

# Communications and Competition Law

Key Issues in the Telecoms, Media  
and Technology Sectors

Edited by

Fabrizio Cugia di Sant'Orsola  
Rehman Noormohamed  
Denis Alves Guimarães



the global voice of  
the legal profession®



Wolters Kluwer  
Law & Business

Kluwer Law International  
PO Box 316  
2400 AH Alphen aan den Rijn  
The Netherlands  
Website: [www.kluwerlaw.com](http://www.kluwerlaw.com)

*Sold and distributed in North, Central and South America by:*

Aspen Publishers, Inc.  
7201 McKinney Circle  
Frederick, MD 21704  
United States of America  
Email: [customer.service@aspublishers.com](mailto:customer.service@aspublishers.com)

*Sold and distributed in all other countries by:*

Turpin Distribution Services Ltd  
Stratton Business Park  
Pegasus Drive, Biggleswade  
Bedfordshire SG18 8TQ  
United Kingdom  
Email: [kluwerlaw@turpin-distribution.com](mailto:kluwerlaw@turpin-distribution.com)

*Printed on acid-free paper.*

ISBN 978-90-411-5146-9

© 2015 International Bar Association

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

Permission to use this content must be obtained from the copyright owner. Please apply to: Permissions Department, Wolters Kluwer Legal, 76 Ninth Avenue, 7th Floor, New York, NY 10011-5201, USA. Email: [permissions@kluwerlaw.com](mailto:permissions@kluwerlaw.com)

Printed and Bound by CPI Group (UK) Ltd, Croydon, CR0 4YY.

# International Bar Association

## The Global Voice of the Legal Profession



the global voice of  
the legal profession®

The International Bar Association (IBA), established in 1947, is the world's leading organisation of international legal practitioners, bar associations and law societies. The IBA influences the development of international law reform and shapes the future of the legal profession throughout the world.

It has a membership of over 55,000 individual lawyers and 206 bar associations and law societies spanning all continents. It has considerable expertise in providing assistance to the global legal community as well as being a source of distinguished legal commentators for international news outlets.

Grouped into two divisions – the Legal Practice Division and the Public and Professional Interest Division – the IBA covers all practice areas and professional interests, providing members with access to leading experts and up-to-date information.

Through the various committees of the divisions, the IBA enables an interchange of information and views among its members as to laws, practices and professional responsibilities relating to the practice of business law around the globe.

The IBA Communications Law Committee is a leading global forum for legal practitioners with specialist expertise or interest in the communications sector. The Committee offers members access to a worldwide network of leading practitioners, in-house counsel and regulators active in telecommunications, content and media markets. The Committee encourages the sharing of sectoral expertise through an

annual newsletter, periodic technical journal and the annual Committee Conference, hosted jointly with the IBA Antitrust Committee.

The scope of the Committee's work covers network, service and content-related developments across all delivery platforms. This provides members with access to practical global perspectives on the array of technological, commercial and policy issues which confront communications lawyers, their companies and clients.

The Antitrust Committee provides an international forum for the exchange of the most current thinking in the field of antitrust law. In addition, there is a strong commitment to bring together international practitioners to facilitate closer working relationships. The committee is increasingly relied upon by government officials and members of the private sector for its expertise and practical input into antitrust developments.

The Antitrust Committee forms working groups to study major international competition policy issues and to submit comments to regulators on proposed new and reformed legislation. The Committee meets at the IBA Annual Conference and also has a specialist antitrust conference each year, together with regular seminars and events organized by the Committee's local country chairs.

# About the Brazilian Institute of Studies on Competition, Consumer Affairs and International Trade – IBRAC

## IBRAC

Since 1992

Brazilian Institute of Studies on Competition,  
Consumer Affairs and International Trade

The Brazilian Institute of Studies on Competition, Consumer Affairs and International Trade – **IBRAC** is a nonprofit private entity established in 1992 to foster the development of research, studies and debates involving competition, consumer law issues and international trade.

In order to achieve that end, IBRAC has played an active role in the promotion of events, notably the much-heralded International Seminar on Competition Defense, which is held every year with the attendance of illustrious panelists from Brazil, the United States of America, the European Community and Latin America.

In addition, IBRAC also maintains technical cooperation agreements with the Brazilian antitrust authorities (*Conselho Administrativo de Defesa Econômica* – CADE) and a number of other non-governmental institutions, all of which has translated into constant meetings and workshops to discuss specific topics of relevant subjects.

Also in keeping with its objective of creating a forum on competition defense issues in Brazil, IBRAC maintains a permanent university extension course in São Paulo, whose classes are given by leading professionals and authorities in the Brazilian competition segment.

In the international area, IBRAC has participated as a Non Governmental Advisor at ICN Conferences since the first one in Naples. IBRAC also co-chairs events with IBA, as the pre-ICN event in 2012 and the 24th Annual Communications and Competition Law Conference, in 2013, both in Rio de Janeiro. IBRAC has also organized a biannual event with ABA Section of Antitrust Law (Antitrust in the Americas), and the next edition will take place in Rio de Janeiro, on June 2015.

## About the IBRAC

---

Consumer law and International trade are also important issues for IBRAC, areas in which IBRAC has been a quite active player in academic and practical discussions.

Since it was founded in 1992, IBRAC has successfully managed to stand as a landmark in the antitrust and competition scenarios. For further information on IBRAC, please visit our Web site at [www.ibrac.org.br](http://www.ibrac.org.br), or write to our e-mail address [ibrac@ibrac.org.br](mailto:ibrac@ibrac.org.br).

Very truly yours,  
*Cristianne Zarzur, IBRAC President (2014–2015)*  
*Tito Andrade, IBRAC President (2012–2013)*  
*São Paulo September 2014*

## List of Editors

**Fabrizio Cugia di Sant’Orsola** is a founding partner of Cugia Cuomo & Associati, has served as Co-Chair of the Communications Committee of the International Bar Association (2011–2013).

He has been a member of the international regulatory counsel in a number of telecommunications reform projects funded by World Bank and EU Commission (including Albania, Azerbaijan, Bulgaria, Kazakhstan and Poland), advised the Italian Treasury in the privatization of Telecom Italia S.p.A. in 1997, and cooperated in the drafting of the Italian part of the European Commission Green Book on multimedia applications in Europe.

He regularly advises national and international carriers in relation to the regulatory aspects of the introduction of convergent telecommunications services and all issues regarding the offering of telecommunication and information technology services. Having been admitted to the Italian High Courts, Fabrizio has also been Legal Assistant to the Italian House of Parliament (1988–1991) and Contract Lecturer in Telecommunications Law (2000–2002) at La Sapienza University, Rome.

He is the author of several publications in the TLC sector and, since 2010, has been a Lecturer of European Law at the SSPLE at the University of Perugia.

**Rehman Noormohamed** is a partner at Michelmores LLP, a leading U.K. national law firm. Rehman heads up the Technology, Media and Communications (TMC) team and the Intellectual Property (IP) team. He is nationally recognized as a leading expert in his field.

Rehman advises end user and supply chain clients in the TMC, financial services, retail, food & drink, manufacturing, pharmaceutical, central & local government, education, health and emergency service sectors on strategic, tactical and operational matters.

His expertise includes large scale and complex IT, telecoms (fixed, wireless and superfast broadband) infrastructure, BPO and business transformation projects; system integration arrangements; ICT managed service contracts; software licensing and distribution; X-aaS contracts; e-commerce (including omni-channel platform arrangements); data protection; information security; all aspects of IP including protection,

exploitation, revenue generation, spin outs, JVs and corporate structuring; EU public procurement, state aid and competition law.

Rehman is a former technology consultant and is also qualified as a professional electronic and communications engineer. He is a member of the British Computer Society, Society for Computers and Law, Institute of Engineering and Technology, the advisory board of “Communication Law Journal” (published by Bloomsbury Professional – international circulation); International Bar Association’s IT, Communications (serving officer) and IP & Media committees.

In January 2014, Rehman was appointed Visiting Professor at Plymouth University’s Futures Entrepreneurship Centre, Faculty of Business. He is a regular contributor and speaker on IT, IP, telecoms, outsourcing, competition law and also on enterprise and entrepreneurship.

Among his degrees, admissions and acknowledgements are: LLB (Hons) Law, University of Exeter; BEng (Hons) Electronic & Communication Engineering, University of Bath; Solicitor Admitted 2001; Leader in the field of IT, Telecoms & IP (Legal 500, Chambers U.K.) 2006-2014.

**Denis Alves Guimarães** is Partner at *Alves Guimarães Política Regulatória S/S*, AGPR, a legal, business and economics consultancy in public policies and government affairs, notably antitrust, regulation and anti-corruption.

He practiced law in leading Brazilian law firms (2006-2013), advising global law firms and companies on all areas of antitrust in many sectors of the economy, as well as on regulatory matters and international trade.

In the public sector (2003-2005), Denis was an attorney at the Secretariat of Economic Law of the Ministry of Justice of Brazil (SDE/MJ), where he worked on antitrust and pharmaceutical regulation investigations, as well as on antitrust and regulatory advocacy before international organizations and the Brazilian Legislative Branch and government bodies.

In the academia, he is a Michigan Grotius Research Scholar (University of Michigan), and has a PhD degree in Economic and Public Finance Law from the University of Sao Paulo (USP) Law School.

Denis is Advisory Board Member of the Brazilian Institute of Studies on Competition, Consumer Affairs and International Trade – IBRAC (2014-2015); Member of the Committee of Studies on Competition and Economic Regulation of the Brazilian Bar Association, Sao Paulo Section – CECORE OAB SP (2013-2015); Member of the network of specialists at *Instituto Millenium* (2014-); and Member of the Committee of Competition of the Sao Paulo Institute of Attorneys – IASP (2013-2015).

He is author, co-author and co-editor of dozens of publications and works on antitrust, regulation, legislative reform, state reform and public policy, including: (1) *Concorrência e Regulação no Setor de Saúde Suplementar* (Competition and Regulation in the Healthcare Sector, published by *Singular* in Sao Paulo, Brazil, 2010); (2) *Comentários à Nova Lei de Defesa da Concorrência* (Comments to the New Brazilian Competition Law, published by *Método* in Sao Paulo, Brazil, 2012); (3) *Competition Law in the BRICS Countries* (published by Kluwer Law International in Alphen aan den



Rijn, The Netherlands, 2012); (4) Brazilian Cartel Enforcement: From Revolution to the Challenges of Consolidation (*Antitrust* magazine, Section of Antitrust Law, ABA, Summer 2011, Vol. 25, No. 3); (5) Country Profile: Brazil. In: chapter “Cable Sector: Competition and Regulation in an International Comparative Perspective”. RAB, Suzanne; SPRAGUE, Alison. *Media Ownership and Control: Law, Economics and Policy in an Indian and International Context* (Oxford: Hart Publishing, 2014).



## List of Contributors

**Cristiane Albuquerque** is the Head of the Merger and Antitrust Unit for Regulated Markets at CADE's General Superintendence. She has worked continuously at CADE since 2009 and also from 2005 to 2006, in different positions. She worked with electricity regulation at a Brazilian electricity distributor from 2006 to 2008 and at the Secretariat for Economic Monitoring of the Ministry of Finance (SEAE/MF) from 2004 to 2005. She holds a bachelor's degree in Economics from the University of Maryland and a master's degree in Economics from the Federal University of Santa Catarina.

**Sílvia Fagá de Almeida** is LCA's Project manager in competition economics, with a degree in economics from the University of São Paulo, and a Ph.D. in economics from Fundação Getulio Vargas – São Paulo (FGV-SP). Her thesis concerned competition policy, assessing empirically the concept of countervailing power and the health-care sector in Brazil, and it was advised by Professor Paulo Furquim de Azevedo, former commissioner at CADE. The research was awarded first prize in a competition by the Secretariat for Economic Monitoring of the Ministry of Finance. During Spring and Fall of 2012, Sílvia Fagá de Almeida was a visiting scholar at the Institute of Latin American Studies – Columbia University (NY), investigating antitrust and regulatory issues. She is also visiting professor of graduate courses in economics at FGV-SP.

**Tito Andrade** is a partner at Machado Meyer Sendacz e Opice Advogados with a focus on competition matters. Mr. Andrade has an LL.B from Faculdade de Direito da Pontifícia Universidade Católica do Rio de Janeiro, Brazil and holds an LL.M from the London School of Economics and Political Sciences (LSE). He was an intern in the General Secretariat of the European Commission, Brussels, Belgium (1999/2000) and in the Rules Division of the World Trade Organization, Geneva, Switzerland (2000). He is a member of the International Bar Association; Brazilian Bar Association; the American Bar Association and he was the President of IBRAC during the years 2012 and 2013. Mr. Andrade is recognized as a tier 1 lawyer by Chambers Latin American Guide and was nominated twice as a *40 under 40* by the survey carried out by Global Competition Review.

**Carlos M. Baigorri** is the Superintendent of Competition at ANATEL. Graduated in Economics from the University of Brasilia (UnB) with a Doctorate in Economics from the Catholic University of Brasília (UCB). Between 2007 and 2009, Dr. Baigorri served as an intelligence analyst in the Cellular Operators Association (ACEL). In 2010, he joined the Brazilian public sector as a specialist in regulation of public telecommunications services, being established at the Brazilian Telecommunications Regulatory Agency (ANATEL) since then. He was Chief Technical Advisor from 2011 to 2013. As the Superintendent of Competition, he is responsible for processes related to merger and acquisitions, price regulation, wholesale regulation, conflict resolutions, investor relations and economic monitoring. He also is a university professor of microeconomics and game theory at UCB and IBMEC-DF.

**Chris Boam** is Founder of 40A&M LLC, a consulting firm on ICT law and policy issues. He served as Director for International Regulatory Affairs in Verizon, and with a background in international data protection law and compliance, also as data protection officer for Europe for MCI. Chris also served on staff in the U.S. House of Representatives and in private legal practice. A graduate of the University of Scranton and the Catholic University of America Law School, where he was Editor-in-Chief of its *communications law journal*, Chris has published and spoken on three continents on communications regulatory issues.

**Luís Bernardo Coelho Cascão** is an associate at Barbosa, Müssnich & Aragão Advogados. He has a Masters in Economic-Intellectual Property Law from the Candido Mendes University (2009) and also a law degree from the Federal University of Rio Janeiro – UFRJ (2006).

**Milene Louise Renée Coscione** is an attorney with expertise in telecommunications and information technology (IT) at Manesco, Ramires Perez e Azevedo Marques Sociedade de Advogados. She has a Masters Degree in Public Law at Universidade de São Paulo and an Extension in Administrative Law and Economic Law at the Brazilian Society of Public Law – SBDP.

**Adriano Augusto do Couto Costa** has been an economist at the SEAE's General-Coordination for Network Industries and Financial Services for the last two years. He is a Master of Sciences' candidate in Corporate Economics at the Catholic University of Brasilia and a Researcher on Infrastructure (Transportation, Energy and Telecommunications), Expert in Corporate Finance, and Bachelor of Economics from the Federal University of Uberlandia. He has more than twelve years of academic and professional experience in telecom, working as an economist at the Brazilian Telecommunications Regulatory Agency (ANATEL) and at the department of projects of the Ministry for Federal Integration for almost five years each, and as a master consultant in the Brazilian think-tank Ipea.

**Daniel Crane** is Associate Dean for Faculty and Research and Frederick Paul Furth Sr. Professor of Law at the University of Michigan and counsel with the New York law firm of Paul, Weiss, Rifkind, Wharton & Garrison, LLP. He is the author or co-editor of six books, including *The Institutional Structure of Antitrust Enforcement* (Oxford University Press) and over fifty articles and book chapters on antitrust law. Professor Crane frequently appears as a commentator on antitrust matters in major news media outlets such as the Wall Street Journal, the New York Times, National Public Radio, and Bloomberg News and testifies before governmental authorities such as the U.S. Congress, the Federal Trade Commission, and the Justice Department.

**Juliana Deguirmendjian** is a trainee at Manesco, Ramires Perez e Azevedo Marques Sociedade de Advogados. Her Bachelor of Laws (LL.B) is ongoing at Escola de Direito de São Paulo of Fundação Getulio Vargas – FGV.

**Yvan Desmedt** is a Partner in the Brussels and Amsterdam offices of Jones Day. He is a member of the Brussels Bar and advises clients on competition law and regulatory matters across a range of sectors, particularly in the regulated industries of TMT, energy, and transportation. His competition law experience includes merger control at the EU and national levels as a notifying party or third-party opponent for clients such as SAP and Warner Music Group. His antitrust experience includes the investigation of interchange fees on behalf of MasterCard, the U.K. roaming case, and the Vitamins cartel at the EU level, as well as various infringement proceedings conducted by the Belgian competition authorities. Yvan also has significant litigation experience. He has represented a number of fixed and mobile operators against the incumbent in Belgium. These proceedings have involved cases before the competition authorities, regulators, administrative courts, and civil courts.

**Jeffrey A. Eisenach** is a Senior Vice President and Co-Chair of the Communications, Media, and Internet Practice at NERA Economic Consulting. He is also an Adjunct Professor at George Mason University Law School, where he teaches Regulated Industries, and a Visiting Scholar at the American Enterprise Institute, where he focuses on policies affecting the information technology sector, innovation, and entrepreneurship. Previously, Dr. Eisenach served in senior policy positions at the U.S. Federal Trade Commission and the White House Office of Management and Budget, and on the faculties of Harvard University's Kennedy School of Government and Virginia Polytechnic Institute and State University. He received his Ph.D. in Economics from the University of Virginia in 1985.

**Mark English** is an associate in Shearman & Sterling's Brussels office where his practice covers all areas of European and U.K. competition law, with a focus on European Commission antitrust and merger control proceedings. Mark has also represented clients investigated by the U.K.'s Office of Fair Trading and provided antitrust counseling and compliance advice on diverse aspects of U.K. and E.U. competition law. Prior to joining Shearman & Sterling, Mark trained as a solicitor in a commercial law firm in the U.K., completed an internship with Hearing Officers for DG

## List of Contributors

---

Competition of the European Commission and worked as an associate in another leading Brussels competition law practice. Mark's experience covers a range of industries including high-tech and telecommunications, aviation and financial services. Mark was part of the team that represented Samsung in the European Commission investigation of conduct involving the enforcement by Samsung of standards-essential patents in litigation with Apple.

**Alexandre Ditzel Faraco** practices in the Antitrust and Regulation Practice Groups of Levy & Salomão where he represents clients in administrative and judicial matters, and provides broad-based consulting in connection with business practices and antitrust compliance. He has experience in working with complex issues in telecommunications and media sectors. Mr. Faraco holds a Ph.D. and a Post-Doctoral Certification (Livre-Docência) from the University of São Paulo and was a Visiting Scholar at Yale University. He is the author of “Regulação e Direito Concorrencial – As Telecomunicações” (Livraria Paulista) e “Democracia e Regulação das Redes Eletrônicas de Comunicação – Rádio, Televisão e Internet” (Fórum).

**Thays Castaldi Gentil** is a senior associate at Mattos Filho Advogados. LL.M candidate in U.S. Law at Washington University (USA). Bachelor of Law from Mackenzie Presbyterian University. Post graduated in Digital and Telecommunications Law from Mackenzie Presbyterian University. Specialist in Digital Law: Management of Electronic Risk from SENAC/SP. Technician in Telecommunications from Federal Center for Technological Education of São Paulo. Member of groups of studies in Telecommunications and Media & Audiovisual of Brazilian Association of Communications and Information Technology Law (ABDTIC). Professional experience encompasses over twelve years of practice in Telecommunications, Media, Information Technology and Internet industries.

**Silvia Giampaolo** is Partner of Cugia Cuomo & Associati. She is a member of the Rome Bar Association since 2006, got her Law Degree, J.D. at the University of Rome “La Sapienza” (2001) and got her MBA/Global Management at the University of Phoenix (USA) (2007). She focuses her practice on legal and regulatory issues regarding multimedia and telecommunications, commercial and competition, intellectual property, protection of personal data, company law and litigation, and assists domestic and multinational companies before Italian Courts, Governmental and Regulatory Authorities, ADR and Arbitration.

**Ilene Knable Gotts** is a partner of Wachtell, Lipton, Rosen & Katz, where she focuses on mergers and acquisitions. Recent international transactions in which Mrs. Gotts advised include Publicis/Omnicom, Essilor/PPG Industries, Deutsche Telekom/MetroPCS, ConAgra/Ralcorp, and PPG Industries/Georgia Gulf. Ms. Gotts is regularly recognized as one of the world's top antitrust lawyers, including in *The International Who's Who of Business Lawyers*, in the first tier ranking of *Chambers USA Guide*, and the “leading individuals” ranking of *PLC Which Lawyer Yearbook*. Mrs. Gotts began her career as a staff attorney with the Federal Trade Commission. From 2009-2010, she

served as the Chair of the American Bar Association's Section of Antitrust Law, following a variety of leadership positions in the Section. In 2006-2007, Mrs. Gotts was the Chair of the New York State Bar Association's Antitrust Section. Mrs. Gotts is a frequent guest speaker, has had approximately 200 articles published, and has edited several books.

