# THE DIGITAL BROADBAND MIGRATION: Examining the Internet's Ecosystem

presented by

The Journal on Telecommunications and High Technology Law and The Silicon Flatirons Center

## JANUARY 31, 2010 - FEBRUARY 1, 2010 University of Colorado at Boulder





## Sunday, January 31, 2010

#### Welcome 8:45am - 9:00am Dale Hatfield, Executive Director, Silicon Flatirons Center, Adjunct Professor, University of Colorado Former Chief Engineer, Federal Communications Commission **Overview Address** 9:00am - 9:30am Phil Weiser, Deputy Assistant Attorney General, Antitrust Division, Department of Justice Overview Panel: The Internet Ecosystem in Perspective 9:30am - 11:30am Moderator - Phil Weiser, Deputy Assistant Attorney General, Antitrust Division, Department of Justice Meredith Attwell Baker, Commissioner, Federal Communications Commission Marc Bereika, Senior Policy Advisor, Office of the Secretary, Department of Commerce Brad Feld, Managing Director, Foundry Group, Mobius Venture Capital Dale Hatfield, Executive Director, Silicon Flatirons Center, Adjunct Professor, University of Colorado Former Chief Engineer, Federal Communications Commission Larissa Herda, Chairman, President and Chief Executive Officer, tw telecom, inc. Michael Powell, Former Chairman, Federal Communications Commission, Senior Advisor, Providence Equity Lisa Tanzi, Vice President and Deputy General Counsel for the Business Division, Microsoft Corporation Lunch 11:30am - 1:00pm Evolving Business Models and Policy Challenges for the Content Industries 1:00pm - 3:00pm Moderator - Jonathan Sallet, Senior Adjunct Fellow, Silicon Flatirons Center, Managing Director, The Glover Park Group Presenters Mark Cooper, Senior Adjunct Fellow, Silicon Flatirons Center, Director of Research, Consumer Federation of America Ellen Goodman, Professor of Law, Rutgers University-Camden Mark Lemley, William H. Neukom Professor of Law, Stanford University Discussants Michael Gallagher, President and Chief Executive Officer, Entertainment Software Association Preston Padden, Executive Vice President, Walt Disney Company Gigi Sohn, Senior Adjunct Fellow, Silicon Flatirons Center, President and Co-founder, Public Knowledge Break 3:00pm - 3:15pm Industry Structure and Opportunities for Innovation 3:15pm - 5:15pm Moderator - Ari Fitzgerald, Partner, Hogan & Hartson Presenters Carl Shapiro, Deputy Assistant Attorney General, Antitrust Division, Department of Justice Howard Shelanski, Deputy Director for Antitrust of the Bureau of Economics, Federal Trade Commission Daniel Weitzner, Associate Administrator for Policy, National Telecommunications and Information Administration Discussants Kathryn C. Brown, Senior Vice President, Public Policy Development and Corporate Responsibility, Verizon Jon Nuechterlein, Partner, WilmerHale Stephen Williams, Senior Judge, U.S. Court of Appeals, D.C. Circuit

#### Reception sponsored by Viaero Wireless

<u>5:15pm - 6:15pm</u>

## Monday, February 1, 2010

Keynote Address	<u>9:00am - 10:00am</u>
James Crowe, Chief Executive Officer, Level 3 Communications	
The Governance Challenges of	
Cooperation In The Internet Ecosystem	<u> 10:00am - 12:00pm</u>
Moderator - Paul Ohm, Associate Professor of Law, University of Colorado	
Presenters	
Pierre de Vries, Senior Adjunct Fellow, Silicon Flatirons Center	
Michael Froomkin, Professor of Law, University of Miami	
Frank Pasquale, Professor of Law, Seton Hall University	
<u>Discussants</u>	
Edward Felten, Professor of Computer Science and Public Affairs, Princeton University	
Andrew McLaughlin, United States Deputy Chief Technology Officer	
Brent Olson, Assistant Vice President of Public Policy, AT&T	

Lunch and Closing Address sponsored by Viaero Wireless 12:00pm - 1:30pm Larry Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration

## About the Conference

The Internet exists as an ecosystem, where an array of network providers, application developers, content creators and end users co-exist with one another. In the best of contexts, this is a peaceful co-existence with shared goals and a mutual understanding of the interdependent nature of the ecosystem. In the worst of contexts, the different actors are at war with one another either in word or in deed. Most often, however, there is a tense co-existence, with the various tensions often just beneath the surface.

