

The Columbia Institute for Tele-Information  
State of Telecom 2019

# Do We Need a National i- Media Commission?



Columbia Institute  
for Tele-Information

January 25th 2019

Webinar

10:00am-2:00pm

## Background

In an era of accelerating technological and business change, the question is whether the existing regulatory institutions fit the changing environment. The pressure points include:

1. New types of media and applications, in particular the Internet, online video, apps, and the Internet of Things
2. The global reach of providers
3. Emerging issues such as:
  - Data privacy and security
  - Social media control of usage
  - Algorithms in the individualization of content, pricing, and advertising
  - Anonymity and cryptography
  - Non-discrimination by networks and platforms
  - Big data and marketing practices
  - Media trade barriers

Dealing with such issues can be done in several ways:

1. A libertarian regime with vanishing regulation.
2. Status quo regulation, with issues dealt with by existing government agencies
3. Creation of new single-issue agencies for new issues, such as a Federal Privacy Commission along the European model.
4. A converged agency to cover the emerging issues of the wider electronic information sector.

Each of these approaches has shortcomings such as overlaps, gaps, single-issue perspectives, lack of expertise, and lack of coordination. Others may run counter to basic policy principles of Western democracies.

The purpose of the conference is to:

1. Identify new types of issues,
2. What regulatory structure— if any—to deal with them.

## Connection Information

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# Agenda

## **10:00am-10:05am Welcome and Conference Overview**

- Eli Noam, Columbia University

## **10:05am-10:35am Shortcomings of the current regulatory system, its cost, and alternative options**

- Thomas Hazlett, Clemson University
- Matthias Kurth, Cable Europe
- **Moderator: Kevin Werbach, University of Pennsylvania**

## **10:35am-11:20am Data privacy and security-- emerging issues and the process to deal with them**

- Stephen Messer and Jan Foo, Collective[i]
- Megan Stiffel, Public Knowledge
- Amie Stepanovich, AccessNow
- Eric Null, Open Technology Institute
- **Moderator: Raul Katz, Columbia University**

## **11:20am-12:10pm IoT and algorithms—emerging issues and the process to deal with them**

- Henning Schulzrinne, Columbia University
- Jason Healey, SIPA, Columbia University
- Bernard Benhamou, Institute for Digital Sovereignty
- Robert Cohen, Economic Strategy Institute
- Andrew Tutt, Arnold & Porter
- **Moderator: Jason Buckweitz, Columbia University**

## **12:10pm-1:00pm Online video -- emerging issues and the process to deal with them**

- Andrew Reinsdorf, AT&T
- Eli Noam, Columbia University
- Howard Homonoff, Homonoff Media
- Michael Nelson, Cloudflare
- **Moderator: John Carey, Fordham University**

## **1:00pm-1:50pm How to reform the process**

- Harold Furchtgott-Roth, Hudson Institute
- Reed Hundt, Former FCC Chairman
- Robert Pepper, Facebook
- **Moderator: Eli Noam, Columbia University**

## **1:50pm-2:00pm Conclusions**

## Bios:



### **Eli M. Noam**

Director, **Columbia Institute for Tele-Information**

Professor of Finance and Economics

Garrett Professor of Public Policy and Business Responsibility

**Columbia University Business School**

Professor of Economics and Finance at the Columbia Business School since 1976, and its Garrett Professor of Public Policy and Business Responsibility. Served for three years as a Commissioner for Public Services of New York State. Appointed by the White House to the President's IT Advisory Committee. Director of the Columbia Institute for Tele-Information, a research center focusing on management and policy issues in telecommunications, internet, and electronic mass media. He has also taught at Columbia Law School, Princeton University's Economics Department and Woodrow Wilson School, and the University of St. Gallen, and is active in the development of electronic distance education. Noam has published 29 books and over 350 articles in economics journals, law reviews, and interdisciplinary journals. His recent books include *Broadband Networks and Smart Grids* (Springer, 2013); *Media Ownership and Concentration in America* (Oxford, 2009); *Peer to Peer Video* (Springer, 2008); and *Ultrabroadband* (IDATE, 2008). He is completing a 4-volume series on *Media Management*, and leads a 30-country team on international media ownership. Chairman of the International Media Management Association (2012-14).

