TABLE OF CONTENTS

Abbr	eviatio	ons and Acronyms	XI
Table	of Ca	ses	xiii
Table	of Le	gislation	xxi
Prolo	gue		xxxi
Intro	ductio	n	1
PART :	1:	ELECTRONIC COMMUNICATIONS AS A DISTINCT AND UNIQUE OBJECT OF REGULATION	7
Chap	ter 1:	The Object of Regulation	9
1.	Intro	duction	9
2.	Brief	Historical Remarks	10
3.	The !	Metamorphosis of (Tele)communications	13
4.	Intri	nsic Characteristics of the Communications Sector	17
	4.1	Network Industries	17
		Positive Network Effects	19
		Economic Implications of Positive Network Effects	21
		Negative Network Effects	22
		Communications as a Network Industry	22
		Communications as a Specific Network Industry	24
	4.2	Dynamism	25
		Convergence	28
	4.4	Sensitive to Regulation, Sensitive to Society's Reactions	32
	4.5	Special Significance and Role	34
	4.6	Communications as Part of the "New Economy"	38
5.	Chap	ter 1: Conclusion	39
Chap Regu		The Goals and Objectives of Communications	43
1.	Intro	duction	44
2.	Econ	omic Objectives	46
	2.1	Consumer Welfare	46

Intro The (2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5 2.3.6 2.3.7 Chap	d. Interim Conclusion on Universal Service Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools Oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range of Objectives Limited Instruments versus Broad Range of Instruments Antitrust Expertise versus Communications Industry Expertise oter 3: Conclusion European Community Communications Law	80 82 89 96 100 103 105 105 106 107 110 111 112 115 117 117 118 120 120 122
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5 2.3.6	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools Oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range of Objectives Limited Instruments versus Broad Range of Instruments Antitrust Expertise versus Communications Industry Expertise	80 82 89 96 100 103 105 105 106 107 110 111 112 115 117 118 120
3.4 3.5 Chap 2: Thi pter 3: Intro 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools Instruments Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range of Objectives Limited Instruments versus Broad Range of Instruments Antitrust Expertise versus Communications Industry	80 82 89 96 100 103 105 106 107 110 111 112 115 117 118
3.4 3.5 Chap 2: Thi pter 3: Intro 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools Instruments Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range of Objectives Limited Instruments versus Broad Range of Instruments	80 82 89 96 100 103 105 106 107 110 111 112 115 117 118
3.4 3.5 Chap 2: Thi pter 3: Intro The (2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range of Objectives	80 82 89 96 100 103 105 106 107 110 111 112 115 117 118
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective Narrowly Focused Objectives versus Broad Range	80 82 89 96 100 103 105 105 107 110 111 112 115 117
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3 2.3.4	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition One-off Interventions versus Long-term Perspective	80 82 89 96 100 103 105 105 107 110 111 112 115 117
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1 2.3.2 2.3.3	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature To Protect versus to Promote or Restrict Competition	80 82 89 96 100 103 105 105 107 110 111 112 115 117
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1 2.3.2	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion EINSTRUMENTS OF COMMUNICATIONS REGULATION Typology of the Regulatory Tools Induction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules Reactive versus Pro-active Nature	80 82 89 96 100 103 105 105 107 110 111 112 115
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2 2.3 2.3.1	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion EINSTRUMENTS OF COMMUNICATIONS REGULATION Typology of the Regulatory Tools Induction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools General and Abstract versus Tailored Rules	80 82 89 96 100 103 105 105 107 110 111 112
3.4 3.5 Char 2: Thi pter 3: Intro The (2.1 2.2 2.3	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation Comparison of the Regulatory Tools	80 82 89 96 100 103 105 106 107 110 111
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1 2.2	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law Sector Specific Regulation	80 82 89 96 100 103 105 106 107 110
3.4 3.5 Chap 2: Thi pter 3: Intro The 6 2.1	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit Competition Law	80 82 89 96 100 103 105 106 107
3.4 3.5 Chap 2: Thi pter 3:	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools oduction Communications Regulation Toolkit	80 82 89 96 100 103 105 105
3.4 3.5 Char 2: Thi pter 3:	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E Instruments of Communications Regulation Typology of the Regulatory Tools	80 82 89 96 100 103 105
3.4 3.5 Char 2: Thi	Consumer Protection On a Higher Level The "eEuropean" Goals oter 2: Conclusion E INSTRUMENTS OF COMMUNICATIONS REGULATION	80 82 89 96 100
3.4 3.5	Consumer Protection On a Higher Level The "eEuropean" Goals	80 82 89 96
3.4 3.5	Consumer Protection On a Higher Level The "eEuropean" Goals	80 82 89 96
3.4	Consumer Protection On a Higher Level	80 82 89
	Consumer Protection	80 82
		80
	c. The Universal Service Directive	75
	b. The 2002 Universal Service Regime	74
	a. Before the 2002 Regulatory Package	72
	The EC Universal Service Regime	72
	The Roots of Universal Service Policies	70
		70
		70
		68 69
		64
		61
		57
	Innovation	32
2.2	The Internal Market	52
	2.3 2.3.1 2.3.2 2.3.3 2.4 Socie 3.1 3.2	 2.3.1 Standards 2.3.2 Intellectual Property Rights: Some Brief Remarks 2.3.3 Facility-based or Service-based Competition? 2.4 Interim Conclusion on the Economic Goals Societal Objectives 3.1 Introduction 3.2 Universal Service