At our 2009 Digital Broadband Migration conference (on Imagining the Internet's Future), the interconnected and misunderstood nature of the Internet ecosystem arose as a dominant theme. In this year's conference, we will pick up that thread and examine an array of issues, including (1) the dynamics of market structure and opportunities for innovation; (2) governance challenges around issues involving cooperation, such as the issues around interconnection between network providers and network provider and application developers, and (3) the business models that sustain content in an environment where many content creators (newspapers, for example) are sustaining to find a source of revenue to stay in business. To do so, we will bring together a leading group of academics, public interest advocates, governmental officials, and industry executives.

*Meredith* Attwell Baker is a Commissioner of the Federal Communications Commission and was sworn in on July 31st, 2009. Ms. Baker most recently served as Acting Assistant Secretary of Commerce for Communications and Information and Acting Administrator of the National Telecommunications and Information Administration (NTIA). NTIA is the President's principal advisor on telecommunications and information policy. Ms. Baker was named Deputy Assistant Secretary in February 2007 and first joined NTIA as a Senior Advisor in January 2004. She also served as Acting Associate Administrator for the Office of International Affairs and on detail to the White House, Office of Science and Technology Policy. At NTIA, Ms. Baker advised and represented the Executive Branch on both domestic and international telecommunications and information policy activities. With a core mission to promote market-based policies that encourage innovation and benefit consumers, NTIA under Ms. Baker pursued the effective and efficient utilization of radiofrequency spectrum by the federal government through its management of federal spectrum use, performed cutting edge telecommunications research and engineering, and oversaw the management of the Internet's domain name and numbering system. Ms. Baker also administered the coupon program to help facilitate the nation's historic transition to digital television. Ms. Baker has served on delegations representing the United States at major international telecommunications conferences and engaged in bilateral discussions with senior level officials from countries around the world. Before joining NTIA, Ms. Baker was Vice President at the firm of Williams Mullen Strategies where she focused on telecommunications, intellectual property, and international trade issues. Earlier, she held the position as Senior Counsel to Covad Communications from 2000 to 2002, and Director of Congressional Affairs at the Cellular Telecommunications Industry Association (CTIA) from 1998 to 2000. Ms. Baker worked at the U.S. Court of Appeals Fifth Circuit in Houston and later at the law firm of DeLange and Hudspeth, L.L.P. From 1990 to 1992, she worked in the Legislative Affairs Office of the U.S. Department of State in Washington.

*Marc Berejka* has served as a policy advisor in the Secretary's Office at the U.S. Department of Commerce since July 2009. He is responsible for identifying and employing policy levers that can be used to promote innovation. Recognizing that innovation is a broad topic, he currently focuses on a handful of strategic issues that arise in the intellectual property, IT standards, broadband, privacy and cybersecurity realms. He regularly engages with industry stakeholders, as well as with counterparts at other U.S. government agencies and in the White House's tech-policy office. Within the Commerce Department, he works with the Patent and Trademark Office, the National Institute of Standards and Technology, and the National Telecommunications and Information Administration in shaping certain policy efforts. Prior to joining the Department, Mr. Berejka worked for 12 years in various public policy roles in the high-tech sector. He has built and managed industry coalitions, driven issue campaigns, developed legislation and articles, and engaged with the press, non-profits, academics and of course policymakers. He has managed policy initiatives on a global basis. Mr. Berejka spent the first part of his career as a telecommunications lawyer with various firms in Washington, D.C. He holds a J.D. from Georgetown University and a B.A. from Princeton University. While at Princeton he focused on political science, economics and Russian studies.