Noam has been a member of advisory boards for the Federal government's telecommunications network, and of the IRS computer system, of the National Computer Systems Laboratory, the National Commission on the Status of Women in Computing, the Governor's Task Force on New Media, and of the Intek Corporation. His academic, advisory, and non-profit board and trustee memberships include the Nexus Mundi Foundation (Chairman), Jones International University (the first accredited online university), the Electronic Privacy Information Center, and several committees of the National Research Council. Noam is a Fellow of the World Economic Forum, a member of the Council on Foreign Relations, and a commercially rated pilot. He served in the Israel Air Force in the 1967 and 1973 wars, and is an active search and rescue pilot

with the Civil Air Patrol (1<sup>st</sup> Lt.). He is married to Nadine Strossen, a law professor and national president of the American Civil Liberties Union for 18 years. He received the degrees of BA, MA, Ph.D (Economics) and JD from Harvard University, and honorary doctorates from the University of Munich (2006) and the University of Marseilles (2008).



**Thomas Hazlett**

H.H. Macaulay Endowed Chair in Economics  
**Clemson University**

Thomas Hazlett holds the H.H. Macaulay Endowed Chair in Economics at Clemson, conducting research in the field of Law and Economics and specializing in the Information Economy, including the analysis of markets and regulation in telecommunications, media, and the Internet. Prof. Hazlett served as Chief Economist of the Federal Communications Commission, and has held faculty positions at the University of California, Davis, Columbia University, the Wharton School, and George Mason University School of Law. His research has appeared in such academic publications as the Journal of Law & Economics, the Journal of Legal Studies, the Journal of Financial Economics and the Rand Journal of Economics, and he has published articles in the Univ. of Pennsylvania Law Review, the Yale Journal on Regulation, the Columbia Law Review, and the Berkeley Technology Law Journal. He also writes for popular periodicals including the Wall Street Journal, New York Times, Reason, The New Republic, The Economist, Slate, and the Financial Times, where he was a columnist on technology policy issues, 2002-2011. Prof. Hazlett also serves as Director of the Information Economy Project at Clemson University. He has provided expert testimony to federal and state courts, regulatory agencies, committees of Congress, foreign governments, and international organizations. His latest book, **THE POLITICAL SPECTRUM: The Tumultuous Liberation of Wireless Technology, from Herbert Hoover to the Smartphone**, was published by Yale University Press in 2017.



**Matthias Kurth**  
Executive Chairman  
**Cable Europe**

Matthias Kurth joined Cable Europe in October 2012 as Executive Chairman. Mr. Kurth sits on Cable Europe's Executive Committee which has oversight of the cable industry's main representational duties in Europe. Matthias lastly held the position of President of the German Federal Network Agency, Bundesnetzagentur (BNetzA), the authority for telecommunications, postal, energy and railway markets in Germany, including frequency management and digital signature. He played an instrumental role in the liberalization of the German energy market and left behind notable achievements with respect to competition in the telecommunications market. Matthias also served as Chairman of the European Regulators Group (ERG) in 2009 to increase regulatory cooperation at the EU level.

Mr. Kurth worked as a judge and lawyer for 16 years prior to his roles of President of BNetzA and Chairman of the ERG. He served as State Secretary in the Hesse Ministry of Economics, Transport, Technology and European Affairs between 1994 and 1999. Mr. Kurth was member of the Hesse Land Parliament from 1978 to 1994 and also worked as a lawyer in Hesse.



**Kevin Werbach**  
Professor of Legal Studies and Business Ethics  
**Wharton School, University of Pennsylvania**

Kevin Werbach is an expert on business, policy, and emerging technologies such as blockchain, broadband, and big data. An influential figure in Internet and communications law, Werbach served on the Obama Administration's Presidential Transition Team in 2008. He founded the Supernova Group, a technology consulting firm, and organized the annual CEO-level Supernova technology conference. He created one of the most successful massive open online courses, with over 450,000 enrollments, and co-wrote *For the Win: How Game Thinking Can Revolutionize Your Business*. He was named Wharton's first-ever Iron Prof in 2010.

Werbach was one of the first technology scholars to focus on blockchain and cryptocurrencies. His book, *The Blockchain and the New Architecture of Trust*, will be published November 20, 2018 by MIT Press.

Earlier in his career, he edited the influential technology newsletter *Release 1.0*, and helped develop the US Government's Internet and e-commerce policies as FCC Counsel for New Technology Policy in the Clinton Administration.