**Leon B. Greenfield** is a partner of the firm's Regulatory and Government Affairs Department, and a member of the Antitrust and Competition and Defense, National Security and Government Contracts Practices Groups. He joined the firm in 1990. He has an exceptionally wide breadth of experience representing clients in complex antitrust-related matters. He has represented clients in cutting-edge Section 2 litigation and agency matters. He has secured antitrust clearance for major acquisitions, litigated cases in federal and state court and counseled clients on many types of antitrust issues. In addition, Mr. Greenfield has played significant roles in the criminal and civil aspects of many of the firm's large cartel matters.

Former Federal Trade Commissioner **Pamela Jones Harbour** is a partner in the Antitrust and Competition Practice and is National Co-Leader of the Privacy and Data Protection team. She is well recognized for her knowledge of evolving areas of competition and consumer protection law, including privacy and data security issues. Pamela's privacy work includes high-level privacy and data protection counsel for national and international clients. She assists clients with data breach notifications, assessments, and audits, and provides strategic advice on data transfers, particularly as it concerns international data transfers and the European Data Privacy Directive. She has advised foreign governments in Asia, India, Europe, Israel, Australia and New Zealand on privacy and competitive implications of online markets and has testified before Congress as an expert witness regarding antitrust and privacy issues. Pamela served on the Federal Trade Commission from 2003 until April 2010. She works from both the Washington, D.C. and New York offices.

**Wagner Heibel** is partner at GO Associados in the fields of Regulatory and Strategic matters. He has been Director at Telefonica Vivo (mobile and fixed company) and Manager at ANATEL (the Agency) and Telebras. Professor of Regulatory Economics to the ANATEL staff. He has an MBA from FIA/USP, post graduation in economics from the Brasilia University, post graduation in TICs, and an engineering degree from the Brasilia University.

**Marcelo Bechara de Souza Hobaika** is currently a Commissioner at the Brazilian Telecommunications Regulatory Agency – ANATEL, and a member of the Brazilian Internet Steering Committee (CGI.br) and of the Board of Directors of the Center for Information and Coordination of .Br. He has been Attorney General of the Brazilian Telecommunications Regulatory Agency (ANATEL) and Legal Advisor to the Ministry of Communications; President of the Organizing Committee of the 1st National Conference on Communications and Vice-President of ANATEL's Advisory Council, having also served as Member of the Supervisory Board of the Brazilian Post and

Telegraph Company. He is a lawyer with an MBA in Business Law from Fundação Getulio Vargas, specialized in Communications and Technology Law and a participant in the I-Law Program at the Berkman Center for Internet & Society at Harvard Law School. He is also certified in Intellectual Property by the World Intellectual Property Organization Academy.

**Andy Huang** is an Associate with the Hogan Lovells Beijing office. His practice is focused on antitrust and other regulatory matters, cross-border M&A transactions and greenfield investments, etc. Andy previously worked with the Ministry of Commerce (MOFCOM). He has developed hands-on experience in dealing with government agencies in China. Andy Huang has researched and written extensively on Chinese law, including two books published by Law Press of China and a co-authored an article in the book “China’s Anti-Monopoly Law – The First Five Years” (Kluwer 2013).

Dr. **Anna Blume Huttenlauch** is an attorney at Freshfields Bruckhaus Deringer LLP, Berlin. She is specialized in German and European antitrust and competition law as well as merger control law. She advises international clients in many different industries with a focus on the telecommunications, media and technology sector as well as consumer products and manufacturing, industrial and services. Anna Huttenlauch completed her legal education at the universities of Passau, Berlin (Humboldt-University) and New York (New York University), where she obtained a master in antitrust and trade regulation law (LL.M.). During her master studies in New York, she interned at the Federal Trade Commission, Antitrust Division. She holds a doctor of laws degree from Humboldt University Berlin (Dr. jur.) and is admitted to the German and the New York Bar.

**Thomas Janssens** is the managing partner of Freshfields Bruckhaus Deringer’s Brussels office and local practice group leader for the antitrust, competition and trade group. Thomas specializes in EU and international antitrust law, covering transactional and behavioral matters. He regularly guides clients through complex multijurisdictional matters, managing cross-border challenges and parallel proceedings before several authorities as well leading teams of Freshfields lawyers and local counsel around the world. His experience crosses a range of industry sectors with a particular focus on regulated industries including telecommunications, media and technology, where he advises a variety of media, telecoms, entertainment and technology clients. He is an Officer on the IBA’s Antitrust Committee and is a regular commentator on topics of EU and national antitrust law. He also serves as co-consulting editor of *Getting the Deal Through: Dominance*, a guide to the regulation of dominant firm conduct in 37 jurisdictions worldwide.

**Thoralf Knuth** is an attorney at Freshfields Bruckhaus Deringer LLP, Cologne. He is specialized in German IT law and criminal law. He advises clients in many different industries on complex data protection issues and has experience in advising international clients in corporate crime investigations. Thoralf Knuth completed his legal education at the European University Viadrina and served his legal traineeship at the



Federal Ministry of Economics and Technology and the higher regional court of Berlin. Before joining Freshfields he worked as team and project manager at a listed e-commerce solutions provider, where he worked, *inter alia*, for international telecommunications operators. Thoralf Knuth is admitted to the German Bar.

**Fabio Ferreira Kujawsky** is a partner at Mattos Filho Advogados, in the Intellectual Property and Technology Team, where he focuses on IP and complex technology transactions relating to outsourcing, information technology, ecommerce, media, entertainment and telecommunications. This transactional work includes negotiation of contracts, joint ventures, mergers and acquisitions and dispute resolution. Mr. Kujawski is an Officer of the Brazilian Information Technology and Telecommunications Association (ABDTIC) and a former Officer of the Technology Committee of the International Bar Association. Mr. Kujawski has been recognized by numerous legal industry journals for his expertise in telecom, media, and information technology, including Chambers & Partners, Who's Who Legal, Latin Lawyer, Legal 500 and PLC. In 2012 and 2014, Mr. Kujawski was recognized by the publication Best Lawyers as Lawyer of the Year in the areas of Technology and Information Technology.

**Philippe Laconte** is an Associate in the Brussels office of Jones Day. He is a member of the Brussels Bar and focuses his practice on competition law and regulatory matters. He has experience assisting clients in abuse of dominant position, merger and state aid cases before civil and administrative courts, competition authorities and regulators, at EU and national levels. He advises clients in a variety of industries, including telecommunications, energy, and consumer products. He has been involved in a number of litigation proceedings against the incumbent telecommunications operator in Belgium. Philippe also worked for three years in the Washington office of Jones Day, where his practice focused on assisting clients in merger reviews and antitrust investigations before the U.S. Department of Justice and the Federal Trade Commission.

**Chung Nian Lam** is the Head of the Intellectual Property, TMT and Data Protection Practices at WongPartnership LLP, one of Singapore's largest and leading law firms. In the area of telecommunications, he has extensive experience advising on telecoms regulatory frameworks, service agreements (wholesale and customer) as well as infrastructure projects including network roll-outs and submarine cable projects. He has been named as a leading lawyer in directories such as *Expert Guides – Guide to the World's Leading Technology, Media & Telecommunications Lawyers* and *Who's Who Legal: The International Who's Who of Telecoms & Media Lawyers*. He is an officer of the Communications Law Committee of the International Bar Association and is also a regular contributor to the *Computer Law & Security Review*.

**Perry Lange** is a counsel in the Regulatory and Government Affairs Department of Wilmer Cutler Pickering Hale and Dorr LLP, resident in the firm's Washington office. Mr. Lange practices antitrust and IP law primarily before U.S. courts; especially cases at the intersection of intellectual property and antitrust law, such as standard setting,

IP licensing, and patent misuse. He has represented companies in the technology, telecommunications, pharmaceutical, manufacturing, financial services and transportation sectors in complex antitrust and IP matters in state court, U.S. district courts and federal appellate courts. In addition to civil litigation, Mr. Lange represents clients in criminal and civil antitrust investigations, and counsels clients on the antitrust implications of business practices such as distribution incentives, advertising restrictions, patent licensing and joint venture formation.

**Bernardo Gouthier Macedo** (Ph.D., University of Campinas, Brazil) is LCA's managing partner dedicated to economics and law, with applied knowledge of service regulation, expertise in sectorial economics, and great experience in the institutional environment and the requirements of antitrust authorities and regulators. Mr. Macedo has led many projects for major firms in competition economics, economic litigation, regulation and commercial defense. Among the most recent high-profile Brazilian merger cases, Mr. Macedo was in charge of the economic team who advise the parts towards the settlement reached in complex merger processes, such as Camargo Corrêa/Cimpor and Oxiteno/American Chemical, deals that have been nominated to GCR's 3rd and 4th Annual Awards, Merger Control Matter of the Year – Americas. Bernardo Macedo features since 2012 in Global Competition Review's The International Who's Who of Competition Economists, and since 2011 officer in charge of economic issues at the Brazilian Institute of Competition, Consumer and International Trade Studies (IBRAC), the main professional association for competition lawyers and economists in Brazil. Among other professional duties, Bernardo Macedo is a member of the board of Banco do Brasil SA, the biggest Brazilian bank, and was a special adviser to the Ministry of Finance in 2003.

**Dr. Federico Marini-Balestra**, LL.M. (*Cantab*), Ph.D. (*Rome*), is an associate at Cleary Gottlieb, focusing on regulatory and antitrust matters in the e-communications sector. Beforehand, he was at the Italian Communications Authority (2001-2005). "Young Administrative Lawyer of the Year 2005" and winner of the "Lizette Bentwich Prize" (Trinity College, Cambridge), he has widely published on Competition Law, e-Communications Law and Robotics Law. Among his publications: a textbook on e-Communications Law (*"Manuale di diritto europeo e nazionale delle comunicazioni elettroniche"*; 2013); the EU chapter of *"The Technology, Media and Telecommunications Review"* (2013; Dolmans and Salerno co-authors); *"Communication technologies and the law: lessons for technology regulation"* (2013; D'Ostuni co-author); *"I mercati rilevanti dei prodotti e servizi e la regolazione ex ante"* (2010; Siragusa and D'Ostuni co-authors). He also published on *European Competition Law Review*; *Computer & Telecommunications Law Review*; *Global Competition Litigation Review*; *The Journal of Regulation*; and *Intellectual Property Quarterly*.

**Florian de Azevedo Marques Neto** is partner at Manesco, Ramires Perez e Azevedo Marques Sociedade de Advogados. He has a Juris Scientiae Doctor (JSD) degree and is a Tenured Professor at Universidade de São Paulo. He is Full Professor of the Department of Constitutional and Public Law of the Faculty of Law of Universidade de

São Paulo, where teaches at graduation (Administrative Law) and post graduation (Administrative and Regulatory Law); Professor at the LL.M – *lato sensu* post graduation at Law, of Fundação Getúlio Vargas – Rio de Janeiro, and; Visiting Professor at Universidade Federal Fluminense (Brazil), Universidade Católica de Lisboa (Portugal), Escola Superior de Negócios (Peru) and Universidad Externado de Colombia. Professor Marques Neto is President of ASIER – American Association for the Studies of Regulation; Vice-President of SBDP – Brazilian Society of Public Law; Member of the Editorial Boards of the Journal of Public Law and Economics, Journal of Telecommunications Law, Journal of Economic Studies, Journal of Contemporary Administrative Law (ReDAC) and Member of the Editorial Board of *Editora Forum* Publisher. Speaker in many conferences in Brazil and abroad, he authored four individual books, more than fifteen co-authored books and more than two hundred academic articles. More information at: <http://buscatextual.cnpq.br/buscatextual/index.jsp>.

**Ana Paula Martinez** is a partner with the Antitrust, and Compliance Practice Groups of Levy & Salomão. Ms. Martinez was the Head of the Antitrust Division of Brazil's Secretariat of Economic Law from 2007 to 2010. She co-headed the cartel sub-group of the International Competition Network – ICN with the U.S. DoJ. Before entering government, Ms. Martinez was an associate with Cleary Gottlieb Steen and Hamilton LLP. Global Competition Review named her on its international lists of the “Top 100 Women in Antitrust” and “40 under 40” and she was selected by her peers as “Lawyer of the Year – Under 40” in 2014 (GCR). She is licensed to practice law in Brazil and New York. She has served as an antitrust advisor to UNCTAD, the World Bank and to the Government of Colombia. Ms. Martinez holds a Master of Laws from both the University of São Paulo and from Harvard Law School and has a Ph.D. in Criminal Law from USP. Ms. Martinez is the Professor in charge of the Graduate Program on Economic Law of Fundação Getúlio Vargas – Rio de Janeiro (Direito).

**Maximiliano Martinhão** is the Secretary of Telecommunications at the Ministry of Communications since 2011. He was born in 1971, in Campinas (SP). He is graduated in Telecommunications Engineering at National Institute of Telecommunications (Inatel) from Santa Rita do Sapucaí (MG). He also holds a master degree in Telecommunications Management from the Strathclyde University (U.K.) and a Bachelor of Law from the Brasilia Higher Education Institute (Iesb). Since 2005, he holds the office of Specialist in Regulation of Telecommunication Public Services at the Brazilian Telecommunications Regulatory Agency (ANATEL). Before working for the Ministry of Communications, he was the General Manager of Certification and Spectrum Engineering at ANATEL, among other managing and advising positions at the Agency. He also served as Planning Engineer at Telebras and was a Brazilian representative in several national and international telecommunication forums.

**Lyda Mastrantonio** is a dual qualified English and Italian lawyer at Preiskel & Co who specializes in national and international Intellectual Property, Information Technology and Telecommunications. She currently advises national and international clients on multi-jurisdictional regulatory matters and on commercial and corporate agreements in

wide range of areas comprising IPRs licensing and assignment, data protection, E-commerce, joint ventures and shareholders agreements. Lyda has an LL.M. in Intellectual Property Law from Queen Mary, University of London with a focus on copyright, trade marks, unfair competition and genetic resources. Preiskel & Co is a boutique law firm based in the City of London that specializes in U.K. and multi-jurisdictional corporate, commercial and regulatory matters.

**João Moura** is Managing Director at **TelComp**, the Brazilian Competitive Telecommunications Association, with 58 members, providing advisory services on regulatory strategy, network infrastructure deployment and business development. Mr. Moura holds a BA degree in Economics and an MBA from COPPEAD – Rio de Janeiro Federal University. Prior to joining TelComp, Mr. Moura was a Partner at Coopers & Lybrand – a global consultancy firm – with significant experience in strategic advisory services, mergers & acquisitions and corporate restructuring. João Moura has also been the CFO of major industrial organizations and a senior officer at BCP Telecommunication (BellSouth).

**Márcio Issao Nakane** is Associate Professor at the Economics Department at University of São Paulo. Mr. Nakane is also a partner at the economics consulting firm Tendências Consultoria Integrada since 2008. He holds a D.Phil. degree in Economics from University of Oxford and a Master degree in Economics from University of São Paulo. Mr. Nakane worked at the Research Department of Central Bank of Brazil from 2000 to 2007 doing academic as well as policy-oriented research in banking. During 2007 and 2008, he was the coordinator for the Consumer Price Index for São Paulo city (IPC Fipe). Mr. Nakane has academic publications in banking, monetary economics, and industrial organization. He has worked on economic analysis of diverse antitrust cases in Brazil.

**Haitam Laboissiere Naser** holds the office of Public Policy Advisor at the Ministries of Planning, Budget and Management (MPOG) and Communications (MiniCom) since 2011, and he was born in 1981, in Brasilia (DF). He is graduated in Political Science from the University of Brasilia (UnB) and in Law from the University Center of Brasilia (UniCeub). He also holds a specialization in Public Management from the Pioneer Union Social Integration (UPIS) and from the National School of Public Administration (ENAP). Before working for the Federal Government, he worked as a trainee in the American Chamber of Commerce (2006) and as a lawyer at Muniz & Faria Advogados (2009-2010).

**Gesner Oliveira** is former President of the Brazilian competition authority CADE (1996-2000). He was President of Sabesp (Water and Sanitation Company of the State of São Paulo) (2007-2010); Vice-Secretary for Economic Policy at the Ministry of Finance (1993-1996); Professor of Economics at Getulio Vargas Foundation in São Paulo since 1990 and Visiting Professor at Columbia University (2006), Ph.D. in Economics, University of California at Berkeley, 1989. He is presently Partner at GO Associados.

**Natalia Porto** is a Brazilian qualified lawyer at Preiskel & Co who specializes in Intellectual Property and Information Technology. Her experience comprises advising on MVNO matters, including on the Brazilian telecom legal framework, U.K. data privacy, data protection and retention, as well as IPR licensing and E-commerce. In addition, she advises on corporate matters including investment and shareholder agreements. She holds an LL.M in Commercial and Corporate Law from Queen Mary University of London, which covered the subjects of E-Commerce, International and Comparative Law of Copyright and related rights, and International and Comparative Law of Trade Marks and Unfair Competition. Preiskel & Co is a boutique law firm based in the City of London that specializes in U.K. and multi-jurisdictional corporate, commercial and regulatory matters.

**Carlos Ragazzo**, CADE's first General Superintendent (the General Superintendence was created by the new Brazilian competition law, in effect since June of 2012), Carlos Ragazzo was also a Commissioner at CADE from 2008 to 2012. Previously, he held the position of Head of Unit at the Ministry of Finance from 2003 to 2008. Having graduated in a Masters and a SJD degrees from the Rio de Janeiro's State University, Mr. Ragazzo also holds an LL.M. in Competition and Trade Policy from NYU. Presently, he is an Adjunct Professor of Antitrust Law in the Getulio Vargas Foundation's School of Law in Rio de Janeiro (FGV Law Rio). Admitted to practice both in Rio de Janeiro and New York.

**Marcelo de Matos Ramos** is the General-Coordinator for Network Industries and Financial Services at the Secretariat for Economic Monitoring of the Ministry of Finance (SEAE/MF). He is a Master and Bachelor of Sciences in Industrial Engineering, Federal University of Rio de Janeiro. He is a Member of Brazil's Senior Executive Service, and is for almost fifteen years ahead of the communications and audiovisual sectors at SEAE. Mr. Ramos is Member of the Brazilian Digital Television System Forum, was an Alumnus of the Minerva Program at George Washington University in 2000, and for ten years was a researcher on innovation and intellectual property at COPPE in the Federal University of Rio de Janeiro. He authored several works on competition law and telecommunications.

**Miguel Rato** is a partner in Shearman & Sterling's Brussels office where his practice focuses on EU competition law. He advises clients on a wide array of contentious and non-contentious EU competition law issues, with a particular focus on unilateral conduct matters, transactions, and IP licensing in high-tech industries. His experience also encompasses EU merger control and State aid investigations. Miguel has been involved in some of the leading competition cases in high-tech industries and at the intersection of IP and competition law, including the European Commission's five-year Article 102 investigation into Qualcomm (which garnered the Legal Business award for Competition Team of the Year 2010), the European Commission's investigation of Microsoft's conduct regarding the Internet Explorer browser, and the European Commission's investigation of conduct relating to the enforcement by Samsung of standards-essential patents against Apple.

**Lauro Celidonio Gomes Dos Reis Neto** is a partner at Mattos Filho Advogados, in the Infrastructure team and has nearly thirty years of experience advising businesses, investors, and sponsors in connection with constitutional, administrative, and regulatory matters, in a wide variety of infrastructure, public works, public concession, and public-private partnership matters. He is Vice-President and Coordinator of Legal Counsel of the Brazilian Association for Infrastructure and Basic Industry (ABDIB), a trade association which represents the interests of approximately 150 infrastructure industry companies. He also serves as a Counselor at the São Paulo Lawyers Institute (IASP) and the Brazilian Institute for the Study of Competition, Consumer Affairs, and International Trade (IBRAC).

**Michael Reynolds** is President of the IBA. Mr. Reynolds worked with the European Commission's Legal Service before opening Allen & Overy's Brussels office in 1979 and has been based in Brussels since then. He has represented major U.K., U.S., Japanese and other international clients in a number of major cases before the European Commission and European Court of Justice. He has advised the Governments of Spain, Russia and Poland on the application of EU law. He has defended clients against whom cases have been brought for infringement of the EU competition rules as well as assisting clients bring complaints and national court proceedings. He has handled a number of major EU merger control cases in both Phases I and II. He advised the Polish government on the convergence of Polish competition law (including state aids) with the EU rules. He has advised the Russian Anti-Monopoly Service on its competition rules under the commission's TACIS program and also advised the Romanian competition agency under the PHARE program. Mr. Reynolds is a former Chairman of the IBA's Antitrust and Trade Law Committee and is EU coordinator for the IBA, handling relations with the EU Commission. He is a Director and founding member of the IBA's Global Forum on Competition, a former Chair of the Legal Practice Division of the IBA, former Secretary General of the International Bar Association (IBA), former Vice President for 2011-2012, and President for 2013-2014. Mr. Reynolds is a visiting professor in European law at the University of Durham. He is a former Board member of British Invisibles.