Kathryn C. Brown is Senior Vice President - Public Policy Development and Corporate Responsibility at Verizon. She has been with the company since June 2002. She is responsible for public policy development and messaging, emerging issues management, and cultivating strategic alliances with key national and international organizations. She is also responsible for Verizon's domestic and international corporate responsibility initiatives. Ms. Brown has responsibility for the Verizon Foundation and its focus on the issues of education and literacy, with programs such as the Verizon Thinkfinity.org education website, and safety and health, supporting initiatives that further Internet safety, and apply technology to increase access to healthcare information and services. Before joining Verizon, Ms. Brown was a partner at the law firm of Wilmer, Cutler & Pickering. Prior to joining the firm, Ms. Brown was the Chief of Staff to Federal Communications Commission (FCC) Chairman William E. Kennard, managing the agenda on all telecommunications, broadcast, and spectrum matters. Additionally, Ms. Brown was the Associate Administrator, Office of Policy Analysis and Development, at the U.S. Department of Commerce's National Telecommunications & Information Administration. Ms. Brown worked for eight years at the New York State Public Service Commission as the Director of the Consumer Services Division and as Litigation Attorney and Managing Attorney for Telecommunications with the Office of General Counsel. Prior to joining the NYPSC, she was the Deputy Clerk of the New York State Court of Appeals. Ms. Brown serves on numerous boards and advisory committees including, the Smithsonian National Museum of American History board of directors; US Center for Citizen Diplomacy board of directors; National Council of LaRaza corporate board of advisors, American Foundation for the Blind board of trustees; Columbia Institute for Tele-Information (CITI) advisory board and the FCC Advisory Committee on Diversity. Ms. Brown received her J.D., summa cum laude, from Syracuse University College of Law in 1980 and her B.A., magna cum laude, from Marist College in 1974. She is admitted to practice in New York and the District of Columbia.

*Mark Cooper* is Senior Adjunct Fellow for Silicon Flatirons and Director of Research at the Consumer Federation of America. Mr. Cooper holds a Ph.D. from Yale University and is a former Yale University and Fulbright Fellow. He combines a commitment to public interest advocacy and academic research. He has been at the Consumer Federation of America for over 25 years, where he is Director of Research. Dr. Cooper is a recipient of CFA's Esther Petersen Consumer Service Award. He has prepared approximately 200 research reports and provided expert testimony in over 125 cases for public interest clients including Attorneys General, People's Counsels, and citizen interveners before state public utility commissions. He has testified over 100 times before federal agencies and courts and has testified before Congress over 100 times. Dr. Cooper is a Fellow at the Vermont Law School Institute for Energy and the Environment, the Stanford Law School Center for Internet and Society, and The Donald McGannon Communications Center of Fordham University. Dr. Cooper has published numerous books and articles on telecommunications, high technology industries and energy policy.

**James Crowe** is Chief Executive Officer of Level 3 Communications, the first international communications company to fully leverage the power of Internet technology. Having assumed the leadership of Level 3's predecessor, a diverse group of companies and holdings in 1997, Mr. Crowe reshaped it into a single company with a core focus on communications and information services. Prior to assuming the leadership of Level 3, Mr. Crowe served as Chairman of WorldCom, following that company's merger with MFS Communications Company in 1996. Prior to that, Mr. Crowe was CEO of MFS, a company he founded and took public in 1993. At the time of its \$14.3 billion merger with WorldCom, MFS was the largest competitive local carrier in the U.S. and Europe. Mr. Crowe serves on the Board of Directors of Level 3 Communications.