**Stephen Messer**  
Co-Founder and Vice Chairman  
**Collective[i]**

Stephen Messer has been an active entrepreneur and investor in the digital economy since the commercialization of the Internet. He currently serves as co- Founder and Vice Chairman of Collective[i]™. Collective[i] hosts a suite of applications that deliver insights to B2B sales teams and Intelligence.com, a global network for sales professionals. Collective[i] is a pioneer in the future of work movement that combines machine learning/artificial intelligence and massive data sets captured via cloud computing in order to improve productivity and grow revenue. Mr. Messer is also Co-Founder and President of World Evolved, a platform for global investment and expansion, and serves as the Chairman of the Council for Accountable Advertising.

Prior to Collective[i], Mr. Messer and his sister, Heidi Messer, co-founded LinkShare Corporation, host to one of the world's largest online affiliate networks representing the world's premier publishers and merchants on the web. The company is widely considered to be a pioneer in the world of SaaS, digital advertising and the sharing economy. Under Mr. Messer's leadership, LinkShare was recognized by Deloitte and Touche for two consecutive years as the fastest growing technology company in New York Region. Mr. Messer served as Chairman and CEO of Linkshare until its sale to Rakuten (4755:JASDAQ) for \$425 million in 2005.

Mr. Messer was awarded the Best Service to the Industry award, recognizing his contributions to development of the affiliate marketing industry. In 2005, Mr. Messer was awarded the prestigious Ernst and Young Entrepreneur of the Year Award for the New York Region. He has been cited in various publications including, The New York Times, The Wall Street Journal, The Nikkei, and Internet Retailer Magazine, and he has appeared on national business programs such as

CNBC, CNNfn, and the Fox News Channel. Mr. Messer has also spoken at major industry events, such as the DMA, Internet World, and Harvard University CyberSymposium, and appeared as a guest speaker at prestigious business schools such as Columbia Business School, New York University's Stern School of Business, and Wharton.



**Janis Foo**  
VP of Legal and Operations  
Collective[i]

Janis Foo is the VP of Legal and Operations at Collective[i]. Collective[i] hosts a suite of applications that deliver insights to B2B sales teams and Intelligence.com, a global network for sales professionals. Collective[i] is a pioneer in the future of work movement that combines machine learning/artificial intelligence and massive data sets captured via cloud computing in order to improve productivity and grow revenue.

In her role at Collective[i], Janis serves as the head of privacy and data governance and leads the company's compliance efforts with various data privacy regulations, including GDPR.

Prior to joining Collective[i], Janis was a corporate attorney at Cleary Gottlieb Steen and Hamilton LLP in New York City, where she advised multinational banks, private equity firms, technology companies and sovereign wealth funds in financings, joint ventures, acquisitions/dispositions, and public-private partnerships. Prior to Cleary, Janis was an entrepreneur, editor, and writer. As a journalist, Janis contributed to *The Wall Street Journal* and *The Far Eastern Economic Review*. Janis earned her undergraduate degree from Brown University, from which she graduated with honors in history, *magna cum laude* and Phi Beta Kappa. She earned her law degree from Yale Law School, where she was an editor of *The Yale Journal of International Law*.

Born in Hong Kong, Janis grew up in San Francisco and currently lives in Brooklyn with her husband and son.



**Megan Stifel**  
Cybersecurity Policy Director  
**Public Knowledge**

Megan Stifel is an attorney and the founder of Silicon Harbor Consultants, a firm that provides strategic cybersecurity operations and policy counsel. She currently serves as Cybersecurity Policy Director at Public Knowledge. In addition, she is a Senior Policy Advisor with Technology for Global Security. Megan is a Senior Fellow in the Atlantic Council's Cyber Statecraft Initiative and a Visiting Fellow at George Mason University's National Security Institute. Megan previously served as a Director for International Cyber Policy at the National Security Council, where she worked to expand the U.S. government's information and communications technology policy abroad, including in connection with cybersecurity, internet governance, bilateral and multilateral engagement, and capacity building. Prior to the NSC, Ms. Stifel served in the U.S. Department of Justice as Director for Cyber Policy in the National Security Division and as counsel in the Criminal Division's Computer Crime and Intellectual Property Section. Ms. Stifel was previously in private practice, where she advised clients on sanctions and FCPA compliance. Before law school, Ms. Stifel worked for the U.S. House of Representatives Permanent Select Committee on Intelligence. She received a Juris Doctorate from the Maurer School of Law at Indiana University, and a Bachelor of Arts, magna cum laude, from the University of Notre Dame. She is a partner with Social Venture Partners Charleston.