**Barbara Rosenberg** is a partner at Barbosa, Müssnich & Aragão Advogados. She has a Doctorate (Ph.D.) in Economic-Financial Law, São Paulo University – USP (2004) and an LLM from University of California, Berkeley (2001). She also has a law degree from São Paulo University – USP (1997). She has been the Director of the Antitrust Department at the Secretariat of Economic Law of the Ministry of Justice of Brazil (SDE/MJ) (February 2003 to December 2005); Foreign associate at Cleary, Gottlieb, Steen & Hamilton (New York, September 2001 to July 2002) and Attorney at the Secretariat of the World Trade Organization – WTO (June to September 2001). Ms. Rosenberg is a Lecturer in competition, international trade and intellectual property law at Getulio Vargas Foundation – FGV; Member of the Editorial Board of the Brazilian Institute of Competition, Consumer and International Trade Law Review – IBRAC and of the Getulio Vargas Foundation Law School Review. She is currently the Vice-President of the IBRAC; Vice-Coordinator of the Intellectual Property and Competition

Committee from the International Chamber of Commerce; Member of the Leniency Group of the International Bar Association; Member of the Competition Commission of the São Paulo Bar Association and “Non-Governmental Advisor” of the International Competition Network.

**Camila Yumy Saito** is a consultant at the economics consulting firm Tendências Consultoria Integrada since 2006. Ms. Saito has a degree in Economics from University of Sao Paulo and she is currently a master student in the professional Master of Economics program at Fundação Getúlio Vargas in São Paulo (FGV-SP). With more than eight years of experience in economic consultancy, she is a specialist on the telecommunication sector. Her work also includes the coordination of projects related to economic scenarios at regional levels and for different income classes.

**Lorne Salzman** is a Canadian lawyer with a practice that focuses on telecommunications regulation and competition (antitrust) law. Mr. Salzman has more than 30 years of experience in telecommunications policy, law, regulation and commercial arrangements in Canada and internationally. He represents clients in proceedings before the Canadian Radio-television and Telecommunications Commission (CRTC) and Industry Canada, including matters relating to competitive entry, interconnection, carrier rates, satellite services, dispute resolution, unbundling of carrier services, universal service, local competition, change of control and spectrum licensing. He also advises governments and regulators in various other countries in matters involving competitive entry, licensing, spectrum licensing, carrier rates, legislative reform and interconnection disputes. Mr. Salzman has extensive experience in representing clients in contentious and non-contentious competition law matters. He advises clients on competition law aspects of mergers, joint ventures, strategic alliances, dominant behavior, cartel behavior, pricing policies and distribution practices. He navigates matters through, and prepares submissions to, the Canadian Competition Bureau. He received his LLB from Osgoode Hall Law School of York University, and is called to the Ontario bar. He holds a BAsC degree from the University of Toronto, and holds the qualification of a professional engineer in Ontario (P.Eng.).

**Guido Lorencini Schuina** is advisor of the Secretary of Telecommunications at the Ministry of Communications since 2013, and was born in 1988, in Cachoeiro de Itapemirim (ES). He is graduated in Electrical Engineering from the Federal University of Espirito Santo (UFES), specializing in Telecommunications Engineering and Electronic Engineering. Since 2012, he holds the office of Telecommunications Infrastructure Advisor at the Ministries of Planning, Budget and Management (MPOG) and Communications (MiniCom). Before working for the Federal Government, he worked as a Public Policy Advisor for the State of Espirito Santo (2011-2012) and as a Telecommunications Engineer for the private sector at Embratel (2008-2011).

**Hartmut Schneider** is a partner in the Regulatory and Government Affairs Department of Wilmer Cutler Pickering Hale and Dorr LLP, resident in the firm’s Washington office. Mr. Schneider practices antitrust law primarily before U.S. agencies and courts and has

extensive experience in securing merger clearance for transactions in a diverse range of industries, including land-based and wireless communications. He also regularly counsels clients on legal issues at the intersection of antitrust and intellectual property law, as well as on the compliance of joint ventures, other horizontal cooperation agreements and vertical distribution agreements with the antitrust laws. Before relocating to Washington, Mr. Schneider worked in the Antitrust and Competition Department of the firm's Brussels and Berlin offices. In addition to his U.S. antitrust law expertise, Mr. Schneider has significant experience in EC and German competition law.

**Alfonso Silva** is partner and head of Carey y Cía.'s Corporate-Telecom Group. His practice areas span, in general, corporate and business law, financing, mergers and acquisitions and, specially, all regulatory and transactional aspects related to the telecommunications industry, including the Telecom law and regulations, concessions, licenses and permits and state contracts amongst others. Mr. Silva has been appointed representative and/or board member of several multinational companies that operate in Chile, including banks. Additionally, he is a member of the board of the Chilean Direct Selling Association since 1994. He is also an officer of the IBA Communications Committee since 2010 (in the position of Representative for Latin America). Likewise, Mr. Silva is a member of the Chilean Bar Association since 1988 and was member of its Ethics Committee during 2009 and a member of the Legal Committee of the British-Chilean Chamber of Commerce since 2011. He is also the author of several articles and publications in the telecommunications field, including the Chilean Chapter of the "Getting The Deal Through - Telecoms and Media" published by Law Business Research Ltd. (since 2000). Mr. Silva studied law at the Universidad de Chile and, in 1985, was appointed there as Assistant Professor of Administrative Law. In 1988, he was admitted to the Bar. Additionally, he received the British Council Award (1992) and holds a Master of Laws (LL.M.) degree from the University of Cambridge (1993). He has also been Visiting Professor of the Master of Informatics and Telecommunications Law at the Universidad de Chile during 2005, 2007 and 2009.

**Mariana Oliveira e Silva** is a consultant at the economics consulting firm Tendências Consultoria Integrada since 2006. Ms. Oliveira holds a Master degree in Economics from University of São Paulo, having graduated at the Economics Department from Ribeirão Preto campus. With over six years of experience in economic consulting, she is a specialist on credit and retail trade sectors. Her work includes the monitoring of economic activity indicators for the Brazilian economy and the coordination of demand estimation projects. Ms. Oliveira has an academic paper on switching cost in Brazilian banking.

**Sebastián Squella** is a member of Carey's Corporate-Telecom Group. His main practice areas include telecommunications and media law, mergers and acquisitions, financing operations, direct sale matters and assessment in general corporate and commercial matters. Mr. Squella studied law at the Universidad de Chile and, in 2007, was there appointed as Assistant Professor of Philosophy of Law. He was admitted to the Chilean Bar in 2013.



**Roberto Domingos Taufick** is a Member of Brazil's Senior Executive Service, Commissioner at the Federal Commission for the Fund of Collective Rights, and Deputy General-Coordinator for Network Industries and Financial Services at SEAE, where has been working for the last three years. Mr. Taufick was the first U.S. Federal Trade Commission International Fellow under the Safe Web Act. For five years served as lead counsel for CADE, the Brazilian Competition Commission. Has previously worked in the telecommunications and corporate team of Tozzini, Freire, Teixeira & Silva Attorneys-at-Law in Sao Paulo. He authored several works on Competition Law. His book on the Brazilian New Competition Law has been adopted by both graduate and undergraduate studies in Brazil's best law schools. Master of Laws candidate in Law, Science and Technology, Stanford University; Postgraduate Diploma in EU Competition Law, King's College London; Expert in Competition Law, Fundação Getulio Vargas; Extended education on Competition Law, University of Brasília; Bachelor of Laws, University of Sao Paulo – Largo Sao Francisco *campus*.

**Vivian Terng** is an associate at Barbosa, Müssnich & Aragão Advogados. She has a law degree from São Paulo University – USP (2013), with extension studies at L'Institut d'Études Politiques de Paris – SCIENCES PO and WIPO International Summer School on Intellectual Property, Croatia.

**Kurt Tiam** is an Of Counsel with the Hogan Lovells Beijing office. He joined the corporate and commercial practice group at Hogan Lovells Beijing in 2004. Before joining Hogan Lovells, Kurt practiced as an advocate and solicitor in a leading local law firm in Malaysia. Since joining Hogan Lovells, Kurt represents leading venture capital funds in many of their portfolio investments into China with a focus on internet and technology related investments. He advises regularly on telecommunications related matters including cloud solutions, Machine to Machine applications, data centers, online gaming and mapping services, data transfer and data protection issues. He also advises on the structuring and completion of cross border mergers and acquisitions for both foreign multinationals and PRC clients (private and state-owned entities). His corporate experience includes advising on foreign direct investments and greenfield investments in China.

**Regina Ribeiro do Valle** is VP at the Brazilian Association of Information Technology and Telecommunications Law (ABDTIC) for 2012-2014, and a member of this Association since 1982. She is also a Member of the International Law Association (ILA), and during seven years has been Chair of the Task Force Group of the Brazilian-American Chamber of Commerce (AmCham). She built her career as a partner in some of the major law firms in Brazil, dedicating her practice to corporate and regulatory law, assisting national and international clients with particular focus on telecommunications, media, entertainment, and electronic commerce. Regina Valle is regularly recognized and recommended as a leader at important publications as The International Who's Who Legal, International Financial Law Review 1000 and Expert Guides. She has an LL.M. in International Law from the Law School of Universidade de São Paulo (USP) in 2007, and she graduated in the same School in 1976. Among her

publications in Brazil are: “Responsible Use of Digital Means,” a chapter from the book *Electronic Law and Internet Manual*, published by Lex in 2006; “The Regulation of Infrastructure Services in Brazil,” a chapter from the book *Public Private Partnerships*, published by MP in 2006; “Cyber Law is a Reality? – Institutional Law: Self Regulation in the Internet,” from the book *E-Dicas: Information Society Law*, published by Usina do Livro in 2005; and “Pay TV and Broadcast,” article for the “*Revista de Informação Legislativa*” n. 160 (October/December 2003).

**Wolrad Prinz zu Waldeck und Pyrmont** is an attorney at Freshfields Bruckhaus Deringer LLP, Düsseldorf and specializes in various fields of IP law, in particular in patent law and its intersection to antitrust law. He has substantial experience in patent litigation and has been intensively involved in the recent smartphone litigations. His clients include a number of major international companies in the telecommunication, consumer electronics, pharma and biotechnology industries, which he advises and represents in complex patent litigation. Wolrad completed his legal education at the universities of Heidelberg and Munich, and at the George Washington University Law School. During his LL.M. studies, he served part-time in the chambers of The Hon. Judge Randall. R. Rader at the U.S. Court of Appeals for the Federal Circuit. Before joining Freshfields, he worked as research associate at the Max-Planck-Institute for Intellectual Property, Competition and Tax Law, and as Program Director of the Munich Intellectual Property Law Center (MIPLC) where he was responsible for coordination, implementation and further development of its interdisciplinary LL.M. IP program. Wolrad is a faculty member of the MIPLC. He is admitted to the German bar.

**Joep Wolfhagen** started his career at Freshfields Bruckhaus Deringer’s Brussels office in the Antitrust, Competition and Trade group. He is currently an associate in the Dispute Resolution department of Freshfields Amsterdam. Joep was educated at the University of Virginia, NYU and the University of Amsterdam, from which he obtained both an LLM Degree in European Private Law and IP/Competition Law. Previously he worked as a trainee for the European Commission (DG Competition), where he was involved in several IP-related competition cases.

**Leonardo Fernandez Zago** is advisor of the Secretary of Telecommunications at the Ministry of Communications since 2014, and was born in 1984, in São José dos Campos (SP). He holds a degree in Law from the Brasilia Higher Education Institute (Iesb). Since 2007, he has worked as a lawyer in Brasilia (DF), in the areas of civil, consumer and labor law. Before working for the Ministry of Communications, he has worked at Paixão Côrtes e Advogados Associados from 2007 to 2011, and as a lawyer in the consumer and civil law fields from 2011 to 2014.

**Cristianne Zarzur** is a partner at Pinheiro Neto Advogados where she focused on competition matters, acting on the following areas: merger clearance; non-merger counseling/investigations (cartel investigations, leniency applications, settlement agreements, abuse of dominant position, exclusionary practices, etc); and compliance programs. Ms. Zarzur has an LL.B. degree from the Mackenzie University, São Paulo

(1995) and a specialization degree in economics from the Getulio Vargas Foundation (1996). Her international experience includes participation in several seminars (ABA, IBA, ICN). In addition, Ms. Zarzur joined the competition and intellectual property law firm Howrey Simon Arnold & White, LLP as a foreign associate during 2000/2001. Ms. Zarzur is currently the president of the Brazilian Institute of Studies on Competition, Consumer Affairs and International Trade – IBRAC. She is listed in several publications such as Chambers Global (Tier 1 in Competition in Brazil), Who's Who Legal, PLC Which Lawyer, Expert Guides – Women in Business Law, among other publications.



# Summary of Contents

About the IBA	v
About the IBRAC	vii
List of Editors	ix
List of Contributors	xiii
Foreword by Michael J. Reynolds	li
Foreword by Daniel A. Crane	liii
Foreword by Gesner Oliveira	lv
Preface	lvii
List of Figures	lxi
List of Tables	lxiii
PART I	
Convergence, Takeovers and Mergers in the Communications and Technology Industry: Comparative Experiences	1
CHAPTER 1	
Introducing Diversity in EU Merger Control <i>Yvan Desmedt &amp; Philippe Laconte</i>	3

## Summary of Contents

---

### CHAPTER 2

- Summary of Recent U.S. Enforcement Decisions in  
Communication/Entertainment Industry Transactions  
*Ilene Knable Gotts* 13

### CHAPTER 3

- Competition and Regulatory Aspects of Convergence, Takeovers and  
Mergers in the Communications and Media Industries  
*Thomas Janssens & Joep Wolfhagen* 27

### CHAPTER 4

- Brazil's Antitrust and Regulatory Reviews of TIM/Telefónica:  
Lessons Learned  
*Ana Paula Martinez & Alexandre Ditzel Faraco* 35

### CHAPTER 5

- Changes in the Global Telecommunication Market and Its  
Implications in Brazil  
*Gesner Oliveira & Wagner Heibel* 51

### CHAPTER 6

- Mergers in the Canadian Communications Sector: An Increasingly Curious  
Situation  
*Lorne Salzman* 61

### PART II

- Looking Ahead: New Markets and Competitive Hurdles in the  
Offering of Globalized Services 67

### CHAPTER 7

- In Search of a Competition Doctrine for Information Technology  
Markets: Recent Antitrust Developments in the Online Sector  
*Jeffrey A. Eisenach & Ilene Knable Gotts* 69

### CHAPTER 8

- The Internet of Things in the Light of Digitalization and Increased  
Media Convergence  
*Anna Blume Huttenlauch & Thoralf Knuth* 91

### CHAPTER 9

- Dynamic Markets and Competition Policy  
*Bernardo Macedo & Sílvia Fagá de Almeida* 105

CHAPTER 10	
Recent Antitrust Developments in the Online Sector	
<i>Federico Marini-Balestra</i>	117
CHAPTER 11	
Mobile Payments and Mobile Banking in Brazil: Perspectives from an Emerging Market	
<i>Márcio Issao Nakane, Camila Yumy Saito &amp; Mariana Oliveira e Silva</i>	135
CHAPTER 12	
Internet of Things: Manufacturing Companies Industry and Use of ‘White Spectrum’: Ghost in the Machine?	
<i>Kurt Tiam &amp; Andy Huang</i>	153
PART III	
Intellectual Property and Competition in Electronic Environments	163
CHAPTER 13	
Competitive Aspects of Cloud-Based Services	
<i>Fabrizio Cugia di Sant’Orsola &amp; Silvia Giampaolo</i>	165
CHAPTER 14	
Standard-Essential Patents and US Antitrust Law: Light at the End of the Tunnel?	
<i>Leon B. Greenfield, Hartmut Schneider &amp; Perry A. Lange</i>	181
CHAPTER 15	
IP and Antitrust: Recent Developments in EU Law	
<i>Miguel Rato &amp; Mark English</i>	193
CHAPTER 16	
Antitrust Cases Involving Intellectual Property Rights in the Communication and Media Sector in Brazil	
<i>Barbara Rosenberg, Luis Bernardo Cascão &amp; Vivian Terng</i>	205
CHAPTER 17	
Patents Meet Antitrust Law: The State of Play of the FRAND Defense in Germany	
<i>Wolrad Prinz zu Waldeck und Pyrmont</i>	215
PART IV	
Power over Data	231

## Summary of Contents

---

CHAPTER 18	
The Role of Privacy in a Changing World	
<i>Chris Boam</i>	233
CHAPTER 19	
The Transatlantic Perspective: Data Protection and Competition Law	
<i>Pamela Jones Harbour</i>	247
CHAPTER 20	
Power over Data: Brazil in Times of Digital Uncertainty	
<i>Florian de Azevedo Marques Neto, Milene Louise Renée Coscione &amp; Juliana Deguirmendjian</i>	257
CHAPTER 21	
Big Data and the Cloud: Privacy and Security Threats of Mass Digital Surveillance?	
<i>Lyda Mastrantonio &amp; Natalia Porto</i>	281
PART V	
Open Internet and Net Neutrality	291
CHAPTER 22	
Net Neutrality Regulation: A Worldwide Overview and the Chilean Pioneer's Experience	
<i>Alfonso Silva &amp; Sebastian Squella</i>	293
CHAPTER 23	
Net Neutrality in Singapore: A Fair Game	
<i>Chung Nian Lam</i>	305
CHAPTER 24	
Internet Regulation in Brazil: The Network Neutrality Issue	
<i>Lauro Celidonio Gomes dos Reis Neto, Fabio Ferreira Kujawski &amp; Thays Castaldi Gentil</i>	317
CHAPTER 25	
<i>The New Brazilian Internet Constitution and the Netmundial Forum</i>	
<i>João Moura</i>	329
CHAPTER 26	
The Brazilian Telecom Regulatory Scenario and the Proposals of the Internet Law	
<i>Regina Ribeiro do Valle</i>	335



PART VI	
Regulatory Policy Round Table: A Brazilian Case Study	343
CHAPTER 27	
Competition in the Brazilian Telecommunication Market	
<i>Maximiliano Martinhão, Guido Lorencini Schuina, Haitam Laboissiere Naser &amp; Leonardo Fernandez Zago</i>	345
CHAPTER 28	
A New Horizon for Competition Advocacy in Brazil	
<i>Adriano Augusto do Couto Costa, Marcelo de Matos Ramos &amp; Roberto Domingos Taufick</i>	359
CHAPTER 29	
Overlaps and Synergies between Regulators in the Brazilian Telecommunications Market	
<i>Marcelo Bechara de Souza Hobaika &amp; Carlos M. Baigorri</i>	375
CHAPTER 30	
The New Competition Law in Brazil and the New Framework for Merger Analysis in Telecom	
<i>Carlos Emmanuel Joppert Ragazzo &amp; Cristiane Landerdahl de Albuquerque</i>	387
CHAPTER 31	
Regulatory Policy Round Table: A Dialogue between Telecommunications and Antitrust Authorities	
<i>Denis Alves Guimarães</i>	397
Index	413



# Table of Contents

About the IBA	v
About the IBRAC	vii
List of Editors	ix
List of Contributors	xiii
Foreword by Michael J. Reynolds	li
Foreword by Daniel A. Crane	liii
Foreword by Gesner Oliveira	lv
Preface	lvii
List of Figures	lxi
List of Tables	lxiii
PART I	
Convergence, Takeovers and Mergers in the Communications and Technology Industry: Comparative Experiences	1
CHAPTER 1	
Introducing Diversity in EU Merger Control <i>Yvan Desmedt &amp; Philippe Laconte</i>	3
1. Scope of the Commission's Competence to Promote Cultural Diversity and Media Plurality under EU Merger Rules	4

## Table of Contents

---

2.	The Commission's Restrictive Approach in Relation to Media Plurality in News Corp/BskyB	7
3.	The Commission's Interventionist Approach in Relation to Cultural Diversity, as Shown in Universal/EMI	8
4.	The Way Forward, Risks, and Opportunities	10

### CHAPTER 2

	Summary of Recent U.S. Enforcement Decisions in Communication/Entertainment Industry Transactions <i>Ilene Knable Gotts</i>	13
1.	AT&T/T-Mobile	13
2.	Verizon/SpectrumCo	16
3.	Deutsche Telekom/MetroPCS	18
4.	Mobile Phone Patent Portfolio Developments	21
	4.1. DOJ Mobile Phone Investigations	21
	4.2. FTC Google Settlement	23
5.	VIVENDI/EMI	25