**Brad Feld** is a Managing Director of Foundry Group. Mr. Feld has been an early stage investor and entrepreneur for over twenty years. Prior to co-founding Foundry Group, he co-founded Mobius Venture Capital and, prior to that, founded Intensity Ventures, a company that helped launch and operate software companies and later became a venture affiliate of the predecessor to Mobius Venture Capital. Mr. Feld currently serves on the board of directors of Gist. Gnip, Oblong, Standing Cloud, and Zynga for Foundry Group. Previously, Mr. Feld served as chief technology officer of AmeriData Technologies. AmeriData acquired Feld Technologies, a firm he founded in 1987 that specialized in custom software applications. He had grown Feld Technologies into one of Boston's leading software consulting firms prior to the acquisition. He also directed the diversification into software consulting at AmeriData, a \$1.5 billion publiclytraded company which was acquired by GE Capital in 1995. In addition to his investing efforts, Mr. Feld has been active with several non-profit organizations and currently is chairman of the National Center for Women & Information Technology and co-chairman of the Colorado Governor's Innovation Council. Brad is a nationally recognized speaker on the topics of venture capital investing and entrepreneurship and writes widely read and well respected blogs at www. feld.com and www.askthevc.com. Notable companies that Mr. Feld has invested in and/or sat on the boards of include Abuzz (acq. NYT), Anyday.com (acq. PALM), Critical Path (CPTH), Cyanea (acq. IBM), Dante Group (acq. WEBM), DataPower (acq. IBM), FeedBurner (acq. by GOOG), Feld Group (acq. by EDS), Harmonix (acq. VIA), NetGenesis (IPO), ServiceMagic (acq. IACI), and ServiceMetrics (acq. EXDS). Mr. Feld holds a Bachelor of Science and Master of Science degrees in Management Science from the Massachusetts Institute of Technology.

*Edward Felten* is a Professor of Computer Science and Public Affairs at Princeton University. Mr. Felten's research topics include computer security and privacy, and public policy issues relating to information technology. Specific topics include software security, Internet security, electronic voting, cybersecurity policy, technology for government transparency, network neutrality and Internet policy. Mr. Felten is the Director of Princeton's Center for Information Technology Policy (CITP), a cross-disciplinary effort studying digital technologies in public life. Mr. Felten often blogs about technology and policy at Freedom to Tinker.

Ari Fitzgerald is a partner at Hogan & Hartson. Mr. Fitzgerald's practice focuses on wireless, satellite, international communications, and Internetrelated issues. Ari also provides strategic and legal advice on a wide range of telecommunications and spectrum-related issues. He serves as counsel to several communications-related trade associations in the United States and Europe, and represents several telecommunications carriers, telematics providers, equipment suppliers, and investors in major spectrum-related and regulatory policy proceedings at the Federal Communications Commission (FCC) and National Telecommunications and Information Administration (NTIA). He has also provided advice on telecommunications privatization and market liberalization issues. Ari joined Hogan & Hartson from the FCC, where for nearly three years he served as Legal Advisor to the FCC's former Chairman, William Kennard. In this position, he advised the chairman on wireless, international, and spectrum policy issues. Ari later served as Deputy Chief of the FCC's International Bureau, overseeing the development of FCC policies on international telecommunications, foreign ownership, satellite services, spectrum allocation, and promotion of the Internet. Prior to working at the FCC, Ari worked as an attorney in the Office of Legal Counsel of the U.S. Department of Justice, counseling the White House and federal government agencies on constitutional and administrative law matters. He also served as Legal Counsel to former U.S. Senator Bill Bradley. Before his work in the federal government, Ari was an attorney at another international law firm. In addition, Ari worked as a Financial Analyst in the corporate finance department of the First Boston Corporation, an international investment bank, before entering law school. Ari served as a law clerk to The Honorable H. Lee Sarokin of the federal District Court for New Jersey. Ari currently serves on the board of directors of Crown Castle International, a publicly traded communications infrastructure firm, and on the advisory board of a number of private communications businesses. He also serves as the Secretary of the Minority Media and Telecommunications Council and on the board of directors of the Duke Ellington Fund, a nonprofit organization established to secure private financial support for Washington, D.C.'s public high school for the performing arts.