2.1	Article 82 EC	131
2.2	Constituent Elements of Article 82 EC	132
2.2.1	Dominance	133
	a. Market Definition	134
	i. Demand Substitutability	135
	ii. Supply Substitutability	138
	iii. Potential Competition	139
	iv. The Geographical Market	141
	b. Relevant Communications Markets	144
	c. Market Analysis	149
	i. Market Shares	149
	ii. Barriers to Entry	151
	iii. Conduct and Performance	154
2.2.2	A Position of Dominance within the Common	155
	Market or in a Substantial Part of It	
2.3	Abuse: Types of Abusive Practices	156
2.3.1	Refusal to Supply	159
2.3.2	The Essential Facilities Doctrine	161
	a. The Concept of Essential Facilities and the EC	161
	Legal Doctrine	
	b. Observations on the EFD and Its Application	169
2.3.3.	Tying	172
	a. The Concept of Tying in EC law	172
	b. Observations on Tying as an Abuse	178
2.4.	Conclusion on EC Competition Rules	183
Euro	pean Community Communications Specific	185
Legis	lation	
3.1	The Liberalisation of the European Community	185
	Communications Markets	
3.1.1	The Liberalisation Package	186
	a. The Telecommunications Terminal	186
	Equipment Directive and the	
	Telecommunications Services Directive	
	b. The Use of Article 86(3) of the EC Treaty	187
	c. Further Liberalisation Measures	189
3.1.2	The Open Network Provision Framework	190
3.1.3	Relationship between EC Competition Law and the	193
	Sectoral Rules	
3.1.4	Key Regulatory Decisions of the 1998 European	195
	Telecommunications Package	
3.2	The 2002 Electronic Communications Framework	197
3.2.1	Design of the 2002 Regulatory Framework	199
	a. "Hard Law" Instruments	199
	b. "Soft Law" Instruments	203
3.2.2	Scope of the Electronic Communications Regime	206

3.

	3.2.3	Key Elements of the 2002 Communications Regime	207
		The New Significant Market Power Regime	209
		a. Introduction to the SMP Regime	209
		b. Market Definition	212
		i. Market Selection	212
		ii. Interim Observations on Market	215
		Selection	
		iii. Product and Geographical Market	217
		Definition	
		iv. Interim Conclusion on Market	221
		Definition	
		c. Market Analysis	222
		i. Standard Antitrust Analysis	222
		ii. Idiosyncrasies of the Communications	223
		Specific Market Analysis	
		iii. Interim Conclusion on Market Analysis	225
		d. Remedies	225
		i. Obligations Regarding Wholesale	227
		Markets	220
		ii. Choice of Remedies	230
		iii. Interim Observations on Wholesale	231
		Markets Remedies	000
		iv. Obligations Imposed on Retail Markets	233
		v. Exceptions	234
		e. A Brief Comparison of the 2002 Sector Specific	235
	225	Regulation and Generic Competition Rules	220
4		Conclusion on the SMP Regime	238
4.	Cnap	eter 4: Conclusion	241
Char	ter 5	: The WTO Regime for Telecommunications	245
Servi		. The WIO Regime for refecontinuincations	243
Jeivi	ces		
1.	Intro	duction	245
2.		World Trade Organization	247
	2.1	General Agreement on Trade in Services	248
	2.2	The Annex on Telecommunications	254
		Scope of the Annex on Telecommunications	254
		Contents of the Annex on Telecommunications	256
		Interim Observations on the Annex on	258
		Telecommunications	
	2.3	The Fourth Protocol	259
	2.3.1	The Reference Paper	261
		Scope of the Reference Paper	262
		Contents of the Reference Paper	263
		a. Definitions	263

	b. Section 1	265	
	c. Section 2	267	
	d. Other Provisions	268	
	2.3.4 Interim Observations on the Reference Paper	269	
3.	The WTO Law on Telecommunications and the EC	273	
	Telecommunications Law		
	3.1 Effect(s) of the WTO Law onto the EC Legal Order	274	
	3.2 Specific Commitments of the European Communities and Their Member States	278	
	3.3 WTO Telecommunications Rules <i>vis-à-vis</i> EC Telecommunications Rules	281	
	3.3.1 Harmony	281	
	3.3.2 Discord	284	
	a. Basic <i>versus</i> Value-added Telecommu- nications Services	284	
	b. Telecommunications <i>versus</i> Audiovisual Services	285	
	c. Technological Neutrality	288	
	d. Solutions?	290	
	e. Lack of Global Competition Rules	292	
4.	Chapter 5: Conclusion	294	
Part	3: Can Competition Law Do it All? – The Final Assessment	297	
1.	Step 1: Competition Law versus the Intrinsic Characteristics of Electronic Communications	300	
	1.1 Network Effects	300	
	1.2 Dynamism	306	
	1.3 Convergence	309	
	Step 1: Conclusion	313	
2.	Step 2: Competition Law versus the Goals and Objectives	314	
۷.	of Communications Regulation	314	
	2.1 Economic Goals and Objectives	314	
	2.1.1 Consumer Welfare	314	
	2.1.2 Innovation	315	
	2.2 Societal Goals and Objectives	319	
	Step 2: Conclusion	321	
3.	Step 3: Endangering the Authority and Integrity of	322	
	Competition Law:		
4.	Yes or No? The Answer	326	
5.	Some Speculations on the Future	328	
Epilo) Ogue	337	
	Bibliography		
About the Author			