### CHAPTER 3

	Competition and Regulatory Aspects of Convergence, Takeovers and Mergers in the Communications and Media Industries <i>Thomas Janssens &amp; Joep Wolfhagen</i>	27
1.	Introduction	27
2.	Regulatory Changes Are Reflective of Consolidation and Convergence Trends	28
3.	Consolidation in the Mobile Sector	29
	3.1. Striking the Right Balance between Competition and Investment Incentives	29
	3.2. Recent EU Practice May Shape the Framework for Further Consolidation	30
	3.3. The Limits of Mobile Consolidation: The US Experience	31
4.	Service and Infrastructure Convergence Drive Cable Consolidation	31
	4.1. Analysing the Effects of Cable Mergers	32
	4.2. Mergers Involving Cable Operators in the EU	32
	4.3. US Cable Consolidation	33
5.	Conclusion	33

### CHAPTER 4

	Brazil's Antitrust and Regulatory Reviews of TIM/Telefónica: Lessons Learned <i>Ana Paula Martinez &amp; Alexandre Ditzel Faraco</i>	35
1.	Brief Description of the Telefónica/Telco Transaction	36

2.	Regulatory Aspects	36
2.1.	Regulatory Framework for Reviewing Transactions in the Telecommunications Sector in Brazil	37
2.2.	Why Telefónica's Indirect Equity Interest in TIM Brasil May Be Viewed as Problematic from a Regulatory Perspective	38
2.3.	ANATEL's Review of Telefónica/Telco Transaction	40
3.	Antitrust Review	41
3.1.	Merger Review Framework in Brazil	41
3.2.	CADE's Review of the 2007 Telefónica/Telco Transaction	44
3.3.	CADE's Review of the 2010 Telefónica/Portugal Telecom Transaction and Its Impact on the 2013 Telefónica/Telco Transaction	46
4.	Lessons Learned	47
4.1.	Lesson 1: Behavioral Remedies Are Resource-Intensive and Will Likely Be Viewed with Skepticism as a Remedy under Brazil's New Pre-merger Review System	48
4.2.	Lesson 2: The Regulatory and Antitrust Agencies Are Expected to Conduct Independent Reviews	48
4.3.	Lesson 3: Minority Shareholdings Raise Substantial Antitrust Concerns	48
4.4.	Lesson 4: Enhanced Skepticism towards the Role of Economics in Minority Shareholdings Cases	49

CHAPTER 5

Changes in the Global Telecommunication Market and Its Implications in Brazil

*Gesner Oliveira & Wagner Heibel*

51

1.	Scenario 1: Authorization of the Operation That Permits Telefónica to Absorb TIM's Share of the Market	53
2.	Scenario 2: Splitting of TIM and Its Absorption by the Main Competitors	53
3.	Scenario 3: Arrival of a New Player	55
3.1.	AT&T	55
3.2.	VODAFONE	57
3.3.	VIVENDI	57

CHAPTER 6

Mergers in the Canadian Communications Sector: An Increasingly Curious Situation

*Lorne Salzman*

61

1.	Legal Infrastructure	62
2.	Early Days	62
3.	The Turning Point	63
4.	Merger Law Fallout	64

## Table of Contents

---

### PART II

Looking Ahead: New Markets and Competitive Hurdles in the Offering of Globalized Services	67
---	----

### CHAPTER 7

In Search of a Competition Doctrine for Information Technology Markets: Recent Antitrust Developments in the Online Sector <i>Jeffrey A. Eisenach &amp; Ilene Knable Gotts</i>	69
---	----

1. Introduction	69
2. The IT Challenge to Traditional Antitrust Doctrine	71
2.1. The IT Trifecta: Dynamism, Modularity, and Demand-Side Effects	71
2.2. Implications for Enforcement	72
3. From Theory to Practice: Recent Enforcement Review Involving IT (and Related) Markets	76
3.1. Transactions Involving Content Providers	76
3.1.1. Horizontal Theories	77
3.1.2. Vertical Theories	79
3.2. Transactions Involving Database Software	80
3.3. Transactions Involving Hardware, Platforms, or Networks	82
3.4. Transactions Involving Potential Competition and Future Markets	87
4. Looking Ahead: Some Issues for the Future	88
4.1. Net Neutrality: When (If Ever) Is Ex Ante Regulation Appropriate?	88
4.2. Big Data and the Internet of Things	89
5. Conclusions	90

### CHAPTER 8

The Internet of Things in the Light of Digitalization and Increased Media Convergence <i>Anna Blume Huttenlauch &amp; Thoralf Knuth</i>	91
--	----

1. Introduction	91
2. Digitalization and Convergence as Industry Trends	92
3. Approach of Antitrust Authorities, Namely the European Commission and the German Federal Cartel Office	93
3.1. Content versus Advertising Markets	94
3.2. Online versus Offline	94
3.3. User Reality and Criticism	95
3.4. How Do Competition Authorities Take the Increasing Competition into Account?	96
3.5. Challenges Ahead	97
4. Beyond Antitrust: The Spamming Fridge	98
5. Legislation and Consultations	99
6. Let Your Car Tell Your Insurer About Your Whereabouts	102
6.1. A Real-Life Example	102

6.2.	What Positions Have Been Taken by Authorities and Courts?	104
7.	Outlook	104
CHAPTER 9		
Dynamic Markets and Competition Policy		
<i>Bernardo Macedo &amp; Sílvia Fagá de Almeida</i>		
		105
1.	Introduction	105
2.	The Competition Environment in Dynamic Markets	106
	2.1. Elements That Pose Challenges to Competitors	106
	2.2. Elements That Intensify Competition	107
3.	Antitrust Enforcement	109
	3.1. Relevant Market	109
	3.2. Market Power and the Competitive Environment	110
	3.3. Efficiencies	112
4.	Conclusions	113
	Bibliography	114
CHAPTER 10		
Recent Antitrust Developments in the Online Sector		
<i>Federico Marini-Balestra</i>		
		117
1.	Introduction	117
	1.1. Over-the-Top Applications and Services Providers	119
2.	Net Neutrality vis-à-vis Regulatory and Antitrust	121
	2.1. The United States: Is Net Neutrality an Antitrust Domain?	122
	2.2. The European Union: A Complementary Use of Antitrust	
	Law and Regulation to Enforce Net Neutrality	124
	2.2.1. On the Regulatory Side, “There Are No Clear Rules on	
	Net Neutrality Today at EU Level”, Forbidding All Traffic	
	Management and Data Prioritization	124
	2.2.2. Also on the Antitrust Side Net Neutrality Recently	
	Emerged as a Protagonist	127
3.	Recent Initiatives in the European OTT Sector	127
	3.1. Appraising the Role of OTT Services	127
	3.2. Online Search Sector	128
	3.3. Online Selling	131
4.	Conclusions	133
CHAPTER 11		
Mobile Payments and Mobile Banking in Brazil: Perspectives		
from an Emerging Market		
<i>Márcio Issao Nakane, Camila Yumy Saito &amp; Mariana Oliveira e Silva</i>		
		135
1.	Introduction	135
2.	Brazilian Market	136

## Table of Contents

---

2.1.	Mobile Banking, Mobile Payment	136
2.2.	Mobile Phone Evolution in Brazil	137
2.3.	Financial Inclusion	139
2.3.1.	Recent Development	139
2.3.2.	International Comparative	141
2.3.3.	Crossing between Mobile Phones and Financial System	141
2.3.4.	Important Disparity between Geographic Regions in Brazil	142
3.	Regulatory Framework	144
3.1.	Framework for Regulatory Analysis	144
3.2.	Objectives of Legislation	146
3.3.	Scope of Payment Services	147
4.	Evaluation and Conclusions	149
	Bibliography	150
CHAPTER 12		
	Internet of Things: Manufacturing Companies Industry and Use of 'White Spectrum': Ghost in the Machine? <i>Kurt Tiam &amp; Andy Huang</i>	153
1.	China's IOT Drive	153
2.	The Case for White Spectrum	154
3.	Allocation of Frequency Spectrum in China	154
4.	Development of IPv6 Addressing	155
5.	Foreign Investment Challenges in the M2M Industry	156
6.	Setting Standards and Antitrust Concerns	157
7.	Data Protection and Data Transfer Concerns	158
8.	Restrictions on Types of Data Transferred	160
9.	Encryption Requirements in China	161
10.	Conclusion	161
PART III		
	Intellectual Property and Competition in Electronic Environments	163
CHAPTER 13		
	Competitive Aspects of Cloud-Based Services <i>Fabrizio Cugia di Sant'Orsola &amp; Silvia Giampaolo</i>	165
1.	Introduction	165
2.	The Structure of Clouds	167
3.	Competitive Aspects	170
3.1.	Standardization	170
3.2.	Licensing and the "Revised" TTBER	172
3.3.	Article 102 TFEU	175
4.	Conclusions	178



CHAPTER 14

Standard-Essential Patents and US Antitrust Law: Light at the End of the Tunnel?

*Leon B. Greenfield, Hartmut Schneider & Perry A. Lange* 181

1. Introduction 181
2. Standard-Essential Patent Enforcement 182
3. Injunctions Based on Standard-Essential Patents 184
4. Antitrust Violations Based on Abuse of Standard-Essential Patents 187
5. Determining FRAND Rates 188
6. The Ability to Challenge Standard-Essential Patents:  
Validity/Infringement/Enforceability 190
7. Conclusion 191

CHAPTER 15

IP and Antitrust: Recent Developments in EU Law

*Miguel Rato & Mark English* 193

1. Introduction 193
2. Background 194
  - 2.1. Factual Context: Standards, SEPs and FRAND Commitments 194
  - 2.2. Theoretical Context: ‘Hold-Up’ and ‘Reverse Hold-Up’ 195
3. The Samsung and Motorola Decisions 197
4. Critical Assessment 199
5. Final Remarks 202

CHAPTER 16

Antitrust Cases Involving Intellectual Property Rights in the Communication and Media Sector in Brazil

*Barbara Rosenberg, Luis Bernardo Cascão & Vivian Terng* 205

1. Introduction 205
2. Relevant Precedents Involving IPRS 206
  - 2.1. CDs and DVDs: Abuse of Dominant Position and Patent Pool 206
  - 2.2. Sham Litigation: Tachographs, Shop Tour and Pharmaceutical, Cases 207
  - 2.3. Musical Rights and Copyrights: The ECAD Case 209
3. Merger Control in Brazil: General Aspects, Associative Agreements and Licensing IPRS 210
4. Merger Control: Communication and Media 212
  - 4.1. Phonographic Industry: Music Recording and Music Publishing Market – Universal/EMI and Sony/EMI Case 212
  - 4.2. Film Distribution 213
  - 4.3. Digital Music and Phonographic Industry 213
5. Final Remarks 214

## Table of Contents

---

### CHAPTER 17

#### Patents Meet Antitrust Law: The State of Play of the FRAND Defense in Germany

*Wolrad Prinz zu Waldeck und Pyrmont* 215

1. Background: Standardization and FRAND Licensing Declarations 215
2. Setting the Scene: Peculiarities of the German Patent Litigation System 216
3. The Origin: The Orange Book Standard Decision 218
  - 3.1. Unconditional License Offer on Non-refusable Terms 219
  - 3.2. Compliance with the Obligations under the Prospective License 220
4. The Orange Book's Progeny: Subsequent Application and Extension 221
  - 4.1. Restrictive Interpretation of "Customary License Terms" 222
  - 4.2. The Amount of the FRAND Royalty 223
  - 4.3. Rendering of Accounts and Deposit of License Fees 224
5. The Watershed: Developments on the European Union Level 225
6. Changing Tides?: The Impact of the Commission's Antitrust Investigations in Germany 227
7. Outlook: What Makes a Licensee Willing/Unwilling 228

### PART IV

Power over Data 231

### CHAPTER 18

#### The Role of Privacy in a Changing World

*Chris Boam* 233

1. Privacy Is Nebulous, but Its Function in Society Is Not 234
2. Has Law Bridged the Gap: Assuming That We Know What the "Gap" Is? 236
3. The Sea Change in the Role of Trust 240
4. Where Do We Go from Here? 241

### CHAPTER 19

#### The Transatlantic Perspective: Data Protection and Competition Law

*Pamela Jones Harbour* 247

1. Introduction 247
2. Data Protection and Competition 248
  - 2.1. Google/DoubleClick and Beyond 248
  - 2.2. Data Protection and Competition: EU 249
3. Three Theories for Evaluating Privacy Issues in a Competition Law Framework 251
  - 3.1. Competition in Privacy Protections 251
  - 3.2. Competition in Technologies to Strengthen User Privacy 253
  - 3.3. Defining a Product Market for Data 253

4.	Privacy, Competition and the Impact on Consumers	254
5.	Conclusion	255
CHAPTER 20		
Power over Data: Brazil in Times of Digital Uncertainty		
<i>Floriano de Azevedo Marques Neto, Milene Louise Renée Coscione &amp; Juliana Deguirmendjian</i>		
		257
1.	Intimacy, Private Life, Honor and Image as Persons' Fundamental Rights	259
2.	Legislation of the Telecommunications Sector in Brazil	261
3.	Brazil's Specific Legislative Initiatives on the Protection and Confidentiality of Data	262
4.	Contributions of International Experience to Brazil	264
	4.1. Canada	265
	4.2. European Union	268
	4.3. Brazil	273
5.	Conclusion	277
CHAPTER 21		
Big Data and the Cloud: Privacy and Security Threats of Mass Digital Surveillance?		
<i>Lyda Mastrantonio &amp; Natalia Porto</i>		
		281
1.	Introduction	281
2.	The Cloud: An Evolving Model	282
3.	Cloud and the EU Digital Agenda	284
4.	Users' (Big) Data	285
5.	Privacy and Data Retention	286
6.	Security	288
7.	Conclusion	290
PART V		
	Open Internet and Net Neutrality	291
CHAPTER 22		
Net Neutrality Regulation: A Worldwide Overview and the Chilean Pioneer's Experience		
<i>Alfonso Silva &amp; Sebastian Squella</i>		
		293
1.	Introduction	293
2.	Net Neutrality Concept	295
	2.1. Pros and Cons of Net Neutrality	296
3.	Regulatory Perspective of Net Neutrality	298
	3.1. EE.UU	298

## Table of Contents

---

3.2.	European Commission	299
4.	An Approach to the Chilean Experience	300
4.1.	The Net Neutrality Law	300
4.2.	Content of the Net Neutrality Law	301
4.2.1.	Identification of the Relevant Players Regulated by This Law	301
4.2.2.	Prohibitions and Obligations	301
4.3.	Net Neutrality Special Regulation	302
4.4.	Network Traffic Management	302
4.5.	Main Criticism to the Net Neutrality Law	303
5.	Conclusions	304

### CHAPTER 23

Net Neutrality in Singapore: A Fair Game		
<i>Chung Nian Lam</i>		305

1.	Introduction	305
2.	Net Neutrality Basic Concepts	306
3.	The Telecoms Regulatory Approach in Singapore	306
3.1.	Licensing Regulation in Singapore	307
3.2.	The TCC's Interconnection and Non-discrimination Obligations	307
4.	The IDA's Position on Net Neutrality	309
4.1.	No Blocking of Legitimate Internet Content	309
4.2.	Compliance with Competition and Interconnection Rules	309
4.3.	Providing Information Transparency	310
4.4.	Meeting Minimum Quality of Service ('QoS') Standards	310
4.5.	Niche or Differentiated Internet Services Allowed	311
5.	Other Issues	312
5.1.	Pricing Models and Net Neutrality?	312
5.2.	Infrastructure and Net Neutrality	313
6.	Conclusion	314

### CHAPTER 24

Internet Regulation in Brazil: The Network Neutrality Issue		
<i>Lauro Celidonio Gomes dos Reis Neto, Fabio Ferreira Kujawski &amp; Thays Castaldi Gentil</i>		317

1.	Purpose	317
2.	Brief Summary of Internet History	317
3.	Network Neutrality: History and Concept	319
4.	Network Neutrality Regulation	322
4.1.	Europe	323
4.2.	United States	324
4.3.	Brazil	326
5.	Conclusion	327

CHAPTER 25

*The New Brazilian Internet Constitution and the Netmundial Forum*

*João Moura*

329

1. The Political Dividends: A Positive Balance 331
2. What Is in That for Businesses? 332
3. Data Protection 332
4. Obligation to Maintain Logs of Connection and Access to Applications 332
5. The Usage of Data from Aggregated Customers to Develop New Applications 332
6. Net Neutrality 333
7. More Revenues, Innovation and Competition 333

CHAPTER 26

*The Brazilian Telecom Regulatory Scenario and the Proposals of the Internet Law*

*Regina Ribeiro do Valle*

335

1. Introduction 335
2. Current Scenario of Internet Services Regulation in Brazil 336
3. Neutrality of Network vis-à-vis the Right to Charge for Quality Services 338
4. Conclusion 340

PART VI

*Regulatory Policy Round Table: A Brazilian Case Study*

343

CHAPTER 27

*Competition in the Brazilian Telecommunication Market*

*Maximiliano Martinhão, Guido Lorencini Schuina, Haitam Laboissiere Naser & Leonardo Fernandez Zago*

345

1. Introduction 345
2. Institutional Aspects for Telecommunications in Brazil 345
3. The Brazilian Telecommunications Sector 346
  - 3.1. The Telecommunications Market 347
    - 3.1.1. Fixed Telephony 347
    - 3.1.2. Mobile Telephony and Broadband 348
    - 3.1.3. Fixed Broadband 348
    - 3.1.4. Pay TV 349
  - 3.2. Indicators for the Telecommunication Sector 350
    - 3.2.1. Indicator for Companies' Performance 350
    - 3.2.2. Competition Indicators 350
    - 3.2.3. Service Indicators 350
4. Actions for the Telecommunications Sector in Brazil 351

## Table of Contents

---

4.1.	General Plan of Competition: PGMC	351
4.2.	Wholesale Products Broker System: SNOA	353
4.3.	Regulation of Industrial Exploitation of Dedicated Lines: EILD	354
4.4.	Anatel's Competition Office	354
4.5.	Law of Conditioned Access Service	355
4.6.	Infrastructure Sharing	355
5.	Conclusion	357

### CHAPTER 28

#### A New Horizon for Competition Advocacy in Brazil

*Adriano Augusto do Couto Costa, Marcelo de Matos Ramos  
& Roberto Domingos Taufick*

359

1.	Telecommunications and Competition in Brazil	359
1.1.	Completion of Universal Access	361
1.2.	Digital TV	361
1.3.	End of the Term of the PSTN Concession	361
1.4.	Not Enough Incentives for Competition	361
2.	The Secretariat for Economic Monitoring and the Leap to Competition Advocacy	362
2.1.	Advocacy According to the Former Competition Law	362
2.2.	Seae as a De Facto Competition Advocate	363
2.2.1.	Engaging in Economic-Oriented Opinions to the Public Sector	363
2.2.2.	Other Advocacy Measures	364
2.3.	Brazil's 2011 Competition Law: Changes in the Existing Assignments	365
3.	Enhancing Competition Advocacy	369
3.1.	The National Competition Advocacy Program: A Broader View	369
3.1.1.	Overview	369
3.1.2.	Outreach	370
3.1.2.1.	The Public Sector	370
3.1.2.2.	Private Undertakings	371
3.1.2.3.	Academic Institutions	371
3.1.2.4.	News Agencies	372
3.1.2.5.	Final Consumers	372
4.	Final Remarks	372

### CHAPTER 29

#### Overlaps and Synergies between Regulators in the Brazilian Telecommunications Market

*Marcelo Bechara de Souza Hobaika & Carlos M. Baigorri*

375

1.	Introduction	375
2.	The Necessity of Regulation	378

3.	Anatel's Role under the Law 8.884/94	379
4.	The New Institutional Structure	380
	4.1. The General Plan of Competition (PGMC)	380
5.	Synergies	383
6.	Conclusion	384
	Bibliography	384

CHAPTER 30

The New Competition Law in Brazil and the New Framework for Merger Analysis in Telecom

*Carlos Emmanuel Joppert Ragazzo & Cristiane Landerdahl de Albuquerque* 387

1.	Introduction	387
2.	The Telecommunication Sector in Brazil	388
	2.1. The Importance of the Telecommunication Sector in the Brazilian Economy	388
	2.2. Mergers in the Telecom	389
	2.2.1. Minority Shareholding	390
	2.2.2. Vertical Integration and Access to Inputs	390
	2.2.3. Large Horizontal Overlap and Vertical Concerns	390
	2.2.4. Network Sharing	390
3.	Merger Review in Brazilian Telecom Sector	391
	3.1. Previous Procedure	391
	3.2. Merger Review under the New Competition Law	393
4.	Cooperation between Agencies	395
5.	Final Remarks: The Need for Ongoing and Strong Cooperation between the Antitrust and Regulatory Agencies	396

CHAPTER 31

Regulatory Policy Round Table: A Dialogue between Telecommunications and Antitrust Authorities

*Denis Alves Guimarães* 397

1.	Introduction	397
2.	Institutional Background	398
	2.1. Secretariat of Telecommunications of the Ministry of Communications (STE/MiniCom)	398
	2.2. Secretariat for Economic Monitoring of the Ministry of Finance (SEAE/MF)	398
	2.3. National Agency of Telecommunications (ANATEL)	399
	2.4. CADE's General Superintendence (SG/CADE)	399
3.	Content Background: Building Policy Consensus	400
4.	Improving Policy Consensus	407
	4.1. Merger Reviews	407

## Table of Contents

---

4.2.	Anticompetitive Practices	408
4.3.	Competition Advocacy	408
5.	Overcoming Policy Consensus	409
6.	Conclusion	410
	Index	413



## Foreword by Michael J. Reynolds

It gives me enormous pleasure as current President of the IBA to introduce this extremely valuable and informative book based on topics and papers presented following our Communications and Anti trust Conferences in Rio de Janeiro (2013) and Prague (2014).