**Amie Stepanovich**  
US Policy Manager and Global Policy Counsel  
**Access Now**

Amie Stepanovich is U.S. Policy Manager and Global Policy Counsel at Access Now, where she works to ensure that laws and policies on surveillance and cybersecurity recognize and respect human rights. Amie manages and develops the organization's U.S. policy and leads global projects at the intersection of human rights and government surveillance. Previously, Amie was the Director of the Domestic Surveillance Project at the Electronic Privacy Information Center, where she testified in hearings in both the Senate and the House of Representatives, as well as in State legislatures. Amie is a board member of the Internet Education Foundation and an advisory board member for the Future of Privacy Forum. From 2014-2015, she

was a liaison to the American Bar Association's Cybersecurity Task Force and she co-chaired the 2014 Computers, Freedom, and Privacy Conference. In 2015 Amie was an American delegate to the American Swiss Foundation's Young Leaders Conference and a member of the Australian-American Leadership Dialogue's Young Leaders Dialogue (YLD) from 2017-2018. Amie was named an American Program Manager for the YLD for the 2019-2020 class. In addition, Amie was named as a Privacy Ambassador by the Information and Privacy Commissioner of Ontario, Canada and was recognized in 2014 as one of Forbes magazine's 30 under 30 leaders in Law and Policy. She has a J.D. from New York Law School, and a B.S. from the Florida State University.

LinkedIn: <https://www.linkedin.com/in/astepanovich>

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**Eric Null**  
Senior Policy Counsel  
**Open Technology Institute**

Eric Null is senior policy counsel at the Open Technology Institute, focusing on internet openness and affordability issues, including network neutrality, Lifeline, and privacy.

Before joining OTI, Null was senior staff attorney at the Institute for Public Representation (IPR), a public interest law firm and legal clinic housed in Georgetown Law. At IPR, he represented public interest organizations in front of the FCC, FTC, and courts of appeals. He worked on a broad range of issues including the open internet, municipal broadband, prison phone rates, and children's advertising and privacy. He also worked closely with IPR clinic students and taught several classes about legal skills and substantive areas of law. Prior to IPR, Null was an attorney at the boutique IP law firm Ladas & Parry, and was an intern in the House of Representatives Communications & Technology Subcommittee and at Public Knowledge.

Null earned an LL.M. from Georgetown Law, a J.D. from Cardozo Law, and a B.A. in political science from the University of Vermont.



**Raul Katz**  
Professor  
**Columbia Business School**

As an international telecom industry consulting executive, Dr. Raul Katz has provided direction to CEOs and other top management of major telecommunications, software and information services companies in the areas of business strategy, consumer/industrial marketing and general management approaches. He managed projects in the areas of demand forecasting, scenario planning, competitive analysis, market entry strategy, churn management and new product development. Dr. Katz conducted assignments in the United States, Europe, Asia, the Middle East and Latin America. In addition, Dr. Katz has worked extensively in the design of organizations, management processes and best practices of telecommunications enterprises.

In addition, Dr. Katz has worked with governments and international organizations in the development of regulatory frameworks and policies, National Broadband Plans and National Technology Strategies. In particular, he has supported the governments of Colombia, Costa Rica, and Brazil.

He is currently President of Telecom Advisory Services, a boutique firm that advises clients in the interrelated fields of strategy and regulation. He was previously CEO of Adventis, a telecommunications consulting company with offices in New York, Boston, London, Berlin and Shanghai. Before joining Adventis, he was a Lead Partner at Booz Allen Hamilton, where he was a member of the firm's Leadership Team and Head of the US and Latin America telecommunication practices.

Dr. Katz received his Ph.D. in Management Science and Political Science and an M.S. in Communications Technology and Policy from the Massachusetts Institute of Technology. In addition, he holds a Licence in History and a Maîtrise in Political Science from the University of Paris-Sorbonne, as well as a Licence and a Maîtrise (with honors) in Communication Sciences from the University of Paris. He is a Director of Business Strategy Research at Columbia University's Center for Tele-Information, an Adjunct Professor in Columbia Business School Division of Finance and Economics, and a Visiting Professor at the Universidad de San Andres in Argentina. He currently teaches courses on Competitive Strategy for

High Technology Companies, and Consulting in the Telecommunications and Media Industries.