**Michael Froomkin** is a Professor of Law at the University of Miami School of Law. He received an M.Phil. degree from Cambridge University in 1984, and a J.D. from Yale Law School in 1987. He clerked for Judge Stephen F. Williams of the U.S. Court of Appeals for the District of Columbia Circuit and for John F. Grady, chief judge of the Northern District of Illinois. Professor Froomkin joined the University of Miami faculty after working in the London office of the Washington, D.C., firm of Wilmer, Cutler & Pickering. He currently teaches Internet Law, Jurisprudence, Administrative Law and Tort. Previously he has taught Constitutional Law, Trademark, Civil Procedure I, and seminars in Law & Games and E-Commerce.

**Michael Gallagher** is President and CEO of the Entertainment Software Association. He has a deep background in technology policy. Mr. Gallagher was the Department of Commerce's Assistant Secretary for Communications & Information, serving as chief telecommunications and Internet policy advisor to the George W. Bush Administration. During his over four-year tenure at

the Department of Commerce, he led successful efforts to pave the way for a number of new technologies and services, such as ultrawideband, broadband over powerlines, advanced wireless services, and millimeter wavelength networks. In addition, Mr. Gallagher developed and successfully advocated the U.S. Government's policies on international Internet governance. Mr. Gallagher was most recently Communications Practice chair at Perkins Coie, a leading international law firm offering a broad spectrum of legal services. Mr. Gallagher holds degrees in Economics and Political Science from the University of California, Berkeley and a Juris Doctor from the University of California, Los Angeles.

*Ellen Goodman* is a Professor at Rutgers University and specializes in the law of information technology, including telecommunications, media and intellectual property. She has been an expert panelist before the National Science Foundation, the Federal Communications Commission, the Brookings Institute, and the Aspen Institute, as well as other policy and academic audiences. Professor Goodman is currently working as a Ford Foundation grantee on policy design principles for a digital public media system. She is a Research Fellow at American University's Center for Social Media and a Visiting Scholar at the Annenberg School of Communication at the University of Pennsylvania, and has had visiting positions at the University of Pennsylvania Law School and the University of Pennsylvania Wharton School of Business. Prior to joining the faculty in January 2003, Professor Goodman was a partner in the law firm of Covington & Burling with a practice in information technology law. Professor Goodman graduated from Harvard College, magna cum laude, in 1988 and from Harvard Law School, cum laude, in 1992. She clerked for the Honorable Norma L. Shapiro on the Eastern District of Pennsylvania. She lives with her husband and three children near Philadelphia.

**Dale Hatfield** is currently the Executive Director of Silicon Flatirons Center, an independent consultant and Adjunct Professor in the Interdisciplinary Telecommunications Program at the University of Colorado at Boulder. Prior to joining the University of Colorado, Mr. Hatfield was the Chief of the Office of Engineering and Technology at the Federal Communications Commission and, immediately before that, he was Chief Technologist at the Agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Mr. Hatfield was Acting Assistant Secretary of Commerce for Communications and Information and Acting Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Mr. Hatfield was Chief of the Office of Plans and Policy at the FCC. Mr. Hatfield has nearly four decades of experience in telecommunications policy and regulation. Mr. Hatfield has been involved in spectrum management issues for almost his entire career, including having major responsibilities for management of the resource at both the FCC and NTIA. Additionally, he has lectured, developed and taught short courses, and consulted in the area of spectrum management both domestically and internationally.