This annual conference has just celebrated its 25th year. Every year it brings together top experts in communications regulatory and anti trust law and is put on jointly by the communications and Anti trust committees in the IBA. In the audience there are always in-house counsels from some of the top companies in the communications sector.

It is an excellent idea to have collected papers on the two most recent conferences in this book. Taken together the papers give an in-depth and up to date insight into some of the main regulatory and anti trust issues that affect this sector and deal with the major recent cases on both sides of the Atlantic. Taking the annual conference to Brazil was a recognition of this very important market and the papers record the important regulatory and anti trust developments in the communications sector in this BRICS jurisdiction.

I congratulate the officers of the Communications Committee and Anti trust committee on the continuing success of this conference, the first of which I co-chaired in Brussels in 1990. I have no doubt that the annual conference will go from strength to strength in the years to come and this important publication forms part of that achievement.

*Michael J. Reynolds  
IBA President  
Brussels May 2014*



## Foreword by Daniel A. Crane

It is a generally held belief that sectoral regulation and competition law are the two alternative modes for addressing problems of access, discrimination, and market power in communications and related technology industries. In fact, experience shows that this is far too simplistic a conception of the problem. The legal and regulatory toolkit contains many more tools than command-and-control prescriptions on prices and terms of service, on the one hand, or general antitrust prohibitions on the other. Available tools include adjustments in patent, copyright, or trademark policy to favor open competition or investment, reinforcement of private contractual solutions such as FRAND commitments, and direct governmental investments to subsidize the growth of particular firms or sectors. Sophisticated jurisdictions utilize a combination of these tools to advance innovation and consumer choice in the communications field, also keeping in mind that sometimes the best regulatory intervention is no regulatory intervention at all.

Given the amount of theoretical academic ink that has been spilled on these topics, it is refreshing to see a volume of this kind that channels the experience and real-world knowledge of distinguished practitioners from around the globe. In this fine comparative book, we have the opportunity to examine regulatory vignettes from Asia, Brazil, Europe, and the United States. We see problems of competition in the telecommunications and technology spaces addressed across a range of interfaces, from merger policy, to Internet architecture, to IP interventions, to more traditional regulation. The information is up to date and filtered through the best minds working on the relevant problems.

As with any volume that captures episodic, circumstance-specific vignettes, the sum of this book's wisdom should be appreciated in the context of the wider theoretical frameworks proposed by the economics and political science literature. We see hints in these pages of market failures and rehabilitations, interest group capture and public choice theory, and of the perennial conflicts between static and dynamic efficiency. It

is to be hoped that this volume will make a lasting contribution to understanding good and bad legal and regulatory policy in the communications sector.

*Daniel A. Crane  
Associate Dean for Faculty and Research &  
Frederick Paul Furth Sr. Professor of Law,  
University of Michigan.  
Counsel; Paul, Weiss, Rifkind,  
Wharton & Garrison LLP*

## Foreword by Gesner Oliveira

The idea of publishing this book came up during the 24th Annual Communications and Competition Law Conference, hosted jointly by the IBA and the IBRAC in Rio de Janeiro.

Among several topics highly relevant to the ones active in the fields of Communications and Competition Law, we are particularly pleased to have delivered contributions in respect to two of them: (1) *Convergence, Takeovers and Mergers in the Communications and Technology Industry* in Part I of this book, where we hope you appreciate the joint contribution prepared by an economist and an engineer on the *Changes in the Global Telecommunication Market and Its Implications in Brazil* and (2) *Regulatory Policy Round Table* in the final Part VI of the book, subject approached by us in the 24th Annual Communications and Competition Law Conference.

In respect to the regulatory policy matter, co-editors of this book had the great idea of gathering contributions from the most important Brazilian authorities responsible for formulating and implementing regulatory and antitrust policies for the communications sector. The diversity of regulators somehow involved in this policy-making creates the threat of inefficient overlapping competencies while at the same time makes possible that valuable synergies are achieved.

The final Chapter 31 of the book – *Regulatory Policy Round Table: A Dialogue between Telecommunications and Antitrust Authorities* – mediates such debate between the main regulators: two high profile government bodies subordinated to Brazil's President, the Secretariat of Telecommunications of the Ministry of Communications (STE/MiniCom) and the Secretariat for Economic Monitoring of the Ministry of Finance (SEAE/MF); and two independent agencies, the National Agency of Telecommunications (ANATEL) and the CADE's General Superintendence (SG/CADE).

The chapter also reminds of an issue particularly relevant to economists, the importance of a solid economics *bureau* within the structure of the antitrust bodies and its ability to conduct complex analyses on any sector of the economy. In the Brazilian case, this body is the Department of Economic Studies (DEE) of the Administrative Council for Economic Defense (CADE).

Having experience in the private and public sectors and in business and academia, we are sure that this book will be a valuable and lasting contribution to practitioners, policymakers and researchers.

*Gesner Oliveira*  
*Managing Partner at GO Associados*  
*Professor of Economics,*  
*Getulio Vargas Foundation Business Administration*  
*School of São Paulo (FGV/EAESP)*

# Preface

*“Why is it that Communications is subject to special competition rules?”* This almost naïve question, now that almost twenty years have passed from the dawn of liberalization in communications, has often been posed to regulatory lawyers during their practice, being the postulants operators, colleagues or officers indeed of Competition or Regulatory Agencies. Sometimes the question would be asked almost with a philosophical nuance, probably with some hidden interest in touching deeper cords: *“how much does Communications stand out alone as a practice, within the general mare magnum of competition law?”*

The answer, if existent, naturally is not clear-cut, and would entail a series of related topics, issues and clarifications. This book provides an attempt to shed some light on the current international debate, and provides an excellent insight into worldwide experiences in the field, from different angles and on the different aspects related to the crucial mix between sector specific regulation and “special” competition rulings applied to communications.

In this respect, it follows the healthy debates triggered by two gatherings of regulatory lawyers of Communications and Competition IBA Committees, held in Rio de Janeiro in 2013 and Prague 2014, and we are very grateful to all contributors for their commitments and contributions.

Fact is that as in all general big-bangs, liberalization and the following digital revolution have moved elements even further apart, and the legal universe of communications is now drifting away and expanding. Nowadays no-one believes anymore that someday, at the end of its strange parabola, “special” competition regulation will dissolve and converge into the general framework, as originally believed. But this is now evidently a non-issue: the particular experience and application of competitive rules provides a lengthy experience to practitioners, enriches the field, and provides for further speculations. Convergence entails the bundling of networks and services, and sector specific regulation is progressively concentrating on other side-related topics, where the competitive battleground now appears very complex, and once formed simply an ancillary side-related content in communications. Matters such as intellectual property of content, or consumer protection, privacy and data security once fell in side categories. Yet connectivity and network offering (the theoretical ground on which

the application of the essential facility doctrine still resides) represents more and more a commodity, and competitive analysis in the area has moved further on to different items, such as necessity to identify FRAND conditions on compulsory licensing of standards, or the strategic role of open sources or the antitrust clearings in case of mergers between operators acting on potential sensitive data aggregation and profiling.

Defined relevant markets appear more and more as silent icebergs drifting away detached from technological evolution and speed of change. It is foreseeable that the communications sector will focus in the near future more and more on the protection and regulation of content, both copyrighted and user-generated, with giants like Google already looking forward to concentrate on all the business-line, from network to content, as in the Google Fiber project. Also, mobile e-commerce, Internet advertising, search engine optimization and geolocalization services appear destined to converge and interact, modifying again the competitive implications and presumably the definition of markets. In this sense the potential growth of mobile online advertising should not be underestimated, as the geolocalization capabilities of modern handsets will expand the possibility for consumer profiling and related tailored promotional contents.

In fact, recent concerns about the protection of personal privacy and the activities of national law enforcement and security services have arisen in the commercial sphere in connection with both transmission services and the emergence of cloud computing and other technologies that offer substantial benefits to users. In their most efficient manifestations, these services and technologies are trans-border in nature, and present familiar private international commercial law problems.

In this respect, this book focuses also on the specific Brazilian experience. In Brazil the NSA scandal has triggered, as known, an initiative at the General Assembly, followed then by the issuing of the Net Mundial statement, the first Internet Charter ever drawn. Yet even before Snowden, heightened public awareness of the rights of access to electronically transmitted and stored communications by law enforcement and security services had added an additional dimension affecting both commercial decisions and regulatory relationships. This additional dimension has been manifest in the deliberations over DG Justice's proposed European General Data Protection Regulation to replace the 1995 Data Directive, currently debated in Europe. The proposal's ambitious scope, certain specific provisions such as the right to be forgotten, the anxiety in some quarters (especially in the United States) that it unnecessarily threatens economic efficiency and, as a practical matter, its extraterritorial effect, assured that controversy would attend it.

From the very beginning of consideration of the proposal, the traditional transatlantic complications over privacy protection presented some difficulties. At a foundational level, the rather different perspectives on privacy arise – is it a basic human right, integral to human dignity, or not? Likewise, different approaches to privacy protection – comprehensive in Europe, sector by sector in the United States – lead to a European view deeply skeptical of the possibility of mutual recognition arrangements.

The fact that regulatory and competition review and reform may make treasure also from the outcome of international conferences, debates and fora organized and held by practitioners acting worldwide, ensures that the international community may



truly exploit the vast array of experiences which delve on a continuous basis from practical grounds.

We indeed hope this book will provide you a helpful framework for your everyday practice and comparative analysis.

*Fabrizio Cugia di Sant'Orsola,  
Rehman Noormohamed &  
Denis Alves Guimarães  
Rome, London and São Paulo  
September 12, 2014*



## CHAPTER 8

# The Internet of Things in the Light of Digitalization and Increased Media Convergence

*Anna Blume Huttenlauch & Thoralf Knuth\**

---

### 1. INTRODUCTION

At the beginning of this year, Google made quite some noise when it announced it was paying USD 3.2 billion to acquire the home appliance company Nest. The transaction was cleared by the US antitrust authorities on 4 February 2014 but concerns were raised as to how Google will make use of the ‘smart appliances manufacturer’ and the data on personal user behaviour that comes with it, namely whether this data will enable Google to reinforce and strengthen its market position in advertising and other neighbouring markets. The acquisition also demonstrated that the ‘internet of things’ is not merely a mirage in the mist of technological fantasy but that considerable investments are being made in order to make it happen – not only by Google, but even by entire cities. The city of Songdo IBD in South Korea will be built as a wired city with all inhabitants connected to a city-wide grid by 2015, a project which has so far already cost more than USD 10 billion.<sup>1</sup> The city will feature an almost fully integrated connection between devices, roads and buildings via sensors and microchips.<sup>2</sup>

Besides the strong interest in creating a fully connected world Google’s acquisition exemplifies quite drastically – but certainly not uniquely – that media companies

---

\* Dr Anna Blume Huttenlauch is an attorney at Freshfields Bruckhaus Deringer LLP, Berlin. She is specialized in antitrust law. Thoralf Knuth is an attorney at Freshfields Bruckhaus Deringer LLP, Cologne. He is specialized in IT law.

1. J. Greenwood, *The internet of things*, [http://www.songdo.com/songdo-international-business-district/news/in-the-news.aspx/d=209/title=The\\_Internet\\_of\\_Things](http://www.songdo.com/songdo-international-business-district/news/in-the-news.aspx/d=209/title=The_Internet_of_Things) (accessed 14 May 2014).
2. *Master Plan*, <http://www.songdo.com/songdo-international-business-district/the-city/master-plan.aspx> (accessed 14 May 2014).

are increasingly expanding their business activities beyond their traditional field of business. In some cases, this means that companies only slightly shift their focus beyond their traditional media and expand their business to other types of media. For example, the traditional German newspaper publishing house Axel Springer has consistently shifted its focus from its traditional print business to digital media and has even embraced more remote business models that are not directly related to media in the classical sense; in 2013 it acquired Runtastic, which makes sports and fitness smartphone apps.<sup>3</sup>

In other cases it means that companies look for business opportunities beyond the media field altogether. Earlier this year, for example, the media empire Liberty Global, that owns Virgin Media and the cable television company Discovery Communications, reportedly showed an interest in taking a stake in Formula One.<sup>4</sup>

## 2. DIGITALIZATION AND CONVERGENCE AS INDUSTRY TRENDS

By expanding into other business areas or even new industry sectors these companies are reacting to the steady increase in competition confronting media companies globally. To a large extent, this increase in competition is being steered by technological innovation.

Newspapers have probably experienced this increased competition most drastically. In Germany, for example, a number of newspapers have gone bankrupt in recent years.<sup>5</sup> In the last twenty-two years, the overall number of newspapers in Germany has decreased by 21% and circulation has dropped by almost 30% since 1995.<sup>6</sup> The number of magazines has declined by more than 11% since 2005.<sup>7</sup> In the USA, we can observe an even more drastic development, which is tracked meticulously by the website <http://newspaperdeathwatch.com>. Recent investment into the declining print business by tycoons like Amazon founder and CEO Jeff Bezos, who acquired the Washington Post in 2013 despite its decreasing operating revenue and circulation, and Warren Buffet, who has recently invested in a number of small and mid-sized newspapers, can be seen as little more than a noble attempt to delay this trend. Similarly, advertising spending in newspapers has declined by approximately 60%

---

3. *Axel Springer acquires majority stake in Runtastic*, [http://www.axelspringer.de/en/presse/Axel-Springer-AG-acquires-a-majority-stake-in-Runtastic\\_19467043.html](http://www.axelspringer.de/en/presse/Axel-Springer-AG-acquires-a-majority-stake-in-Runtastic_19467043.html) (accessed on 6 Jun. 2014); *Axel Springer makes considerable progress in the digital transformation of the company*, [http://www.axelspringer.de/en/presse/Axel-Springer-makes-considerable-progress-in-the-digital-transformation-of-the-company\\_19503336.html](http://www.axelspringer.de/en/presse/Axel-Springer-makes-considerable-progress-in-the-digital-transformation-of-the-company_19503336.html) (accessed on 6 Jun. 2014).

4. *John Malone set to take on Rupert Murdoch for F1 stake*, <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/media/10615809/John-Malone-set-to-take-on-Rupert-Murdoch-for-F1-stake.html> (accessed 25 May 2014); apparently this was later abandoned again.

5. Among the newspapers that have recently gone bankrupt are the Financial Times Deutschland, the Frankfurter Rundschau, the Nürnberger Abendzeitung, and the Münchner Abendzeitung.

6. *Die deutschen Zeitungen in Zahlen und Daten 2013* ['German newspapers in figures and dates'], statistics published by the German association of newspaper publishers.

7. Statistics published by the German association of newspaper publishers (BDVZ) and by the Information Community for the Assessment of the Circulation of Media (IVW).

since 2000 in Germany.<sup>8</sup> These advertising budgets have been largely shifted to other media such as online and TV.

The consequence of increasing competition is a growing convergence between the various forms of media, triggered and accelerated by technological innovation. Whereas the term ‘convergence’ has mostly been used to refer to the on-going transformation of the audiovisual media landscape (namely the progressive merger of traditional broadcast services and the Internet<sup>9</sup>) the phenomenon concerns the way in which all media services are consumed and delivered. In almost all areas the lines are blurring between the familiar twentieth-century media services such as print newspapers, linear TV broadcasting and radio, and the on-demand services delivered to computers that increasingly replace the traditional mediums.<sup>10</sup> Technological innovation constantly brings us new forms of media services which raise the competitive pressure on traditional services and leads to the creation of new forms of content and advertising formats, something which has been exemplified by the development of smartphones and other handheld devices. Moreover, with every smartphone enabling converged production as well as consumption, in the future there might be a shift from ‘lean-back’ consumption to active participation.<sup>11</sup>

Another way of reacting to the increasing competitive pressure – particularly of content providers who have so far offered their services for free – is the development of pay-models.

### **3. APPROACH OF ANTITRUST AUTHORITIES, NAMELY THE EUROPEAN COMMISSION AND THE GERMAN FEDERAL CARTEL OFFICE**

The expansion into new fields of business activity and the acquisition of companies who can pave the way into these areas of course stands and falls with the willingness of antitrust authorities to clear such strategic moves. Therefore, the question arises if, and if so, how, antitrust authorities take into account the increasing digitalization of media and the growing convergence between the various forms of media in their analyses of the media markets and the competitive landscape.

Overall, it is fair to say that so far most antitrust agencies have tended to follow the traditional categorization which means that they have considered separate markets for newspapers, magazines, online, TV, out-of-home, radio, etc. The developments of

---

8. Calculations based on statistics published by the German advertising industry association.

9. See, for example, Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013).

10. New viewing possibilities include, extending from TV sets with added Internet connectivity, through set-top boxes delivering video content ‘over-the-top’ (OTT) to audiovisual media services provided via PCs, laptops or tablets and other mobile devices. Consumers use tablets or smartphones while simultaneously watching TV, for instance to find out more about what they are watching or to interact with friends or with the TV programme itself, see Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013), p. 3.

11. Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013), p. 3.

increased digitalization and convergence of these categories have not yet been reflected in an adapted definition of the relevant media markets.

### 3.1. Content versus Advertising Markets

Most competition authorities in Europe distinguish between the content markets and the advertising markets within the various media segments.<sup>12</sup> These two sides of the respective markets are closely interrelated, from an economic point of view, because of indirect network effects. A larger network on one side of the market brings about an intrinsically more valuable product and therefore raises the attractiveness for the other side of the market. While the specific dynamics of two-sided markets have been researched extensively from an economic perspective,<sup>13</sup> they have so far played a fairly limited role in the analysis of competition authorities.<sup>14</sup>

### 3.2. Online versus Offline

The European Commission and national authorities such as the German Federal Cartel Office (FCO), have been adamant that online and offline are distinct markets, both in terms of content and advertising.<sup>15</sup> With respect to 'offline media', there are further distinctions not only according to the general type of media (e.g., *newspapers v.*

- 
12. In the case of online media, the content market has been free of charge in the past for many services and therefore only the advertising markets were considered in such cases, e.g., free online newspapers, search engines, etc. After the introduction of pay walls and other paying mechanisms this may change in the future.
  13. J. Anderson & J.J Gabszewicz, *The media and advertising: a tale of two-sided markets*, in Ginsburg and Throsby (eds.), *Handbook of Cultural Economics* vol. 1, p. 567-614 (2006); T. Eisenmann, W. Parker & M. Van Alstyne, *Strategies for Two-Sided Markets*, 84 (10) *Harvard Business Review*, 92-101 (2006); L. Filistrucchi, D. Gerardin, E. van Damme & S. Affeldt, *Market Definition in Two-Sided Markets: Theory and Practice*, Tilburg Law School Legal Studies Research Paper Series No. 09/2013; D. Ratliff & L. Rubinfeld, *Online Advertising: Defining Relevant Markets*, 6(3) *Journal of Competition Law and Economics* 653, 686 (2010); M. Rysman, *The Economics of Two-Sided Markets*, 23(3) *Journal of Economic Perspectives*, 125-143 (2009).
  14. A remarkable exception is the *Yellow Pages* decision of the Dutch Competition Authority of 28 Aug. 2008 by which it cleared the acquisition of Truvo Nederland by European Directories, see [www.acm.nl/en/publications/publication/3979/European-Directories---Truvo-Nederland](http://www.acm.nl/en/publications/publication/3979/European-Directories---Truvo-Nederland) (accessed on 25 May 2014). The German Federal Cartel Office has acknowledged the interdependence of two-sided media markets as the 'circulation spiral' in numerous merger cases ('Auflagen-Anzeigen-Spirale'), see e.g., FCO decision of 29 Aug. 2008, *Intermedia /Health&Beauty* [2008] B6-52/08; FCO decision of 19 Jan. 2006, *Axel Springer /ProSiebenSat1* [2006] B6-103/05; see also OECD Roundtable on Two-Sided Markets, Note by the Delegation of Germany, [http://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussionen\\_Hintergrundpapiere/OECD\\_2009.06.02-Two-Sided-Markets.pdf?\\_\\_blob=publicationFile&v=4](http://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussionen/Hintergrundpapiere/OECD_2009.06.02-Two-Sided-Markets.pdf?__blob=publicationFile&v=4) (accessed on 2 Jun. 2014). The European Commission recognized the existence of network effects in its Microsoft decision (Commission decision of 24 Mar. 2004, *Microsoft* [2008] COMP/C-3/37.792) and in the Mastercard decisions (Commission decision of 14 Dec. 2007, *Mastercard* [2007] COMP/34.579, 36.518 and 38.580).
  15. See for example Commission decision of 11 Mar. 2008, *Google / Doubleclick* [2008] COMP/M.4731 paras 44, 45; Commission decision of 18 Dec. 2010, *Microsoft / Yahoo! Search Business* [2010] COMP/M.5727 para. 62 and FCO Decisions of 25 Apr. 2014, *Funke Mediengruppe / Axel Springer* [2014] B6-98/13; FCO Decision of 21 Apr. 2009, *Neue Pressegesellschaft mbH & Co. KG*

*magazines v. TV v. out of home*), but even according to specific formats or specific target groups addressed by these media segments (e.g., *quality/subscription newspapers v. tabloid, TV magazines v. sports magazines and other types of magazines tailored to specific readers*).<sup>16</sup> With respect to online advertising, the European Commission has also discussed various ways of sub-segmentation, for example, into *search v. non-search*, display, classifieds, etc. but it has not yet reached a final decision on this.<sup>17</sup>

### 3.3. User Reality and Criticism

Today, the distinctions made by competition authorities in the past do not necessarily still reflect the way in which users choose the specific media they consume and they certainly no longer reflect the way in which advertising is placed in the various types of media. This becomes most obvious with respect to the distinction between offline and online content which the FCO, for example, has argued in the past on the basis that electronic media require (stationary) Internet access whereas print copies of a newspaper or magazine can be read anywhere.<sup>18</sup> With the drastic increase in the use of mobile devices it is questionable whether this line of argument still holds true and can persuasively justify a delineation of separate markets. Today, 22% of citizens of the European Union use mobile devices to use the Internet<sup>19</sup> and the prognosis is that by 2016 the largest portion of Internet access will take place via Wi-Fi and mobile devices.<sup>20</sup>

With respect to advertising, the market reality today is that most companies have outsourced their advertising and buy advertising space through one of the large media agency networks.<sup>21</sup> The parameters that determine the buying behaviour of these agencies are mostly: (i) how much ‘reach’ are the various platforms capable of

---

*/ Zeitungsverlag Schwäbisch Hall GmbH / Herr Claus Detjen* [2009] B6-150/08; FCO Decision of 19 Jan. 2006, *Axel Springer / ProSiebenSat1* [2006], B6-103/05.