Dr. Katz has published articles in journals such as Telecommunications Policy, Telephony, Strategy and Business, Communications and Strategies, Interconomics, America's Network and The Information Society. His book The Information Society: an International Perspective, focusing on the deregulation trends in the worldwide telecommunications industry was published in 1988. His book Creative Destruction: Business Survival Strategies in the Global Internet Economy, addressing recent discontinuities in the telecommunications industry, was published in 2000, and translated into Japanese. His book The Role of ICT in Development was published in 2010.

He is fluent in English, French and Spanish. He currently lives in New York and has lived in France, in addition to his native country of Argentina.



### **Henning Schulzrinne**

Julian Clarence Levi Professor of Computer Science  
**Columbia University**

Prof. Henning Schulzrinne is Julian Clarence Levi Professor of Computer Science at Columbia University. He received his undergraduate degree in economics and electrical engineering from the Darmstadt University of Technology, Germany, his MSEE degree as a Fulbright scholar from the University of Cincinnati, Ohio and his

Ph.D. from the University of Massachusetts in Amherst, Massachusetts. He was a member of technical staff at AT&T Bell Laboratories, Murray Hill and an associate department head at GMD-Fokus (Berlin), before joining the Computer Science and Electrical Engineering departments at Columbia University, New York. From 2004 to 2009, he served as chair of the Department of Computer Science. From 2010 to 2011, he was an Engineering Fellow at the Federal Communications Commission (FCC); he is currently the CTO of the FCC.

He is editor of the "Computer Communications Journal", the "ACM Transactions on Multimedia Computing", the "ComSoc Surveys & Tutorials" and a former editor of the "IEEE Transactions on Image Processing", "Journal of Communications and Networks", "IEEE/ACM Transactions on Networking" and the "IEEE Internet Computing Magazine".

He has been a member of the Board of Governors of the IEEE Communications Society and is vice chair of ACM SIGCOMM, former chair of the IEEE Communications Society Technical Committees on Computer Communications and the Internet and has been technical program chair of Global Internet, IEEE Infocom 2000, ACM NOSSDAV, IEEE IM, IPTComm 2008, IFIP Networking 2009 and IPTel and general co-Chair of ACM Multimedia 2004 and ICNP 2009. He serves on the Internet2 Applications, Middleware and Services Advisory Council and have led a working in the NSF GENI project. He also has been a member of the IAB (Internet Architecture Board). He serves on a number of conference and journal steering committees, including for the IEEE/ACM Transactions on Networking.

He has published more than 250 journal and conference papers, and more than 70 Internet RFCs. Protocols co-developed by him are now Internet standards, used by almost all Internet telephony and multimedia applications. His research interests include Internet multimedia systems, quality of service, and performance evaluation.

He served as Chief Scientist for FirstHand Technologies and Chief Scientific Advisor for Ubiquity Software Corporation. He is a Fellow of the IEEE, has received the New York City Mayor's Award for Excellence in Science and Technology, the VON Pioneer Award, TCCC service award and the IEEE Region 1 William Terry Award for Lifetime Distinguished Service to IEEE.



**Jason Healey**

Senior Research Scholar, School of International and Public Affairs

**Columbia University**

Jason Healey is a Senior Research Scholar at Columbia University's School for International and Public Affairs specializing in cyber conflict, competition and cooperation. Prior to this, he was the founding director of the Cyber Statecraft Initiative of the Atlantic Council where he remains a Senior Fellow. His was the editor of the first history of conflict in cyberspace, [\*A Fierce Domain: Cyber Conflict, 1986 to 2012\*](#) and co-authored the book *Cyber Security Policy Guidebook* by Wiley.

His ideas on cyber topics have been widely published in over a hundred articles and essays published by the World Economic Forum, Aspen Strategy Group, Atlantic Council, and National Research Council. *A Fierce Domain* was reviewed favorably in the Economist and by numerous government leaders, including both the President of Estonia and former head of the CIA and NSA. Jason is also president of the Cyber Conflict Studies Association and previously was adjunct faculty at National Cryptologic School, Georgetown University, and Johns Hopkins School of Advanced International Studies. He is an affiliate at Stanford University's Center for International Security and Arms Control.