*Larissa Herda* is Chairman, President, and Chief Executive Officer of tw telecom. Ms. Herda took the helm of tw telecom inc., formerly Time Warner Telecom Inc., as CEO and President, on June 19, 1998. She was elected Chairman of the tw telecom inc. Board of Directors effective June 7, 2001, and currently holds the title of Chairman, CEO and President. Ms. Herda served as the company's Senior Vice President of Sales and Marketing from March 1, 1997 until her appointment as chief executive. Under Ms. Herda's direction, tw telecom introduced comprehensive data, voice over IP and metro Ethernet products; expanded its optical network footprint and regional connectivity between cities; launched switched telephone services; built a national IP backbone; and made three acquisitions -- a regional Internet service provider and two competitive local exchange carriers (CLECs). Ms. Herda has raised approximately \$6 billion in the public and debt markets, including a \$290 million IPO, since becoming tw telecom President and CEO. Recognized for her business efforts and leadership in the community, Ms. Herda was named Ernst & Young Entrepreneur of the Year for the Rocky Mountain Region and the Denver Business Journal CEO of the Year and Outstanding Women in Business for 2007. She also received the "Swede" Johnson Hope Award presented by the Colorado Chapter of the National Multiple Sclerosis Society and the Women of Distinction Award from the Girl Scouts of America. Most recently, she was named Telecom Executive of the Year by the Denver Telecom Professionals. Ms. Herda was recently named to the Board of the Denver Branch of the Federal Reserve Board of Kansas City. She is on the Board at the Leeds School of Business at the University of Colorado, is a member of The Committee of 200 and also a member of the community advisory board of SungateKids, a local children's advocacy center helping abused children and their families. Ms. Herda is a graduate of the University of Colorado.

*Mark Lemley* is the William H. Neukom Professor of Law at Stanford University. He is widely recognized as a preeminent scholar of intellectual property law. Mr. Lemley is an accomplished litigator—having litigated cases before the U.S. Supreme Court, the California Supreme Court, and federal circuit courts—as well as a prolific writer with more than 100 published articles and six books. He has testified numerous times before Congress, the California legislature, the Federal Trade Commission, and the Antitrust Modernization Commission on patent, trade secret, antitrust, and constitutional law matters, and he is also a partner and founder in the firm Durie Tangri LLP. Mr. Lemley's contributions to legal scholarship focus on how the economics and technology of the Internet affect patent law, copyright law, and trademark law; and at Stanford he currently acts as the Director of the Program in Law, Science & Technology, and the Director of the LLM Program in Law, Science & Technology. Before joining the Stanford Law School faculty in 2004, he was a professor of law at the UC Berkeley School of Law (Boalt Hall) and at the University of Texas School of Law. Mr. Lemley also served as counsel at Fish & Richardson and Brown & Bain as well as clerked for Judge Dorothy W. Nelson of the U.S. Court of Appeals for the Ninth Circuit.

*Andrew McLaughlin* is the United States Deputy Chief Technology Officer. He is the former Head of Global Public Policy and Government Affairs for

Google Inc., based in San Francisco. He is an Emeritus Fellow of the Berkman Center. Working at the intersection of law, politics, economics, and technology, Andrew's Berkman Center work has principally taken the form of projects to expand Internet infrastructure in developing countries. Mr. McLaughlin has assisted governments, NGOs, and private sector actors to understand and analyze Internet and communications technologies; to reform their laws, policies, and regulations; and to foster favorable environments for local technology entrepreneurship.

**Jon Nuechterlein** is a partner at WilmerHale in Washington, D.C. His practice focuses on appellate litigation and competition issues, particularly those arising under federal telecommunications law. From January 2000 until his arrival at the firm in early 2001, Mr. Nuechterlein served as Deputy General Counsel of the Federal Communications Commission, where he oversaw litigation arising from the Telecommunications Act of 1996. From 1996 to 2000, he served as Assistant to the Solicitor General in the U.S. Department of Justice. In that capacity, he personally argued seven cases in the U.S. Supreme Court, drafted the federal government's briefs in many additional cases and helped formulate the government's litigation strategy on a wide range of issues. He is the author (with Phil Weiser) of Digital Crossroads: American Telecommunications Policy in the Internet Age (MIT Press 2005), and of *Antitrust Oversight of an Antitrust Dispute: An Institutional Perspective on the Net Neutrality Debate*, 7 J. Telecomm. & High Tech. L. 19 (2009).