16. See for example FCO Decision of 25 Apr. 2014, *Funke Mediengruppe / Axel Springer* [2014] B6-98/13; FCO Decision of 21 Apr. 2009, *Neue Pressegesellschaft mbH & Co. KG / Zeitungsverlag Schwäbisch Hall GmbH / Herr Claus Detjen* [2009], B6-150/08; FCO Decision of 29 Aug. 2008, *Intermedia / Health&Beauty* [2008], B6-52/08; FCO Decision of 19 Jan. 2006, *Axel Springer / ProSiebenSat1* [2006] B6-103/05.
17. See for example Commission decisions of 11 Mar. 2008, *Google / Doubleclick* [2008] COMP/M.4731; Commission decision of 18 Dec. 2010, *Microsoft / Yahoo! Search Business* [2010] COMP/M.5727.
18. See for example FCO Decision of 25 Apr. 2014, *Funke Mediengruppe / Axel Springer* [2014], B6-98/13; FCO Decision of 21 Apr. 2009, *Neue Pressegesellschaft mbH & Co. KG / Zeitungsverlag Schwäbisch Hall GmbH / Herr Claus Detjen* [2009], B6-150/08, paras 188, 189; OLG Düsseldorf decision of 22 Dec. 2010, VI-Kart 4/09 *Anzeigengemeinschaft* [‘advertising cooperation’].
19. Figure relates to 2012, see Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013), p. 4 with reference to Eurostat 2012 Individuals – Mobile Internet access (isoc\_ci\_im\_i).
20. Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013), p. 4 with reference to [www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c\\_11-481360\\_ns827\\_Networking\\_Solutions\\_White\\_Paper.html](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c_11-481360_ns827_Networking_Solutions_White_Paper.html) (accessed on 5 Jun. 2014).
21. In Germany there are currently four large media agencies (Group M, Dentsu Aegis, Omnicom and Publicis-Vivaki), which together have a market share of approximately 90%. According to press reports the intended merger between Omnicom and Publicis will not be implemented.

generating; and (ii) which target group can be reached by placing the ad into a certain medium. The type of media, i.e., whether the ad is placed in a print or online medium is only of secondary importance.

### 3.4. How Do Competition Authorities Take the Increasing Competition into Account?

There are currently no indications that competition authorities will generally change their way of looking at media markets. In 2012, for example, the president of the FCO, Andreas Mundt, confirmed that the mere fact that advertising budgets are shifted from one type of media to another does not justify a definition of an overall advertising market that would encompass all forms of media.<sup>22</sup>

However, there are a few examples of FCO decisions where the FCO has at least discussed and acknowledged the increasing convergence between different media. Eventually, all of the following cases ended up with blocking decisions:

- In 2006, the FCO blocked the acquisition of ProSiebenSat 1, one of Germany's two large TV companies, by German publishing house Axel Springer, which publishes (amongst other newspapers and magazines) the BILD Zeitung, Germany's largest tabloid newspaper.<sup>23</sup> This decision was later also confirmed by the Federal Supreme Court (*Bundesgerichtshof*).<sup>24</sup> There were no overlaps between the business activities of the parties, but the FCO discussed at length what kind of 'cross-media effects' would be caused by the acquisition of a TV station by a print company. It suggested the acquisition would be detrimental to competition and in particular would enhance the existing duopoly in the TV market. In that discussion, the FCO noted that the BILD Zeitung – although not part of the same market as the TV companies – constituted the sole substitute for TV from the perspective of companies looking to place their ads in a medium that reaches the largest possible audience. The FCO argued that there was no other print-medium besides the BILD Zeitung with a daily reach of 12 million citizens over 14 years (in 2005) that could constitute an alternative for advertising aimed at a mass audience. Eliminating this fringe competition, the FCO feared, would take away the disciplinary effect on pricing decisions by the TV companies and thereby enhance the existing duopoly.
- In 2009, the FCO blocked a merger between two regional newspapers in neighbouring regions based on the argument that it would eliminate potential competition.<sup>25</sup> In its blocking decision – which was later overturned by the courts for unrelated reasons – the FCO discussed whether the distinction

---

22. Interview with Andreas Mundt, *Horizont* 25 Oct. 2012 (43/2012, p. 18).

23. FCO Decision of 19 Jan. 2006, *Axel Springer / ProSiebenSat1* [2006], B6-103/05.

24. Bundesgerichtshof decision of 8 Jun. 2010 – *KVR 4/09 – Springer/Pro Sieben II*, see <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=53625&pos=0&anz=1> (accessed on 5 Jun. 2014); see also OLG Düsseldorf, WuW/E DE-R 2593.

25. FCO Decision of 21 Apr. 2009, *Neue Pressegesellschaft mbH & Co. KG / Zeitungsverlag Schwäbisch Hall GmbH / Herr Claus Detjen* [2009], B6-150/08.



between online and offline advertising should be reconsidered in relation to the specific area of classified ads. The FCO acknowledged that the competitive pressure exerted by the Internet is particularly strong in relation to classified offline ads. However, the FCO eventually left the question open since it was not decisive in the given case and it has not revisited the issue since.

- In 2011, the FCO blocked a joint venture between the two large German TV companies RTL and ProSiebenSat1 who wanted to create an online video platform. Again, the FCO argued that this would further strengthen the duopoly on the market for TV advertising.<sup>26</sup> Even though the online video platform itself would not have been active in TV advertising, the FCO argued that its activity in the field of in-stream video advertising, i.e., advertising videos displayed before, during or after a video chosen by a user, would enhance the duopoly on the market for TV advertising because in-stream video ads are to be considered the ‘closest substitute’ to TV advertising and may, in the future, even be considered part of the same market.

All three examples demonstrate that the FCO could not ignore tendencies of convergence between different types of media. However, instead of taking them into account when defining the relevant market and considering the converging ‘markets’ as part of one overarching market, the FCO stayed with its traditional approach.

An agency that has – at least sporadically – acknowledged the convergence between print and online is the Canadian Competition Bureau. In 2010, the Canadian Competition Bureau cleared the *YellowPages / Canpages* merger between the largest printed business directories in the country without challenge indicating that it presumably considered online business directories as a competitive discipline on the print directory advertising rates.<sup>27</sup> However, in a later decision in 2014, the Canadian Competition Bureau, in line with its historical approach, has considered that print and online media form part of separate markets.<sup>28</sup> In its recent position statements, the Canadian Competition Bureau notes that the degree of substitutability between print and online is evolving and that future transactions should be considered on a case-by-case basis.<sup>29</sup>

### 3.5. Challenges Ahead

With increasingly converging media markets, it will become almost inevitable for antitrust authorities to rethink their approach of considering all of these markets

---

26. FCO Decision of 17 Mar. 2011, *ProSiebenSat1 Media AG / RTL interactive GmbH* [2011], B6-97/10.

27. *Yellow Pages / Canpages* (2010), see report on [www.crai.com/uploadedFiles/Publications/Competition\\_Insights\\_0710.pdf](http://www.crai.com/uploadedFiles/Publications/Competition_Insights_0710.pdf). (accessed on 5 Jun. 2014).

28. *CanWest Global / Hollinger* (2000), see report on [www.cbc.ca/news/business/competition-bureau-approves-canwest-hollinger-deal-1.212044](http://www.cbc.ca/news/business/competition-bureau-approves-canwest-hollinger-deal-1.212044) (accessed on 5 Jun. 2014); *Bell / Globe and Mail* (2001), see report on <http://www.cbc.ca/news/business/bce-gets-green-light-bell-globemedia-born-1.278218> (accessed on 5 Jun. 2014).

29. *Transcontinental / Quebecor* (2014), see <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03741.html> (accessed on 5 Jun. 2014).

separately. The question whether it will be sufficient to acknowledge the ‘competitive pressure’ from neighbouring media markets in order to come to a comprehensive competitive assessment of any given media market will become more pressing as these neighbouring markets grow closer together. Some traditional market definitions therefore will have to be reconsidered. This is not meant to suggest that broader markets will necessarily yield better results in merger control cases. It has been suggested that – from the supply point of view – the media world today is one of competition for the attention of consumers.<sup>30</sup> On that basis the broadest possible market definition from the consumer’s point of view would be the market for information, which is obviously too wide a view to tackle competition concerns. It will, however, become necessary for competition authorities to pay increasing attention to the technological developments in the various media markets. More specifically, especially in two-sided media markets, competition authorities cannot disregard competition on one side of the market when analysing the other side. If one side of the market is facing competition from a new product (e.g., online newspaper content), competition authorities must take into account that this may increase competition on the other side of the market as well (e.g., online advertising). Likewise, due to the specific dynamics of two-sided markets, not all competition necessarily benefits consumers (and in some cases, competition may even be detrimental), since a larger network on one side of the market may give rise to an intrinsically more valuable product for the other market-side.<sup>31</sup> All of these issues will bring interesting challenges that competition authorities will have to face more and more.

#### 4. BEYOND ANTITRUST: THE SPAMMING FRIDGE

Beyond antitrust issues the speed of the development of technologies and business ideas raises questions throughout many other areas of law. Since technology is IT-driven, most of the legal discussion is related to data protection, both with a view to protecting privacy and to protection against cyber security threats. Other areas of law, including liability and even basic contract law, will also have to be reviewed from a new perspective.

The ‘internet of things’ – which describes a rather broad concept, not a specific technology – will give rise to a number of challenging legal questions, many of which we are not even able to apprehend at this stage. Basically, the ‘internet of things’ describes the fact that nearly every object or thing will be connected to some network, allowing it to communicate with other things and without the need for human interaction. Well-known examples are the refrigerator that automatically orders milk if necessary, or the autonomous car that does not need an active driver, interacts with traffic lights to avoid congestion, or communicates with the manufacturer for maintenance purposes.

---

30. Green Paper European Commission on Preparing for a Fully Converged Audiovisual World: Growth, Creation and Values, COM(2013) 231 final (24 Apr. 2013), p. 6.

31. D. Camesasca, M. Meulenbelt, T. Chellingsworth, I. Dames & J. Vandebussche, *The Dutch Yellow Pages Merger Case – 2-1 Will Go!*, ECLR 4, 13 (2009).

The legal issues that arise from these technological developments are just as broad. In early 2014, Proofpoint Inc., a security-as-a-service provider, announced that it had identified a network of email spammers consisting not only of computers but ‘at least one refrigerator’.<sup>32</sup> The user will often not even be aware that this household gadget is capable of sending an email, let alone prevent it. Probably the user will not be able to update the refrigerator software or make sure there are no security issues.

One of the envisaged benefits for the autonomous car – besides safety considerations and congestion prevention – is the possibility of collecting information about a driver so that their insurer can raise or lower the insurance premium based on an individual risk profile created through an automated assessment of the driver’s style.<sup>33</sup> The wide impact of the internet of things is demonstrated by the number of ideas and proposals referring to it and the challenges it will bring about. For example, there have been discussions about a legal framework for robotics, the main driver of what is called ‘industry 4.0’, which is an aspect of the internet of things because manufacturing robots already are connected with, e.g., supply management systems for components. An electronic person or e-person, a kind of legal person, has been proposed. That would allow for the ‘thing’ to have financial assets and be liable for damages.<sup>34</sup> But even more simple questions will have to be answered, such as who is responsible for a speeding ticket?

## 5. LEGISLATION AND CONSULTATIONS

Legislation does not always keep up with the pace of technological development. Take the autonomous vehicle, for example, in the United States, three States in 2012 passed laws that define safety and performance standards for autonomous vehicles, thereby practically allowing autonomous cars to be driven (or better, to drive) in public traffic.<sup>35</sup> In Europe, on the other hand, most countries are bound by the Vienna Convention on Road Traffic which requires that every vehicle has a driver who at all times is able to control the vehicle.<sup>36</sup>

So what legal developments have taken place with respect to the internet of things, which now seems to be the focus of the business strategies of companies like Google?

---

32. Proofpoint uncovers Internet of Things (IoT) Cyberattack, [http://www.marketwatch.com/story/proofpoint-uncovers-internet-of-things-iot-cyberattack-2014-01-16?reflink=MW\\_news\\_stmp](http://www.marketwatch.com/story/proofpoint-uncovers-internet-of-things-iot-cyberattack-2014-01-16?reflink=MW_news_stmp) (accessed 14 May 2014).

33. Commonly referred to as pay-as-you-drive or usage-based insurance; for example offered in the United States since 2008 as a behaviour-based insurance programme under the brand MyRate by Progressive Casualty Insurance Company; for an example from Germany: see below.

34. Beck in: E. Hilgendorf & J.P. Guenther, *Robotik und Gesetzgebung* [‘Robotics and Legislation’], conference transcript, 2012, p. 225.

35. The States of Nevada, Florida and California have such a law – a human driver with a valid driving license has to be in the vehicle to be able to intervene if necessary.

36. Convention on Road Traffic concluded at Vienna (8 Nov. 1968), No. 15705; United Nations Treaty Series, vol. 1042, p. 17; Art. 8, paras 1 and 5 and Art. 13, para. 1.

While ‘boosting’ the internet of things is a priority<sup>37</sup> in the European Commission’s Digital Agenda, the European Union has mainly focused on strategic considerations such as objectives to strive for and obstacles to overcome. The European Commission issued a Communication in June 2009 entitled ‘Internet of Things – An action plan for Europe’ where the internet of things is called an ‘umbrella for a new paradigm’.<sup>38</sup> The Commission identified several topics where governance would be needed, e.g., Internet security, accountability and choice of law or applicability of various legal frameworks. Privacy and protection of personal data, information security, standardization and waste management are considered the areas with the largest legal obstacles. Earlier, the Commission had collected information and opinions from potential stakeholders. For example, in 2006 it conducted a public consultation on the development and use of smart chips (i.e., RFID technology)<sup>39</sup> which resulted in a Communication about ‘steps to a policy framework’ in 2007, where RFID technology was called the ‘tip of an iceberg’ of a broader evolution towards the internet of things.<sup>40</sup> The Commission found that security and privacy, governance, radio spectrum and standards need to be addressed.

The European Data Protection Supervisor (EDPS) welcomed the Commission’s Communication, believing it tackled the main issues. The EDPS found privacy and data protection to be crucial and recommended considering the adoption of Community legislation.<sup>41</sup>

In 2010 the Commission set up an expert group on the internet of things to advise on how best to address the technical, legal and organizational challenges at European level.<sup>42</sup> The expert group was active until November 2012 and worked in six sub-groups: architecture, ethics, governance, identification, privacy and security, and standards.<sup>43</sup> They published six fact sheets on the results of their work. The fact sheet on governance states that the sub-group was unable to agree on any definition of what

---

37. Commission Communication, IP/12/360, *Digital Agenda: Commission consults on rules for wirelessly connected devices – the ‘Internet of Things’* (12 Apr. 2012); Commission Communication, IP/10/581, *Digital Agenda: Commission outlines action plan to boost Europe’s prosperity and well-being* (19 May 2010); Commission Communication, MEMO/10/199, *Digital Agenda for Europe: what would it do for me?* (19 May 2010); and Commission Communication, *Digital Agenda for Europe: key initiatives*, MEMO/10/200 (19 May 2010).

38. Commission Communication, IP/09/951, *European Commission calls for an open, independent and accountable governance of the internet* (18 Jun. 2009).

39. Commission Communication, IP/06/909, *Commission opens online public consultation on radio frequency identification (RFID)* (3 Jul. 2006); Commission Communication, IP/06/289, *Commission launches public consultation on radio frequency ID tags* (9 Mar. 2006); Commission Communication, MEMO/06/378, *Radio Frequency Identification Devices (RFID), Frequently Asked Questions on the Commission’s Public Consultation* (16 Oct. 2006).

40. Commission Communication IP/07/332, *Commission proposes a European policy strategy for smart radio tags* (15 Mar. 2007).

41. Opinion of the European Data Protection Supervisor of 23 Apr. 2008 – 2008/C 101/01.

42. Commission Decision of 10 Aug. 2010 setting up the Expert Group on the Internet of Things [2010], 2010/C 217/08.

43. *Register of Commission experts groups and other similar entities*, <http://ec.europa.eu/transparency/tegeexpert/index.cfm?do=groupDetail.groupDetail&groupID=2514> (accessed 5 Jun. 2014).

governance on internet of things should and could be and that the group recommends broadening the discussion.<sup>44</sup>

The sub-group responsible for privacy, data protection and information security identified many risks arising from the different forms of communication (i.e., thing to thing, thing to person) which will happen automatically, from the different functionalities of the applications and from the vast amounts of data that will be generated by various sources such as sensors or object identifiers. The sub-group recommended observing general data protection principles and objectives such as the right of deletion or to be forgotten, data portability and privacy in any kind of governance on the internet of things.<sup>45</sup> In order to effectively achieve these goals they eventually recommended a binding-law approach after having considered other approaches, such as self-regulation or co-regulation, to be less promising for a harmonized and high standard of privacy, data protection and information security. It should be noted that the European Court of Justice has recently strengthened the right of deletion and the right to be forgotten by finding that existing EU data protection law requires search engine providers to delete search results that mention individuals.<sup>46</sup>

In 2012 the Commission held another public consultation, this time on the governance of the internet of things.<sup>47</sup> This consultation was criticized for not being linked to the discussion on data protection and the proposal for a General Data Protection Regulation<sup>48</sup> or the existing Data Protection Directive.<sup>49</sup> A fundamental data protection principle stipulates that any processing of personal data is not permissible unless certain requirements are met, e.g., the data subject has given his or her consent.<sup>50</sup> The German Bar Association criticized the consultation, arguing it suggests that the internet of things has to be supported and developed without paying attention to already existing legal frameworks and the current efforts to adapt data protection legislation to technological development.<sup>51</sup>

---

44. *Final Report of the EU IOT Task Force on IOT Governance*, [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=1748](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=1748) (accessed 5 Jun. 2014).

45. *IoT Privacy, Data Protection, Information Security*, [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=1753](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=1753) (accessed 5 Jun. 2014).

46. European Court of Justice, Judgement of 13 May 2014, Case 131/12, *Google Spain SL and Google Inc. v. Agencia Española de Protección de Datos (AEPD) and Mario Costeja González*, [2014].