Jason was one of the pioneers of cyber threat intelligence and has unique experience working issues of cyber conflict and security spanning fifteen years across the public and private sectors. As Director for Cyber Infrastructure Protection at the White House from 2003 to 2005, he helped advise the President and coordinated US efforts to secure US cyberspace and critical infrastructure. He has worked twice for Goldman Sachs, first to anchor their team for responding to cyber attacks and later, as an executive director in Hong Kong to manage Asia-wide business continuity and create the bank's regional crisis management capabilities to respond to earthquakes, tsunamis, or terrorist attacks. Immediately after the 9/11 attacks, his efforts as vice chairman of the Financial Services Information Sharing and Analysis Center created bonds between the finance sector and government that remain strong today.

Starting his career in the United States Air Force, Jason earned two Meritorious Service Medals for his early work in cyber operations at Headquarters Air Force at the Pentagon and as a plankowner (founding member) of the Joint Task Force – Computer Network Defense, the world's first joint cyber warfighting unit. He has degrees from the United States Air Force Academy (Political Science), Johns Hopkins University (Liberal Arts) and James Madison University (Information Security). He has been an improv comedian in Washington DC and Hong Kong.



**Bernard Benhamou**  
General Secretary  
**Institute of Digital Sovereignty**

Bernard Benhamou is currently the General Secretary of the Institute of Digital Sovereignty (ISN). He is also a Senior lecturer on the governance of the Internet at Paris I University (Panthéon Sorbonne).

From 2007 to 2013, he was the Inter-Ministerial Delegate on Internet usage at the French Ministry of Research and the French Ministry of Digital Economy. He served as the Coordinator of the French Presidency of the European Union Ministerial Conference on the Internet of Things (2008). From 2003 to 2005, he was Advisor of the French Delegation at the United Nations World Summit on the Information Society (WSIS).

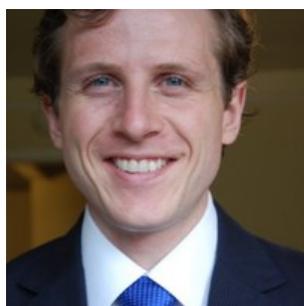
Among his different positions, he was also Head of the Forecast & Internet Governance Mission at the Agency for the Development of e-Government (ADAE-Prime Minister Office & Ministry of Foreign Affairs), Head of the Mission « Internet, Schools & Family » at the French Ministry of Education, Senior lecturer at the National School of Government (ENA) and at the Political Sciences Institute in Paris (Sciences Po), as well as Advisor for the French Ministry of Foreign Affairs on Internet projects in developing countries. Finally, Bernard Benhamou was a founding member and the technology advisor of PlaNet Finance (Internet based NGO devoted to giving microcredit to developing countries), and the creator of the first Network and Internet-based exhibition in the French museum of Science (Passport to the Cyberworld / Cité des Sciences et de l'Industrie, 1997).



**Robert Cohen**  
Senior Fellow  
**Economic Strategy Institute**

Robert B. Cohen, is a senior fellow at the Economic Strategy Institute where he heads a new study, “The economics and business impacts of the “New IP,” cloud computing, SDN, NFV, big data and the Internet of Things. His interest is to evaluate productivity gains and employment and output benefits linked to the “New IP.” Dr. Cohen has been the

Director of the Enterprise Cloud Leadership Council of the TM Forum. He has worked for the European Commission's Directorate General XIII and served as chair of New York's High Tech Council. He holds an MA and Ph.D. in economics from the New School for Social Research and a BA from Swarthmore. He is the author, co-author or co-editor of five books.



**Andrew Tutt**  
Associate  
**Arnold & Porter**

Andrew Tutt focuses on Supreme Court, appellate, and complex litigation. Before joining the firm, Mr. Tutt served as an Attorney-Adviser in the Office of Legal Counsel at the US Department of Justice, where he aided in the preparation of legal advice to the President and federal agencies. Mr. Tutt previously served as a law clerk for Judge Cornelia T.L. Pillard of the US Court of Appeals for the DC Circuit, and as an associate at a large international Washington, DC law firm. He is the author of numerous law review articles on constitutional and administrative law.

Mr. Tutt is a graduate of Yale Law School, where he served as an Articles Editor for *The Yale Law Journal*, won Yale's internal moot court competition, and received prizes for excellence in legal writing and analysis. Mr. Tutt holds a BS from Duke University where he triple majored in Economics, Mathematics, and Biomedical Engineering, earning honors in Economics and Engineering. Between college and law school, he spent a year in Yerevan, Armenia, working for the international anti-corruption organization Transparency International.