**Paul Ohm** is an Associate Professor of Law at University of Colorado Law School and IP/IT Director at Silicon Flatirons. Professor Ohm specializes in the emerging field of computer crime law, as well as criminal procedure, intellectual property, and information privacy. Prior to joining CU he worked as an Honors Program trial attorney in the Computer Crime and Intellectual Property Section of the U.S. Department of Justice. Professor Ohm is a former law clerk to Judge Betty Fletcher of the U.S. Ninth Circuit Court of Appeals and Judge Mariana Pfaelzer of the U.S. District Court for the Central District of California. He attended the UCLA Law School where he served as Articles Editor of the UCLA Law Review and received the Benjamin Aaron and Judge Jerry Pacht prizes. Prior to law school, he worked for several years as a computer programmer and network systems administrator, and before that he earned undergraduate degrees in computer science and electrical engineering.

**Brent Olson** serves as Assistant Vice President-Public Policy at AT&T. Mr. Olson's responsibilities include helping to develop and coordinate at the federal and state levels AT&T's public policy positions on a number of issues covering emerging services and technologies. These include broadband, IP-based services, and video technology services with a particular focus on internet-related policy issues, such as net neutrality and online safety. Mr. Olson is a frequent panelist and speaker at a number of U.S.-based and international public policy conferences. On behalf of AT&T, Mr. Olson currently serves as board vice chair for the Family Online Safety Institute (FOSI) after having served as its chair last year. FOSI is an international organization dedicated to making the online world safer for kids and their families by identifying and promoting best

practices, tools and methods in the field of online safety that also respect free expression. Mr. Olson has over 16 years of telecommunications law and policy experience. Prior to joining AT&T, Mr. Olson worked for at total of nine years as an attorney at the Federal Communications Commission, most recently as the Deputy Chief of the Competition Policy Division of the Wireline Competition Bureau. In between his two stints at the FCC, Mr. Olson was responsible for overseeing U.S. regulatory issues for Cable & Wireless, a global internet and telecommunications company, developing and advocating the company's policy positions in front of the FCC and state regulatory bodies. He is a graduate of Northwestern University and holds a JD from the UCLA School of Law.

**Preston Padden** is Executive Vice President of Government Relations for The Walt Disney Company. Based in Washington, D.C., he works with all business units of The Walt Disney Company in their interactions with the U.S. government and those of other countries. Previously Mr. Padden was president of ABC Television Network. Before joining ABC in 1997, he was chairman and chief executive officer of American Sky Broadcasting (ASkyB), a satellite television joint venture between News Corporation and MCI. Prior to joining ASkyB, he had served as president, telecommunications and television, for News Corporation, having joined Fox Broadcasting Company in January, 1990, as senior vice president, Affiliates. Mr. Padden received his undergraduate degree from the University of Maryland and his law degree from George Washington University in Washington, D.C.

**Frank Pasquale** is Loftus Professor of Law at Seton Hall Law School, where he is also associate director of the Gibbons Institute for Law, Science & Technology. After graduating from Yale Law School, where he was an editor of the Yale Law and Policy Review and the Yale Symposium on Law and Technology and served as a student director in the Disabilities Clinic, Mr. Pasquale clerked for the Honorable Kermit Lipez of the U.S. Court of Appeals for the First Circuit. He then served as a fellow at the Institute for the Defense of Competition and Protection of Intellectual Property in Lima, Peru. Mr. Pasquale joined Seton Hall after practicing at Arnold & Porter LLP, where his work included antitrust and intellectual property litigation. Mr. Pasquale has focused his scholarship on enriching intellectual property and health law with insights from economics, philosophy, and social science. During the Spring 2009 semester, he was a Visiting Professor at Yale Law School.