47. Commission Communication, IP/12/360, *Digital Agenda: Commission consults on rules for wirelessly connected devices – the ‘Internet of Things’* (12 Apr. 2012); the results and conclusions are available online at <http://ec.europa.eu/digital-agenda/en/news/conclusions-internet-thing-s-public-consultation>.

48. Commission proposal for a Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM(2012) 11 final (25 Jan. 2012).

49. Directive 95/46/EC of 24 Oct. 1995 of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data [1995].

50. Article 7 of Directive 95/46/EC; Art. 6 of the Proposal for a General Data Protection Regulation; sec. 4 para. 1 of the German Federal Data Protection Act (BDSG).

51. Opinion of the IT law committee of the German Bar Association on the Commission public consultation on the governance of the internet of things, Opinion 2012-2065 (July 2012).

## 6. LET YOUR CAR TELL YOUR INSURER ABOUT YOUR WHEREABOUTS

The internet of things raises many questions which can and shall not be answered by this article. Even basic civil law questions will have to be looked at from a new perspective. If, for example, the fridge at home automatically keeps track of its content and orders all by itself at your favourite grocery store in order to refill, who concludes what kind of contract with whom? Will consumer-protection legislation apply to the orders? If the technology is to commercially succeed it will have to be as consumer-friendly as online-shopping is today. So, either the grocery store or the operator of the refrigerator's order mechanism will have to ensure that consumer rights are observed.<sup>52</sup> For example, they will have to inform the consumer about the relevant details of the ordering process. If the consumers' right of cancellation is applicable, a pick-up service alongside the delivery service could help ensure the consumers' rights are observed. However, since the current legislation is aimed primarily at a consumer using a computer and the Internet, rather than a device acting on the consumer's behalf without the latter's input, the details of the legal relationship will have to be defined in either case law or amendments to the legislation.

### 6.1. A Real-Life Example

The idea of an insurance company collecting data about their insurance holders' driving, calculating a score from this data and reflecting that score in insurance premiums, provides several examples of the issues arising from the rapid development of the internet of things.

What started as an automated way of gathering simple mileage information, the combination of information that can be gathered nowadays allows for very specific details on where, when and how the insurance holder drives. A German insurer introduced a tariff which provides, *inter alia*, for a possible partly refund of the insurance premium, based on a score.<sup>53</sup> That score is calculated on a weighed assessment of the manner of driving (abrupt acceleration or deceleration), speed (i.e., speeding) and driving at night or in the city (both generally considered to be a higher risk). Further to emergency services or locating a stolen car, the insurance holder may, based on their score, be refunded a small part of the insurance premium. The data is collected using a telematics box installed in the insured car which records where and when the car was moving and how fast it was going.

This box sends data every twenty seconds (and also if an accident occurs) to a service provider where the score is calculated and data is combined with maps. The insurance holder can view all of the collected information, i.e., track his own driving.

---

52. For the European Union, mainly the rights in the Directive on Consumer Rights (Directive 2011/83 of 25 Oct. 2011, on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, [2011]) would be relevant for the order process.

53. Since the insurer is subject to German data protection law it had to publish many information on the tariff, the score and data processing.

The calculated score and the mileage per month is transferred from the provider to the insurance company. If an accident occurs, data is transferred to the emergency services. In order to protect personal data the driving information is only available to the service provider and only the insurance company has access to personal information such as name or address. Other than the insurance holder opting for the tariff and having the telematics box installed, the data collection and exchange as well as the calculation of the score happens entirely autonomously.

Since the collected information clearly qualifies as personal data a legal justification is necessary to collect and process this information. At first glance, this is easy. The insurance holder declared his consent with the collection and processing. But one typical issue for the internet of things is that the information is not collected from the insurance holder but from the car. So what if the car is not driven by the insured but by a family member, friend, colleague or neighbour? This cannot be solved by just turning off the box because this would allow for simple tampering with the score. Currently, there is no tested solution for this question. Data from drivers other than the insured will most likely not be collected lawfully. Consequently, the insurance contract would at least have to require that the insured car may be driven only by the insurance holder himself and even then any collected data could most likely not be lawfully processed – the score would have to exclude this data. Requiring the consent from each driver, e.g., via the on-board entertainment system, could be a solution, but not a very practical or comfortable one. Furthermore, if consent was not given then either no personal data must be collected (which is the same as turning off the box) or the car must not produce any personal data at all, i.e., must not be moved. Alternative solutions, such as a sticker in the car window informing potential drivers about the system, are comparable to a data subject's consent being considered granted through the display of general terms and conditions or by asking them to opt-out rather than for their consent. Courts tend to find that to be no consent at all and the proposal of a General Data Protection Regulation further strengthens the importance of an explicit consent.

Another aspect relates to employees' data. If a company chose such a tariff for their fleet the consent would have to be given by every employee who drives a company car. Further, it is not clear whether such a consent would be given voluntarily,<sup>54</sup> one requirement of a valid consent. In the proposed General Data Protection Regulation the relationship between employer and employee is the example given for an involuntary and thus invalid consent.<sup>55</sup> Further, if the employer were to see either the scores or even detailed information about their employees, all the issues surrounding the protection of employee data would have to be observed, e.g., the involvement of a works council. Even if the company were to choose a tariff with a 'fleet score' calculated without any reference to an individual employee, but based on an overall score over the whole fleet, the insurer would still need the individual employee's consent.

---

54. The employee is subordinated and therefore it is assumed that the employee has no real choice.

55. Recital 34 of the proposal – see *supra* note 48.

## 6.2. What Positions Have Been Taken by Authorities and Courts?

The example from Germany mentioned above has been, according to the insurer's website, discussed with a State data protection authority who is said to have confirmed general compliance with data protection requirements. Since the authority's assessment is not public, it is hard to say to what extent the concept and tariff have been reviewed. Other State data protection authorities recommend not to opt for the tariff and compare the collection of data to a voluntary data retention.<sup>56</sup> The European Court of Justice recently found such data retention, when applied to all means of electronic communication, with its widespread use and its importance in people's everyday lives, entails an interference with fundamental rights for privacy.<sup>57</sup>

A gadget which is particularly in the focus of public interest, Google Glass, has been heavily criticized by a German data protection officer. Amongst many other features, Google Glass may be used to autonomously take and upload pictures of what the user sees literally with a blink of an eye. Thilo Weichert, head of the data protection supervisory authority of the German Federal State of Schleswig-Holstein in a TV interview called Google Glass a 'weapon' to inflict damage upon personal rights.<sup>58</sup>

## 7. OUTLOOK

All these examples show that the increasingly rapid development of technological innovation, especially the phenomenon of increasing digitalization and the internet of things, gives rise to a number of challenging questions in many areas of the law. Antitrust authorities will have to deal with these challenges from the perspective of defining the relevant markets in a way that appropriately take into account the technological reality and the specific dynamics of two-sided markets. From a data protection perspective the biggest challenge will be to strike the right balance between necessary privacy protection and the rapid development of technology and innovation which brings many benefits at the cost of intruding into the personal sphere of human beings.

---

56. Virtuelles Datenschutzbüro, *Datenschützer warnt: Finger weg von Versicherungstarif mit Protokollierung des Fahrverhaltens*, <http://www.datenschutz.de/news/detail/?nid=6305> or Heise Online, *Telefónica vernetzt das Auto mit der Versicherung*, <http://www.heise.de/newsticker/meldung/Telefonica-ernetzt-das-Auto-mit-der-Versicherung-1842870.html> (both accessed 22 May 2014).

57. European Court of Justice, joined cases C-293/12 and C-594/12, *Digital Rights Ireland Ltd (C-293/12) v. Minister for Communications, Marine and Natural Resources and Others and Kärntner Landesregierung (C-594/12) and Others* [2014], judgment of 8 Apr. 2014, para. 56.

58. Interview in the German TV magazine *Kontraste*, *Mit der Hightech-Brille zum Straftäter? – Google Glass in der Kritik* (24 Apr. 2014) <http://www.ardmediathek.de/das-erste/kontraste/mit-der-hightech-brille-zum-straftaeter-google-glass-in?documentId=20974630>, or Heise Online, *Thilo Weichert: 'Google Glass ist eine Waffe'*, <http://www.heise.de/newsticker/meldung/Thilo-Weichert-Google-Glass-ist-eine-Waffe-2176677.html> (both in German, both accessed 8 Jun. 2014).



# Index

## A

- Abuse of dominance, 64, 173, 175, 206, 207
- Abuse of dominant position, 128, 176, 178, 206–207, 209, 210, 225–227, 377, 382
- Abusive practice, 158, 207, 310, 341
- Access, 9, 29, 48, 55, 63, 77, 95, 119, 138, 156, 166, 194, 211, 216, 243, 254, 263, 282, 294, 305, 317, 330, 336, 345, 361, 375, 390
- Access to data, 166–168, 254, 257, 264, 266, 274–276, 282
- Access to the courts, 194, 200, 201, 203
- Accuracy of data, 266, 269, 275
- Administrative Council for Economic Defense (CADE), 35, 38, 41–49, 51, 53, 54, 113, 205–214, 341, 362, 364, 365, 368, 369, 371, 374, 375, 377–380, 383, 384, 387, 388, 390–396, 398–400, 407, 408
- Advertising, 7, 72, 82–84, 91–98, 128–130, 239, 249–251, 254, 255, 271, 287, 290, 319
- Advertising budget, 93, 96
- Advertising market, 94–97, 178
- Advocacy, 205, 359–373, 383, 393, 399, 400, 407–410
- AgCom, 127, 128
- Agência Nacional de Telecomunicações (ANATEL), 35, 53, 138, 322, 332, 335, 346, 360, 375, 387, 398
- Agency cooperation, 48, 287, 388, 394, 395, 396
- Amazon, 85, 92, 169, 237
- América Móvil, 56, 347
- American Convention on Human Rights, 260
- Anticompetitive practices, 41, 363, 364, 399, 400, 407, 408, 410
- Antitrust, 7, 22, 27–28, 32, 35–49, 69–90, 93, 98–99, 106, 108–114, 117–133, 157–158, 174, 176, 177, 181–203, 205–229, 251, 255, 335, 341, 352, 354, 362–365, 370, 371, 373, 387–393, 395, 396, 397, 399, 400, 407–410
- Antitrust authorities, 29, 32, 33, 91, 93–98, 104, 113, 209–211, 214, 336, 387, 390, 397–411
- Antitrust defense, 218, 220, 221, 229
- Antitrust policy, 71, 112, 114, 387, 389, 393, 395, 397, 398, 409, 411
- Apple, 21, 23, 72, 82, 83, 131, 172, 175–178, 185–187, 197, 201, 202, 226
- Article 11(2) of the EU charter on fundamental rights, 4, 10
- Article 21(4) of the EU merger regulation, 6, 11–12
- Article 167(4) of the treaty on the functioning of the EU, 5, 6, 9, 12
- Article 102 TFEU, 121, 126, 173, 175–178, 199, 200, 221, 225–227
- Article 102(c) TFEU, 121
- Associative agreements, 210–212

## Index

---

- AT&T, 13–16, 20, 31, 33, 51, 55–57, 63, 69, 75
- Audiovisual content, 119, 337
- Audiovisual services providers, 337
- Autonomous car, 98, 99
- Auto Parts Designs Case*, 209
- Axel Springer, 92, 96
- B**
- Bandwidth, 119, 297, 308, 321, 327, 336–337, 339, 340
- Big data, 88–90, 166, 167, 238, 239, 242, 243, 281–290
- Booking.com, 132
- Bosch, 24, 188
- Brasil, 35, 36, 38–41, 45–47, 377, 390, 396
- Brazil, 35–44, 46–49, 51–59, 135–150, 205–214, 257–279, 317–327, 329, 332, 334–337, 340, 341, 345–346, 350–357, 359–373, 375, 376, 379, 382, 384, 387–397, 400, 409–411
- Brazilian Competition Policy System (BCPS), 335, 336, 362–364, 368, 373, 399, 407, 409
- Brazilian Supreme Court, 333
- Bright house, 16, 18, 87
- Broadband, 15–17, 19–20, 55, 56, 86, 88, 89, 119, 122, 124, 126, 295, 298–300, 310, 313, 314, 320–322, 324–327, 331, 336, 337, 340, 341, 347–351, 355, 356, 361, 367, 375–378, 384, 388–390
- Broadcasting, 7, 29, 31, 79, 93, 154, 155, 211, 307, 361, 364
- Bundeskartellamt (BKA), 132
- C**
- Cable, 16–18, 28, 31–33, 79, 87, 92, 298, 312, 313, 325, 337, 390
- CADE's General Superintendence (SG/CADE), 208, 209, 368, 393, 394, 398–400, 407, 408
- Canada, 61–66, 81, 142, 258, 264–269, 272, 274–278
- Canadian Competition Bureau, 97
- Car, 90, 98, 99, 102–104, 166, 209, 233, 239, 250
- Carriers, 14, 15, 18, 21, 31, 87, 119, 122, 137, 139, 181, 305, 322, 325, 331, 352, 355, 356, 360, 361
- Cellular, 13, 19, 53, 186, 187
- Cellular South, 14
- China, 153–161
- Circulation, 15, 92, 122, 168
- Civil Landmark of the Internet, 258, 262–265, 274–279
- CLARO, 53, 54, 56, 57
- Collection of data, 104, 250, 266, 268, 277, 278
- Comcast, 16, 33, 75, 79, 123, 312, 324, 331
- Commission, 3, 19, 27, 62, 89, 100, 125, 146, 154, 166, 188, 193, 207, 225, 250, 264, 324, 331, 339, 362
- Communications, 3, 13, 28, 61, 72, 92, 111, 117, 155, 165, 192, 193, 205, 229, 234, 257, 283, 294, 317, 330, 337, 346, 360, 375, 388, 398
- Communications industries, 28, 65, 111, 133, 193
- Competition, 3, 13, 28, 35, 52, 61, 69, 92, 105, 117, 146, 154, 165, 182, 193, 205, 215, 247, 286, 297, 305, 323, 333, 335, 345, 360, 375, 388, 398
- Competition advocacy, 205, 359–373, 383, 399, 400, 408–410
- Competition law, 3, 5, 6, 8, 11, 12, 29, 41, 42, 69, 88, 119–121, 133, 184, 193, 194, 197, 201, 202, 205–208, 210, 212, 213, 215, 216, 218–221, 225, 247–256, 361, 363–372, 378, 380, 383, 387–396, 398, 409
- Competition policy, 5, 11, 72, 90, 105–114, 213, 380, 388

- Competitive dynamics, 69, 70, 106, 107
- Conditioned access services (SeAC), 337, 339, 355
- Confidentiality, 46, 47, 250, 257–264, 273, 286
- Conflicts of competence, 400
- “Connected Continent” package, 27, 28, 126, 324
- Consent, 18, 23, 24, 69–70, 77–80, 82, 87, 101, 103, 148, 157–159, 187, 188, 191, 211, 237, 238, 242, 243, 254, 260, 264–267, 269, 272, 275, 278, 285, 323, 332
- Consolidation, 27–33, 36, 39–41, 47, 51, 54, 57, 70, 74, 90, 109, 127, 249, 255, 258, 262, 264, 278, 314, 354, 360
- Consultation, 10, 11, 99–101, 125, 211, 260, 263, 275, 309, 311, 326, 337, 363–368, 370, 395, 409
- Consumer protection, 90, 102, 256, 284, 338–339, 369
- Consumer welfare, 71–73, 75, 76, 105, 108, 111–114, 128, 209, 252
- Content markets, 94
- Content providers, 12, 31–32, 76–77, 79, 93, 122, 124, 258, 276, 297, 298, 308, 310, 312, 319–321, 325, 326, 331, 337, 368
- Convergence, 8, 12, 27–33, 91–104, 171, 354, 355
- Cooperation, 12, 33, 48, 157, 287, 289, 384, 388, 394–396
- Corporate structure, 51
- Court order, 126, 243, 259, 274, 276, 287, 323
- Cox, 16, 86
- Cross-media-effects, 96
- Cultural diversity, 3–6, 8–12
- Cyber security, 98, 289–290, 330
- D**
- Data controller, 263, 269, 270, 272, 273, 275
- Data protection, 98, 100, 101, 103, 104, 147, 154, 158–160, 169, 171, 247–256, 261–263, 265, 268, 271, 277, 283, 284, 286, 289, 290, 332
- Data protection directive, 101, 238
- Data transfer and encryption, 154, 158–161, 243, 248, 288, 289, 339
- Department of economic studies (DEE), 399, 409
- Destruction of data, 270
- Deutsche Telekom (DT), 13, 15, 18–21, 127
- Differentiated products, 111
- Digital Agenda, 28, 100, 284–285
- Digitalization, 91–104
- Digital media, 92, 207
- Directive 95/46/EC, 268–271
- Directive 2002/58/EC, 268, 270
- DirecTV, 33, 55, 56, 58, 390
- Disclosure of data, 247, 265, 278
- Discriminatory conduct, 338
- Dissemination of data, 276
- Dominance, 17, 83, 121, 129, 158, 167, 173, 176, 198, 199, 201–202, 218, 219, 221, 249, 250, 253, 255–256, 307–308, 330, 367, 383
- Dominant position, 11, 43, 105, 108, 111, 127, 158, 198, 200, 201, 206, 207, 218, 219, 225, 250, 253, 308, 377, 383
- Draft Bill on Personal Data Protection, 258, 262–265, 274, 276, 278
- Draft resolution, 277
- Duopoly, 96, 97, 298
- Dutch competition authority, 32
- DVD Case, 206–207
- Dynamic competition, 87, 94, 98, 105–114. *See also* Dynamism
- Dynamic markets, 71, 86, 87, 105–114
- Dynamism, 70–74, 79, 81, 83, 86, 105, 107, 108, 110, 111, 388, 389

**E**

ECAD case, 209–210  
Economics, 35, 41, 49, 74, 139, 239, 320, 365, 369–372, 393  
Efficiency(ies), 14, 29, 44, 70, 72, 76, 80, 90, 109, 112–114, 147, 150, 297, 314, 363–364, 375, 378, 384, 395, 409, 410  
Efficient institutional structure, 407, 410  
Electronic databases, 261  
Electronic money, 144, 147–148  
Electronic person (E-person), 99  
EMC, 21, 80  
Emergency services, 102–103, 326, 333  
Employees' data, 103, 289  
Entertainment, 13–26, 103, 137, 210, 214, 294, 375  
Entry barriers, 30, 45, 71, 76, 82, 87, 106, 149, 254, 297  
Espionage, 262, 264, 270, 276  
EU law, 173, 177, 193–203, 244  
European Commission, 3, 28–30, 32–33, 93–98, 100, 146, 166, 172, 193, 225, 239, 248, 250, 251, 271, 284, 289–290, 299–300, 323–324, 394  
European Convention for the Protection of Human Rights and Fundamental Freedoms, 270  
European Court of Justice (ECJ), 101, 104, 131, 176  
European Data Protection Supervisor, 100, 271  
European Telecommunications Standards Institute (ETSI), 176–177, 179, 195, 197, 199, 215–216, 225–226, 290  
European Union (EU), 3–12, 28–33, 95, 100–101, 121, 124–127, 130–133, 166, 169–175, 177, 179, 193–203, 206, 216, 225–227, 229, 233, 238, 240, 244, 249–251, 258, 264–265, 268–278, 282, 284–285, 289, 323–324, 397  
Expedia, 132

Expert group, 100

**F**

Facebook, 112, 118, 168, 254, 285  
Fair competition, 311, 314, 335–336, 338  
Fair, reasonable, and nondiscriminatory (FRAND), 22–24, 81, 157–158, 175–178, 182–196, 198–200, 202–203, 215–229  
Federal Communications Commission (FCC), 13, 15, 19–20, 33, 79–80, 89, 122–124, 299, 324–325, 331, 339  
Federal Trade Commission (FTC), 13, 21, 23–25, 74, 76–78, 80–83, 87–89, 112, 124, 133, 187–188, 191, 196, 233, 242, 248, 250–251  
Financial access in Brazil, 142, 149  
Financial inclusion, 135, 139–144, 147, 149  
Fintech, 57  
Foreign investment, 156–157  
Fox Film/Warner Bros, 213  
FRAND, 22–24  
FRAND commitments, 24, 157–158, 184–188, 194–196, 198–200, 202–203, 221  
FRAND royalty, 186, 188, 222–224, 229  
Frequency spectrum, 154–155, 352  
Fundamental rights, 4, 10–11, 104, 194, 200, 203, 248, 258–261, 277, 288, 290  
Future markets, 76, 87–88

**G**

General Data Protection Regulation, 101, 103, 289  
General Law of Telecommunications, 261–262, 336, 346, 378, 379, 399–400  
General Plan of Competition (PGMC), 351–353, 361, 368, 377, 380–382, 395, 409