**Andrew Reinsdorf**  
Senior Vice President—Video, State Regulatory and Economic  
Policy  
**AT&T**

Andrew Reinsdorf is the senior vice president of Video, State Regulatory and Economic Policy for AT&T's external affairs

team. He develops and advocates for policies that foster a more open, competitive and innovative video marketplace that responds most effectively to consumer needs.

Before AT&T acquired DIRECTV in 2015, Andrew lead the company's Washington, D.C. office overseeing the federal, state and local legislative and regulatory agenda. Prior to joining the company 13 years ago, Andrew held senior government affairs positions with the National Association of Broadcasters.

Andrew is the current vice chairman of the Satellite Broadcasting and Communications Association Board. He is also among the founding board members of the American Television Alliance, which is the advocacy association for the broader multi-channel industry.

He is a board member emeritus of United Community Ministries, a nonprofit serving economically challenged families in Alexandria, Virginia. He has also been a volunteer reading mentor for nearly two decades with EveryBodyWins in Washington, D.C. public schools.

Andrew has a bachelor's degree in politics from Ithaca College. He lives in Alexandria, Virginia with his wife and two sons.



### **Howard Homonoff**

Principle

#### **Homonoff Media**

A well-known thought leader, Howard is credited with helping establish and grow PriceWaterhouseCoopers' global Entertainment, Media & Communications advisory practice as well as Homonoff Media Group, LLC, a private strategy consulting practice. He is a recognized expert at intellectual property protection, risk management, and evaluating digital media growth strategies.

As NBCU Cable Networks' General Counsel and VP, Strategic Ventures at CNBC, Homonoff was responsible for P&L management of NBCUniversal's early stage business units including web based streaming media, broadcast syndication, interactive TV and video, and helped launch its digital cable service, CNBC World. Following his time at NBCU, both at PwC and through Homonoff Media, Howard has worked with clients such as Comcast/NBCU, Fox Cable Networks,

Warner Bros. and Procter & Gamble; Internet Service providers and cable operators such as Verizon and Time Warner Cable; and advertising industry clients such as the Association of National Advertisers and the American Association of Advertising Agencies.

A weekly contributor to Forbes.com, Homonoff regularly covers topics and trends related to the media industry, is a senior fellow at Columbia Business School's Institute on Tele-Information (CITI) and is the producer and host of Media Reporter, a cable program produced in conjunction with CITI, which features figures from the entertainment, media and communications world.



**Michael Nelson**

Tech Strategy  
**Cloudflare**

Dr. Michael R. Nelson advises governments, companies, and other organizations on Internet technology issues for Cloudflare, a startup that has improved the performance and security of more than nine million Web sites worldwide. Prior to joining Cloudflare in early 2015, he was a Principal Technology Policy Strategist in Microsoft's Technology Policy Group and prior to that was a Senior Technology and Telecommunications Analyst with Bloomberg Government. In addition, for six years, starting in January, 2009, Michael Nelson has been teaching courses and doing research on the future of the Internet, cyber-policy, technology policy, innovation policy, and e-government in the CCT Program at Georgetown University. From 1998 to 2007, Nelson was Director of Internet Technology and Strategy at IBM, where he managed a team helping define and implement IBM's Next Generation Internet strategy. Prior to that, he was Special Assistant for Information Technology at the White House Office of Science and Technology Policy. There he worked with Vice President Gore and the President Clinton's Science Advisor on issues relating to the Global Information Infrastructure, including telecommunications policy, information technology, encryption, electronic commerce, and information policy. He earned a B.S. from Caltech and a Ph.D. from MIT.



**John Carey**  
Professor  
**Fordham University**

John Carey brings 25 years of experience in media-industry research and product development to his teaching at the Gabelli School of Business. His clients have included Google, American Express, AT&T, NBC Universal, The New York Times, Primedia, A&E Television Networks, Digitas, The Online Publishers Association, PBS, Cablevision, Rainbow Media, Scholastic and XM Satellite Radio, among others.

Professor Carey has served on the advisory boards of the Adult Literacy Media Alliance, the Annenberg School For Communications and Fordham's Donald McGannon Communication Research Center. He was a commissioner on the Annenberg Commission on the Press and Democracy, has been an invited lecturer in more than a dozen countries and has presented his research to the boards of major media companies in the United States. Before coming to Fordham, he taught at Columbia Business School and at New York University.



