatory framework that governs them, before investigating four case-studies and reflecting upon the on-going regulatory reforms.

The developments we are already witnessing, which for instance include Smart Homes equipped with family hub refrigerators and Smart Things such as connected healthcare belts, seem indeed to require an integrated perspective where all issues are consistently dealt with. This also becomes important from an institutional point of view, where a coordination between the various public actors is probably more necessary than ever. These issues are being addressed, among others, by the new General data protection regulation on which an agreement was reached between the Council, the Parliament and the Commission on 15 December 2015.[1]

This publication gives a first insight into the outcome of this long-lasting decision making process, which started in 2012. Its draft also contributed to setting the scene for a workshop organised by the Observatory on 11 December 2015 in Strasbourg, entitled "The grey areas between media regulation and data protection"[2], which discussed, among other things, the challenges that the various stakeholders – media regulators, data protectors, industry, media service providers and consumers – are currently facing. The issues at stake deserve well-informed participation, and the following chapters are intended to contribute an outline of the main questions concerning the interactive consumption of audiovisual content. More will certainly have to follow.

Strasbourg, January 2016
Maja Cappello
Head of the Department for Legal Information
European Audiovisual Observatory

[1] See http://www.consilium.europa.eu/en/press/press-releases/2015/12/18-data-protection/.

[2] See http://www.obs.coe.int/workshops/-/asset_publisher/kNG5qM2wH8Kq/content/dli-workshop-obs-epra-the-grey-areas-between-media-regulation-and-data-protection.

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Acronyms and Abbreviations

API	Application Programming Interface
AVMS	Audiovisual Media Services
BCRs	Binding Corporate Rules
CBP	*College bescherming persoonsgegevens* (Dutch Data Protection Authority)
CCPA	(US) Cable Communications Policy Act
COPPA	(US) Children's Online Privacy Protection Act
DPD	Data Protection Directive (Directive 95/46/EC)
ECPA	(US) Electronic Communications Privacy Act
EPG	Electronic Programme Guide
EPIC	Electronic Privacy Information Center
FTC	(US) Federal Trade Commission
GDPR	General Data Protection Regulation
HbbTV	Hybrid Broadcast Broadband TV
IoT	Internet of Things
WBP	*Wet bescherming persoonsgegevens* (Dutch Data Protection Act)

Introduction

With the advent of various forms of interactive television, the dystopian predictions of authors like Aldous Huxley, Ray Bradbury and most famously, George Orwell, appear closer to contemporary reality than ever. Today, the underlying technology of the sinister 'telescreens' of *Nineteen Eighty-Four*, which receive and transmit simultaneously, can only be dimmed but never switched off, picking up every sound "above the level of a very low whisper" and capturing every movement within their fields of vision, is widely available and widely in use.[3]

Certain types of television ('smart TVs') are capable of responding to visual/motion and acoustic stimuli, like facial recognition/body movements and voices, respectively. The ability of smart TVs to collect, store and process personal information provided by their users, raises a gamut of privacy-related issues that are not dealt with in regulatory frameworks governing traditional forms of audiovisual media. This study[4] examines the role of privacy-related regulation in the audiovisual media sector, with particular emphasis on smart TV.

In the past, televisions were unwieldy appliances in the corner of the living room and not much more than 'lights and wires in a box', as Ed Murrow once famously put it.[5] Technologies and markets later advanced to embrace more portable, lighter and flat-screen models, but the basic concept remained the same: televisions were devices that received broadcast signals and displayed programmes on their screens. The signals were sent from point-to-multipoint and the relationship between viewers and their television sets was one-directional. The privacy of viewers was, in consequence, simply not an issue in media law and policy.

It is only very recently, with the accelerated emergence of interactive televisions, which have changed the relationship between viewers and their television sets into a bi-directional one, that privacy-related concerns have begun to make their way onto the agendas of media law- and policy makers. This sea change is due first and foremost to the existence of interactive capacities in television sets, but also to a slow but sure public sensitisation to privacy-related issues generally.

'Connected TV', 'hybrid TV', and 'smart TV' are all largely synonymous terms used to describe interactive televisions. Essentially, they all refer to television sets – or the combination of televisions and similar technology in 'set top boxes' - which integrate the ability to watch linear television, while also offering the enhanced value of being able to use additional services delivered via an Internet connection. 'Connected', then, refers to the Internet connection that enables viewers (who are now better described as users) to avail themselves of the additional services. 'Hybrid' refers to the converged nature of the technology: a hybrid of a television and a computer. 'Smart' is a term with obvious commercial/marketing appeal, which seeks to distinguish these televisions from their less intelligent forerunners. The term 'smart TV' is used consistently throughout this study.

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[3] Orwell G., "Nineteen Eighty-Four", in Orwell G., *The Complete Novels*, London, Penguin, 2000, pp. 743-744.

[4] The authors are very grateful to Natali Helberger for her valuable comments on a draft version of the study and to Patrick Leerssen for his valuable translation assistance.

[5] Murrow E.R., "Wires and Lights in a Box" Speech, Radio Television News Directors Association Convention, Chicago, 15 October 1958, http://www.rtdna.org/content/edward_r_murrow_s_1958_wires_lights_in_a_box_speech.

