Contents

	List	of key cases	\boldsymbol{x}	
	List	of abbreviations		xv
1	Electronic surveillance yesterday and today			
	1.1	Introduction 1		
	1.2	Origins of bulk surveillance 2		
	1.3	Electronic surveillance in the digital era 8		
	1.4	Between targeted and untargeted measures 11		
	1.5	Development of technical capabilities 17		
	1.6	Summary 28		
2	Sector-specific approach to bulk surveillance			34
	2.1	Introduction 34		
	2.2	Electronic communications 35		
	2.3	Web services and online data gathering 43		
	2.4	Financial surveillance 51		
	2.5	Public space surveillance 56		
	2.6	Summary 64		
3	Fun	damentals of the European legal model		69
	3.1	Introduction 69		
	3.2	Multilateral approach to the protection		
		of human rights 70		
	3.3	Legitimate objectives for implementing		
		surveillance measures 75		
		3.3.1 National security 75		
		3.3.2 Criminal investigations 79		
	3.4	Electronic surveillance and human rights 83		
		3.4.1 Right to privacy 84		
		3.4.2 Data protection 88		

3.4.3 Right to information 92

		3.4.4	Right to peaceful assembly 95			
		3.4.5	Right to a fair trial 97			
	3.5	Proportionality and necessity of surveillance measures 100				
	3.6	Summ	eary 105			
4	Shaj	Shaping the European standard for electronic surveillance				
	4.1	Introduction 111				
	4.2	Secret surveillance programmes as interference with individual rights 112				
	4.3	Accessibility and foreseeability of the law 119				
	4.4	Minimum legal safeguards and the intrusiveness				
	,	of surveillance 124				
		4.4.1	Criminal surveillance – a Huvig/Weber test and beyond 125			
		4.4.2	A "less intrusive" Uzun-based approach 135			
			From Huvig to Big Brother Watch: aligning			
			Huvig/Weber with indiscriminate			
			surveillance 141			
		4.4.4	Adoption of the ECtHR standard by the CJEU 148			
	45	Summ	eary 151			
	1.0	Junin	wry 101			
5	In se	In search of a European consensus				
		Introduction 155				
	100	5.2 The CJEU perspective: a more than decade-long saga				
		concerning a general data retention obligation 157				
	9	44	Origins of the legal regulation of data retention			
	-1		in EU law 157			
		5.2.2	General obligation to retain data 159			
			Criteria for lawful access to data 166			
			Data retention and national security 171			
		5.2.5	Algorithmic retention 177			
	5.3	The EC	CtHR perspective: bulk surveillance in the light			
			(strict) necessity test 179			
	5.4	Cross-l	border data flows 186			
	5.5	Best of	both worlds – a common legal framework for			
		electronic surveillance 193				
	5.6	Summ	ary 200			
6	Emerging challenges of bulk surveillance					
	6.1	Introduction 207				
	6.2	Mass st	urveillance as a targeted measure 208			

6.3	Future use of surveillance data warehouses 217		
6.4	AI-based surveillance 221		
6.5	Automatic content control and electronic		
	surveillance 230		
6.6	The fading public/private surveillance divide 238		

- 6.7 The transatlantic cooperation in the shadow of surveillance 243
- 6.8 Summary 253

Index 260