**Harold Furchtgott-Roth**  
Director  
**Center for the Economics of the Internet**

Harold Furchtgott-Roth founded Furchtgott-Roth Economic Enterprises in 2003. He frequently comments on issues related to the communications sector of the economy. From 2001-2003, Mr. Furchtgott-Roth was a visiting fellow at the American Enterprise Institute where he completed the writing of *A Tough Act to Follow*, a book about the difficulties implementing the Telecommunications Act of 1996. From 1997 through 2001, Mr. Furchtgott-Roth served as a commissioner of the Federal Communications Commission. In that capacity, he served on the Joint Board on Universal Service. He is one of the few economists to have served as a federal regulatory commissioner, and the only one to have served on the Federal Communications Commission.

Before his appointment to the FCC, he was chief economist for the House Committee on Commerce and a principal staff member on the Telecommunications Act of 1996. Earlier in his career, he was a senior economist with Economists Incorporated and a research analyst with the Center for Naval Analyses.

Mr. Furchtgott-Roth is a member of the Washington Legal Foundation's Legal Policy Advisory Board. He is the coauthor of three books: *Cable TV: Regulation or Competition*, with R.W. Crandall, The Brookings Institution, 1996; *Economics of A Disaster: The Exxon Valdez Oil Spill*, with B.M. Owen et al, Quorum Books, 1995; and *International Trade in Computer Software*, with S.E. Siwek, Quorum Books, 1993.



### **Reed Hundt**

Founder and CEO

**Coalition for Green Capital**

**Former Chairman, FCC**

Mr. Hundt imagined the Green Bank concept in 2009, while he was working on the Obama Transition Team. After working for several years on federal Green Bank legislation, including the Green Bank Act of 2009 and the 2010 Senate

Energy Committee Bill, Mr. Hundt decided to focus on state Green Banks. He founded the Coalition for Green Capital in 2012 and currently serves as the Chief Executive Officer.

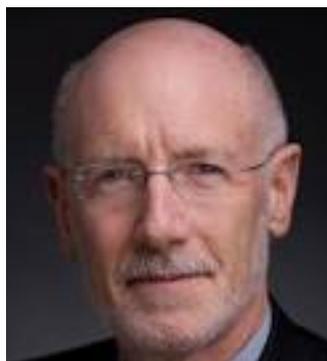
Mr. Hundt is also the Principal of REH Advisors, an advisory firm serving private firms. Mr. Hundt is an adviser to Covington & Burling, an international law firm. Mr. Hundt is on the board of directors of Intel Corporation, the Connecticut Green Bank, and Smart Sky Networks. Mr. Hundt was chairman of the Federal Communications Commission (FCC) from 1993-97 and was co-chairman of the Forum on Communications and Society at the Aspen Institute (1998-2006).

Previously he was a partner at Latham & Watkins, an international law firm. He is a member of the District of Columbia bar.

He has written many articles and four books: *In China's Shadow: The Crisis of American Entrepreneurship* (Yale University Press, 2006), *You Say You Want A Revolution: A Story of Information Age Politics* (Yale University Press, 2000), *The Politics of Abundance: How Technology Can Fix the Budget, Revive the*

American Dream, and Establish Obama's Legacy (Odyssey, 2012), and Zero Hour: Time to Build the Clean Power Platform (Odyssey, 2013).

Mr. Hundt graduated from Yale College (1969) with a B.A. in History magna cum laude and honors with exceptional distinction in history and from J.D. Yale Law School (1974) where he was member of the executive board of the Yale Law Journal. He is married to Elizabeth Katz and has three children: Adam, Nathaniel, and Sara.



**Robert Pepper**

Head, Global Connectivity and Technology Policy

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BA and PhD, University of Wisconsin, Madison. Formerly with: Cisco; Federal Communications Commission; US Department of Commerce; National Science Foundation; faculty of the universities of Iowa, Indiana and Pennsylvania. Former Research Affiliate, Harvard University. 1989- 2005, Chief, Office of Plans and Policy and Chief, Policy Development, FCC. Works with governments developing national digital and broadband strategies. Member: Board, US Telecommunications Training Institute (USTTI); Advisory Board, Columbia University; US Department of Commerce's Spectrum Management Advisory Committee; Ofcom Spectrum Advisory Board, UK; US Department of State Advisory Committee on International Communications and Information Policy.