If it is not connected to the Internet or its additional functionalities have not been activated, a smart TV remains for all intents and purposes a traditional TV, permitting users to view programmes in linear fashion. That, however, defeats the purpose of having such additional technological capabilities. Smart TV offers access to a range of Internet-based services, such as web browsing, video-on-demand, social networking and the use of apps. In addition to viewing they provide the possibility for the user to engage in transactions.

Ian Walden and Lorna Woods have provided a very useful diagnosis of privacy-related concerns arising from the capabilities of smart TV sets. They point out that "the current broadcasting environment gives rise to two privacy concerns in two key areas":

> *"the enhanced ability to monitor and measure our broadcasting consumption patterns, particularly valuable for profiling and marketing purposes; and the possibility of surveillance over, or interception of, the content we are viewing".*[6]

To these concerns one could readily add similar concerns about the monitoring, measuring and surveillance of our patterns of consumption of information and non-broadcast content through our other online activity via the smart TV set. A further concern has to do with the ability of smart TV sets to collect and process personal data through various features such as voice and facial recognition. The processing of such data typically involves sharing that data with various third parties, which creates additional complexity from a privacy perspective.

More generally, the smart TV 'ecosystem' involves a number of different players which, one way or another, acquire access to information about users' consumption of broadcast content and online activities, as well as users' personal data. The ecosystem comprises the smart TV manufacturer, provider of so-called Hybrid Broadcast Broadband TV (HbbTV) services, portal operator, app store operator, app provider, recommendation services provider.[7] Altogether, the use of smart TVs represent a vastly more complex value chain than traditional television services due to the number of players involved, but also due to complex issues linked to distribution.[8]

The involvement of so many different actors gives rise to fears about "multiveillance" – the phenomenon of "surveillance not just by the state, but by companies, marketers, and those in our social networks".[9] Again, as Walden and Woods put it: "A range of actors in the delivery chain have the potential to monitor viewers' consumption of broadcast content and these relationships may not be transparent, nor the parties' respective commitments clear and understood, not least from the viewer's perspective".[10]

Structure

The structure of this study is built around a number of questions:

- What is smart TV?
- How does smart TV compare with other forms of audiovisual media?

[6] Walden I. and Woods L., "Broadcasting Privacy", *Journal of Media Law,* 2011, 3(1), pp. 117-141, at 121.

[7] Düsseldorfer Kreis, *Orientierungshilfe zu den Datenschutzanforderungen an Smart-TV-Dienste*, German Guidelines adopted on 15-16 septembre 2015, https://www.lda.bayern.de/lda/datenschutzaufsicht/lda_daten/OH_Smart_TV_v1.0.pdf., p. 9.

[8] Nooren P., Leurdijk A., van Eijk N., "Net neutrality and the value chain for video", *info*, 2012, Vol. 14 ss: 6, pp. 45 – 58, http://www.ivir.nl/publicaties/download/511.

[9] Richards N., *Intellectual Privacy: Rethinking Civil Liberties in the Digital Age*, New York, Oxford University Press, 2015, p. 5.

[10] Walden I. and Woods L., "Broadcasting Privacy", *op.cit.*, footnote 6, at p. 140.

- What regulatory frameworks govern smart TV?
- What guidance can be found in selected country-specific case studies?
- What are the dangers associated with the collection, storage and processing of private user information by commercial parties?
- How are relevant regulatory frameworks likely to evolve?

Chapter I explores the different terminological and definitional approaches to 'smart TV' and thereby positions it in relation to other forms of (interactive) audiovisual media. It identifies the main distinctive features of smart TV (for privacy-related/data protection purposes) as: speech recognition, motion sensing, facial recognition, interactive capacity (e.g. via apps and social media) and integrated user accounts (e.g. Samsung). These features of smart TV facilitate the collection, storage and processing of personal information by commercial parties. These features then serve as key focuses for the exploration of the regulatory framework and case studies in subsequent chapters.

Chapter II explains how audiovisual media regulation and privacy/data protection regulation have traditionally developed in isolation from one another. Convergence and the emergence and expansion of intelligent technologies are forcing regulators in both sectors to find each other and pursue new regulatory approaches that reflect and address these developments. This chapter examines the lack of relevance of the AVMSD; the limited relevance of the Framework and Access Directives; the growing relevance of the Data Protection and E-Privacy Directives, and the likely implications of the (draft) General Data Protection Regulation. It also explains the relevance of consumer law and human rights law.

Building on the analysis of the complex regulatory framework, **Chapter III** offers an overview of how relevant legal issues are arising and being dealt with in practice at the national level. Four case studies form the core of the chapter, drawing on experiences in Germany, the Netherlands (two case studies) and the United States:

1) Germany: Joint position, technical test of smart TVs and guidance document;
2) The Dutch Data Protection Authority's investigation into the processing of personal data with or through Philips smart TV by TP Vision Netherlands;
3) The Dutch Data Protection Authority's investigation into the processing of personal data by Ziggo relating to of interactive digital services;
4) Electronic Privacy Information Center v. 'Samsung': Complaint to the US Federal Trade Commission about the routine interception and recording by Samsung of private communications of consumers in their homes.

Each of the case studies involves a detailed analysis of the legal issues involved and their broader implications for regulatory approaches to smart TV.

Chapter IV builds on the preceding chapter and, while reflecting on future regulatory developments (in particular the likely implications of the draft General Data Protection Regulation), focuses on the distinctive features of smart TV as identified above, and the (potential) harms that arise from the collection, storage and processing of personal data, as enabled by those technological features.

The study will be completed by a concluding analysis.