- German Federal Cartel Office, 32, 93–98  
Germany, 7, 33, 92–93, 96, 104,  
184–185, 197, 215–229, 244, 248,  
277  
Google, 21, 23–24, 70, 72, 81–83, 85, 87,  
90, 91, 99, 104, 118, 128–131,  
169, 188, 191, 225, 236, 248–250,  
254–255  
Google Glass, 104  
GSM, 195  
GVT, 57–59, 347, 379
- H**
- Herfindahl-Hirschman Index (HHI), 43,  
53, 70, 110, 376  
Hold-up, 24, 182–183, 187, 188, 190,  
191, 195–197, 216  
HRS.com, 132
- I**
- Impact, 3, 6, 7, 9–10, 12, 14, 17, 19–21,  
25, 32, 41, 44–47, 73, 74, 86, 99,  
109, 114, 123, 135, 168, 169, 196,  
207, 209, 227–228, 233, 237, 239,  
241, 247–248, 252, 254–255, 283,  
306, 332, 333, 337, 364, 365, 368,  
371, 379, 382, 390  
Implementation of rights, 265, 273,  
277–279  
Important competitive force, 30, 31  
Independent Regulatory Agency, 360,  
398, 399  
Indicators, 53, 55, 142, 345, 346,  
350–351, 364  
Individual access, 265–266, 275  
Industrial Exploitation of Dedicated  
Lines (EILD), 354  
Industry 4.0, 99  
Information Technology (IT), 69–90, 98,  
148, 153, 166, 169, 170, 179, 241,  
247, 264, 282–283, 335, 337, 339  
Infrastructure, 29, 31–33, 55, 62, 83,  
106, 128, 147, 155, 166, 169, 171,  
181, 282, 283, 294, 300, 306, 307,  
308, 312–314, 317, 318, 321, 333,  
341, 345, 347, 348, 350–353,  
355–357, 359, 381, 383, 390,  
395  
Injunctions, 13, 22–24, 176, 184–191,  
193, 195–202, 208, 216–217, 219,  
220, 222, 225, 227, 228  
Injunctive relief, 24, 175, 178, 184, 186,  
194, 195, 196, 197, 202, 215, 216,  
218, 225–226, 228–229  
Innovation, 9–10, 14–15, 22–23, 31, 33,  
63–64, 70, 71, 73–74, 76, 80–81,  
83–84, 86, 87, 88, 90, 92–93,  
104–114, 117–119, 121, 126, 128,  
147, 153–155, 158, 162, 175, 178,  
181–184, 193, 195, 239, 241, 244,  
247, 251, 253, 272, 286, 290,  
297–298, 304, 306, 318, 321, 324,  
330–331, 333–334, 338–339, 347,  
364, 373, 383, 388–389, 396  
Institutional efficiency, 409  
Institutional framework, 42, 384, 400,  
408, 410  
Institutional improvement, 409,  
410  
Institutional loss, 410  
Institutional structure, 375, 380–383,  
400, 407, 409, 410  
Insurance, 99, 102–103, 135, 149, 238,  
252, 287  
Intellectual property, 16, 22–23, 86,  
110–111, 157, 166, 170, 174, 177,  
193, 205–214, 257, 284  
Interconnection, 69–70, 72, 75, 88–89,  
139, 167, 261, 307–312, 317, 319,  
322, 324, 353, 359, 377, 380, 381,  
383  
InterContinental Group, 132  
Internet, 11, 16, 32, 63, 69, 91, 108, 117,  
144, 153, 166, 194, 233, 248, 257,  
282, 293, 306, 317, 329, 336, 348,  
368, 375, 388  
Internet Broadband Access, 336,  
350–351, 376

- Internet Corporation for Assigned Names and Numbers (ICANN), 313, 340–341
- Internet governance, 101, 329–330
- Internet of the best effort, 122, 295, 324, 339
- Internet of things, 89–104, 153–162, 233, 239, 242
- Internet Service Providers (ISP), 88–89, 120, 122–124, 159, 258, 294, 295, 296, 299–303, 306–312, 314, 323, 336–337, 340, 341
- Interoperability, 70, 75, 127–128, 147, 157, 168, 171–172, 178–179, 181, 215, 284
- Interpretation, 39, 43, 156, 160, 161, 222–223, 227–229, 234–235, 271, 340, 407–410
- Invasion of privacy, 240, 249, 259
- Inviolability and secrecy of communications, 259, 261, 263, 278
- IPv6, 154, 155
- Irreparable harm, 186
- Italian Communications Authority, 127
- L**
- Law, 3, 27, 35, 61, 69, 98, 108, 119, 147, 158, 171, 182, 193, 205, 215, 234, 247, 258, 283, 294, 318, 329, 336, 346, 359, 375, 388, 397
- Law 8,884 of 1994, 41, 400
- Law 9,472 of 1997, 37, 399, 400, 407
- Law 12,529 of 2011, 336, 364, 397, 400, 407, 408, 409
- Legal and institutional scenario, 407, 410
- Legal framework, 7, 99–101, 251, 261, 262, 284, 329, 377, 384, 391, 395, 407
- Legislation omission, 258
- Legislative advocacy, 407, 410
- Legislative improvement, 409, 410
- Legislative initiatives, 258, 262–264, 278
- Legislative reform, 268, 278
- Licenses, 9, 14, 16, 18, 21–23, 37–39, 45, 56, 62, 77–81, 87, 88, 129, 144, 157, 172–174, 176–178, 182–186, 188–193, 195–199, 201–202, 209, 216, 218–229, 307–309, 313, 335, 337, 380
- Licensing agreements, 173–174, 176, 210–212
- LINUX, 23
- LTE, 18, 20, 31, 56, 312
- M**
- Magazines, 92, 93, 95, 96, 233, 365
- Mandatory neutrality, 338
- “Marco Civil da Internet,” 329, 338
- Market, 5, 13, 27, 36, 51, 61, 69, 91, 105, 120, 135, 158, 165, 183, 196, 206, 215, 236, 248, 284, 305, 321, 329, 335, 345, 359, 375, 387, 400
- analysis, 19, 352
- concentration, 11, 43, 53–54, 56, 74, 110, 376, 377, 384
- definition, 46, 98, 109–111, 254, 352
- power, 9, 17, 21–22, 29, 43–45, 63, 70, 72, 74, 76, 83, 86, 88–90, 109–113, 120–122, 167, 174, 177, 207, 213, 249, 251, 253, 255, 308, 352, 354, 373, 378, 381–382, 395
- regulation, 28, 54, 70, 73, 75, 88–89, 136, 146–147, 350, 352, 354–356, 375–384
- share, 22, 30, 43–45, 52, 53, 70, 71, 90, 110–111, 128, 174, 177, 198, 213, 249, 253, 255, 310, 347–349, 352
- studies, 135–136, 362–363, 368, 371, 397–399, 408–409
- Media, 3, 27, 58, 70, 79, 91, 119, 205, 215, 237, 309, 335, 370
- industries, 27–33
- markets, 93–94, 96–98
- pluralism, 3, 4, 6, 11

- Merger control, 3–12, 61, 62, 98, 210–214  
 Merger review, 3, 6–7, 35, 38, 41–44, 48, 65, 210, 213, 252, 363, 379, 383, 388, 389, 391–395, 397, 399, 400, 407–408, 410  
 MetroPCS, 18–21, 31  
 Microsoft, 21–23, 70, 72, 75, 80, 117, 169, 177, 184–185, 188–191, 196, 255, 290  
 Ministry of Communications, 346, 351, 360, 364, 377, 398, 399  
 Minority shareholding, 35, 42, 48–49, 390  
 M2M (Machine to Machine), 154–158, 160  
 Mobile banking, 135–150  
 Mobile communications, 155, 177, 192, 193, 197  
 Mobile devices, 95, 108, 136–137, 167, 201, 273, 281, 283, 285, 286, 288  
 Mobile network operator, 29–31, 136, 149, 307  
 Mobile payments, 135–150  
 Mobile phone penetration in Brazil, 138, 142  
 Mobile phones, 21–23, 137–139, 141–144, 181, 194, 322  
 Mobile phone subscriptions in Brazil, 138  
 Mobile virtual network operators, 14, 30, 352  
 Modularity, 70–72, 76, 79, 80, 83, 86  
 Monsanto and Bayer, 210–211  
 Motorola, 21, 23, 184–186, 188–191, 193–194, 197–199, 201–203, 225–226, 228, 229
- N**
- National Agency of Telecommunications (ANATEL), 35–41, 45–46, 48, 54, 137–138, 322, 326, 332, 335–339, 341, 346, 351–356, 360, 361, 364, 368, 375, 377–384, 387, 390, 391, 393, 395, 396, 398, 399, 407–409  
 National Regulatory Authorities (NRAs), 125, 299  
 National security, 62, 65, 160, 177, 240, 247, 269–270, 276, 287, 289  
 Neighbouring markets, 91, 98  
 Nest, 91  
 Netmundial, 329–333, 340  
 Net neutrality, 11, 28, 33, 75, 88–89, 119, 121–127, 133, 293–315, 317, 320, 322–327, 330–331, 333, 368, 378  
 Network, 11, 14, 28, 44, 65, 69, 94, 111, 117, 136, 158, 166, 181, 248, 255, 263, 282, 293, 305, 317, 330, 338, 350, 361, 375, 390  
 effects, 70–72, 75, 94, 127, 248  
 infrastructure, 29, 181, 294, 300, 321, 341, 390  
 neutrality, 121–122, 124, 263, 295, 317–327  
 Neutrality, 11, 28, 33, 40, 75, 88–90, 119, 121–127, 133, 263, 272, 278, 293–315, 317–327, 329, 331, 333, 338–341, 368, 378  
 News Corp/BSkyB, 4, 6–8, 12  
 Newspapers, 7, 72, 92–96, 98, 130, 309  
 NEXTEL, 14, 39, 57, 347–348  
 Non-binding opinions, 38, 208, 409–410  
 Non-classical transactions, 210
- O**
- Object identifiers, 101  
 Office of Fair Trading, 132  
 Office of the Privacy Commissioner of Canada, 268  
 Offline media, 94–95  
 OI, 40, 45, 53, 54, 57, 347, 390–391, 396  
 On-demand services, 31, 93, 170, 282, 283, 348  
 Online advertising, 95, 98, 129, 254  
 Online video platform, 97

## Index

---

- Orange, 30, 127, 198, 202, 218–225, 227–229
- Orange Book, 198, 202, 218–225, 227–279
- Organisation for Economic Co-operation and Development (OECD), 63, 213, 363–364, 366–367, 409
- Overall advertising market, 96
- Overlap, 17, 20, 39, 44, 87, 96, 212, 214, 375–384, 390, 400, 408–410
- Over regulation, 338–339
- Over-the-top (OTT providers), 118–121, 123, 127–128, 135, 337, 338, 373
- P**
- Patent ambush, 176, 183, 221
- Patent disclosure, 22, 182, 183, 191
- Patent law, 182, 185, 191, 219
- Patent portfolio, 21–24, 189–190, 223
- Patents, 21–24, 75, 107, 113, 157–158, 175–178, 181–193, 195–200, 206–208, 211, 215–229
- Payment institution, 146–147, 149
- Payment institution in Brazil, 145, 146
- Payment Services Directive (PSD), 144, 146, 147, 149
- Personal Information Protection and Electronic Documents Act (PIPEDA), 265–268
- PGMC. *See* General Plan of Competition (PGMC)
- Plurality of the media, 3, 4, 6, 12
- Policy consensus, 400, 407–410
- Policy goal, 397–398
- Portability, 88, 101, 129, 168, 171–172, 178, 211, 272, 278, 284, 350, 352
- Pre-merger review system, 35, 48, 397
- Principle of publicity, 260
- Privacy, 90, 98, 100–101, 104, 147, 158–160, 233–245, 247–255, 257–274, 276–279, 281–290, 298, 301, 319, 326, 330–331, 338, 341
- Privacy by default, 253, 272–273, 278
- Privacy by design, 253, 272–273, 278
- Privileged treatment, 340
- Processing of data, 157, 166, 266, 269–271, 273, 306
- Proofpoint Inc, 99
- ProSiebenSat1, 97
- Public, 7, 10–11, 19–20, 23, 31, 35, 47, 64–66, 74, 77, 99–101, 104, 125, 128, 158, 165–166, 172, 175, 177, 195, 208, 209, 211, 222, 225, 233, 236, 242, 250, 259–260, 263, 266, 269–270, 275–276, 278, 281, 284, 286, 288–290, 294–295, 301, 305, 307–309, 313, 315, 320, 323, 337–339, 346, 355, 360–373, 395, 398, 399, 408–409
- Purpose of collection, 158–159, 240, 265–269, 274–275, 278
- R**
- Radio, 62, 87, 93, 100, 154, 155, 336, 352
- Reach, 16, 18, 25, 27, 30, 32, 44, 61, 80, 95, 96, 122, 124, 128, 139, 140, 141, 197, 199, 206, 223, 234, 237, 248, 251, 265, 297, 311, 317, 318, 331, 339, 350, 351, 361, 362, 368–372, 379
- Realtek, 185, 190, 191
- Reasonable and nondiscriminatory (RAND), 22
- Reform, 37, 126, 155, 171, 243, 268, 271, 272, 274, 277, 278, 314, 363, 393, 395
- Refrigerator, 98, 99, 102, 242
- Regulation, 6, 27, 37, 54, 62, 70, 101, 109, 118, 136, 154, 171, 194, 207, 252, 258, 284, 295, 307, 317, 330, 336, 346, 359, 375, 396, 398
- Regulation 1/2003, 194, 197, 202
- Regulation of electronic money in Brazil, 144–146
- Regulation of payment institution in Brazil, 145–146, 149



- Regulation of payment institution in Europe, 145–146
- Regulatory, 3, 15, 27, 35, 52, 64, 74, 121, 136, 153, 165, 182, 257, 286, 298, 305, 322, 330, 335, 351, 360, 378, 387, 397
- Regulatory agency, 48, 322, 326, 335, 339, 341, 360, 365, 378, 379, 387, 391, 393, 395, 396, 398, 399, 407, 408, 409, 411
- Regulatory policy, 397–411
- Regulatory power, 315
- Relevant market, 11, 13, 17, 19, 22, 84, 97, 104, 109–110, 131, 158, 165, 171, 178, 198, 210, 214, 352, 353, 381, 382, 383, 395
- Remedies, 25, 29, 30, 32, 35, 41, 44, 45, 47, 48, 74, 76, 77, 79, 81, 82, 90, 131, 132, 185, 194, 197, 200, 202, 227, 229, 255, 256, 268, 381, 382, 390, 391, 392, 394, 396
- Retention of data, 288
- Reverse hold-up, 195–197
- Right of deletion, 101
- Right to be forgotten, 101, 272, 273, 278
- Right to privacy and private life, 259–261, 274, 276, 277, 288, 298
- Rivalry, 44, 107, 111, 182, 212, 352
- Robots, 99, 130
- Rockstar, 21
- Royalty, 18, 21, 22, 23, 87, 158, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 196, 197, 207, 209, 219, 220, 222–224, 226, 229
- Royalty stack(ing), 183, 188, 190
- RTL, 97
- S**
- Satellite, 32, 33, 37, 55, 79, 87, 155, 337, 367
- Score, 102, 103
- Secretariat for Economic Monitoring (SEAE), 43, 341, 362–373, 379, 383, 384, 391, 392, 393, 398–399, 407, 408, 409, 410
- Secretariat for Economic Monitoring of the Ministry of Finance (SEAE/MF), 398–399, 407, 409
- Secretariat of Economic Law (SDE), 43, 208, 210, 362, 363, 364, 368, 369, 371, 392, 393, 408
- Secretariat of Telecommunications of the Ministry of Communications (STE/MiniCom), 398, 399
- Section 5 FTC Act, 187, 188
- Section 2 Sherman Act, 187
- Sectorial regulatory agencies, 378, 407
- Sectorial studies, 368, 408, 409
- Security-as-a-service provider, 99
- Security of data, 257, 283, 288–290
- Sensors, 91, 101
- SFR, 58
- Shop Tour Case, 208
- SKY, 7, 8, 55, 56, 58, 347, 390
- Skype, 118, 127, 305, 306, 338
- Smart appliances manufacturer, 91
- Smartphone, 21, 70, 92, 93, 108, 175, 177, 193, 215, 218, 227, 337, 372
- SNOA, 353–354, 382
- Songdo IBD, 91
- Sony/EMI, 212–213
- Sony Ericsson, 21
- Spectrum, 14, 16–21, 27, 28, 30, 37, 39, 54, 56, 62, 64, 65, 66, 86, 87, 100, 153–162, 258, 351, 352, 380, 383
- Sprint, 14, 15, 16, 31
- Standard essential patents (SEPs), 21, 22, 23, 24, 75, 157, 158, 175, 176, 181–202, 207, 215, 216, 217, 218, 220, 221, 222, 223, 225, 226, 227, 228, 229
- Standardization, 70, 77, 100, 157, 166, 168, 170–172, 177, 179, 182, 183, 187, 188, 195, 196, 197, 203, 215–216, 284, 290, 359

- Standards, 19, 43, 75, 99, 111, 147, 155, 171, 181, 193, 207, 215, 235, 265, 282, 301, 309, 330, 336
- Standard-setting organizations (SSOs), 21, 22, 181, 183, 187, 188, 194, 195, 198, 199, 215, 216, 221, 226
- State attorneys general, 14
- Storage of data, 158, 159, 165, 167, 168, 169, 170, 171, 282, 287
- Supremo Tribunal Federal (STF), 206
- Synergies, 58, 74, 375–384, 400, 409, 410
- T**
- Tachographs' Case, 207–209
- Technological innovation, 93, 104, 110, 117, 119, 121, 158, 396
- Technology, 16, 28, 69, 91, 105, 117, 135, 153, 165, 181, 194, 207, 216, 234, 247, 257, 282, 293, 318, 335, 336, 345, 361, 378, 396, 398
- Telecom Argentina, 57
- Telecom Italy, 51, 57, 58, 59
- Telecommunication, 3, 14, 27, 35, 51, 62, 111, 117, 135, 153, 171, 181, 194, 214, 215, 243, 257, 293, 305, 320, 331, 335, 345, 359, 375, 387, 397
- Telecommunications General Law (LGT), 37, 38, 39, 336, 346, 360, 378, 379, 399, 400, 407
- Telecommunications in Brazil, 345–346
- Telecommunications Integrated Market Regulation, 28
- Telecommunications market, 27, 28, 29, 30, 36, 40, 47, 62, 171, 305, 345, 347–349, 351, 352, 357, 373, 375–384, 400
- Telecommunications policy, 63, 346, 351, 360, 399
- Telecommunications sector, 36–38, 66, 157, 258, 261–262, 265, 277, 278, 335, 336, 338, 345–357, 373, 377, 378, 383, 384, 399, 400
- Telefónica, 36, 38–41, 44–49, 51, 52, 53, 54, 127
- Telematics box, 102, 103
- Telephony, 15, 28, 44, 53, 181, 214, 261, 283, 284, 305, 324, 346–348, 350, 351, 353, 355, 356, 359, 360, 361, 373
- TIM, 35–49, 52–54, 57, 58, 59, 347, 390
- Time Warner, 16, 18, 33, 87
- T-Mobile, 13–16, 18, 19, 20, 21, 30, 31, 33
- Transaction, 7, 14, 27, 35, 65, 70, 91, 112, 135, 136, 157, 205, 218, 248, 314, 353, 387, 390
- Transmission of data, 125, 270
- TV, 7, 31, 32, 33, 55, 87, 93, 95, 96, 97, 104, 211, 336, 337, 338, 347, 348, 349, 350, 352, 355, 356, 361, 364, 373, 390
- Two-sided markets, 72, 94, 98, 104, 312, 321
- U**
- UMTS, 175, 177, 195, 198, 201
- UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, 4, 9
- Unfairness Policy Statement, 24
- United Nations, 277, 283, 330
- Universal/EMI, 3, 4, 6, 8–12, 212–213
- Up-to-date data, 126, 266, 269
- U.S. Department of Justice (DOJ), 13–23, 31, 33, 76, 79–87, 132
- User behaviour, 91
- V**
- Verizon, 16–18, 31, 64, 86, 87, 123, 325
- Vertical foreclosure, 3, 377, 378, 382
- Vexatious litigation, 200
- Viber, 118
- Videolar against Koninklijke Philips Electronics, 207
- Video On Demand (VoD), 337, 338, 348

Vivendi, 25–26, 51, 55, 57–59, 347  
VIVO, 36, 40, 45, 46, 47, 52, 53, 54, 57,  
347, 390  
Vodafone, 30, 33, 51, 55, 57

**W**

Washington Post, 92  
WhatsApp, 118, 293, 305, 308, 338  
White spectrum, 153–162  
Willing/unwilling licensee, 188, 190,

191, 198, 226, 228, 229  
Wired city, 91  
Working Party on the Protection of  
Individuals with regard to the  
Processing of Personal Data, 270,  
271

**Y**

Yahoo, 128, 255  
YouTube, 127, 168, 339, 372