**Michael Powell** is a Senior Advisor of Providence Equity. Prior to joining Providence in 2005, Mr. Powell served as Chairman of the Federal Communications Commission from 2001 to 2005. Mr. Powell was appointed to the FCC by President Clinton in 1997 and was designated Chairman by President Bush in 2001. As Chairman, Mr. Powell focused on initiatives that encouraged market-driven solutions that promoted consumer interests and drove innovative approaches to getting broadband technology out to people, such as broadband over power lines, WiFi Hotspots, cable broadband and DSL. Mr. Powell previously served as the Chief of Staff of the Antitrust Division in the Department of Justice. Prior to that, Mr. Powell was an associate in the law firm of O'Melveny & Myers and clerked for the Honorable Harry T. Edwards,

Chief Judge of the U.S. Court of Appeals for the D.C. Circuit. Before starting his legal career, Mr. Powell served as a policy advisor to Secretary of Defense Richard B. Cheney. Mr. Powell's experience also includes military service as an armored cavalry officer in the U.S. Army. Mr. Powell graduated from the College of William and Mary and earned his Juris Doctor from Georgetown University Law Center. Mr. Powell is Chairman of the MK Powell Group and serves on the boards of America's Promise, Archipelago Learning, Cisco Systems, ObjectVideo, the Rand Corporation, the Aspen Institute and the board of advisors for the Disabled Veterans for Life Memorial effort.

*Jonathan Sallet* is a Senior Adjunct Fellow for Silicon Flatirons and a Managing Director at The Glover Park Group and has combined a career in technology, public policy, politics and the law. Mr. Sallet's most recent writings include, "The Geography of Innovation: The Federal Government and the Growth of Regional Innovation Clusters," authorship of a chapter in the Center for American Progress's book on the presidential transition and a comment on FCC Reform that can be found at www.fcc-reform.org. In addition, he appeared recently as a panelist at an antitrust conference co-sponsored by the American Antitrust Institute and Silicon Flatirons. Mr. Sallet served in the Clinton Administration as Assistant to the Secretary and Director of the Office of Policy & Strategic Planning of the Department of Commerce, focusing on economic and technology policy. He was a member of the small group of Administration officials who met regularly with Vice President Gore to address the telecommunications issues that became the Telecommunications Act of 1996, and he headed the first White House working group on the deployment of educational technology. He clerked for Associate Justice Lewis F. Powell, Jr., and Judge Edward Tamm of the United States Court of Appeals for the District of Columbia Circuit and was a partner in the law firms of Jenner & Block and Miller, Cassidy, Larroca & Lewin.

*Carl Shapiro* serves as the Deputy Assistant Attorney General for Economics at the Antitrust Division of the U.S. Department of Justice, where he supervises more than fifty Ph.D. economists in the Antitrust Division's Economic Analysis Group (EAG). EAG is widely recognized as one of the most experienced and sophisticated organizations in the world in the application of economics to competition policy. Professor Shapiro had the honor of serving previously as Deputy Assistant Attorney General for Economics in the Antitrust Division, during 1995-1996. He is hopeful that experience will prove valuable during his current tour of duty. Shapiro is on leave from the University of California at Berkeley, where he is the Transamerica Professor of Business Strategy at the Haas School of Business and Professor of Economics in the Department of Economics. From 1998 to 2008 he served as Director of the Institute of Business and Economic Research at UC Berkeley. Shapiro has been a Professor at UC Berkeley since 1990. He was on the faculty of Princeton University from 1980 to 1990 and earned his Ph.D. in Economics from MIT in 1981. Shapiro has published extensively in the areas of industrial organization, competition policy, the economics of innovation, and competitive strategy. Shapiro is the co-author, with Hal R. Varian, of the surprisingly popular 1999 book, Information Rules: A Strategic Guide to the Network Economy. In recent years, his research has focused on the antitrust evaluation of horizontal mergers, the design and use

of patents, and the intersection between antitrust and intellectual property. His academic curriculum vitae and recent research can be found at http://faculty. haas.berkeley.edu/shapiro. Prior to joining the Department of Justice, Shapiro consulted extensively for a wide range of private clients as well as for the Department of Justice and the Federal Trade Commission, mostly in the area of antitrust economics.

**Howard Shelanski** is Deputy Director for Antitrust of the Bureau of Economics for the Federal Trade Commission. He received his J.D. from Boalt Hall in 1992 and his doctorate in economics from UC Berkeley in 1993. After graduating from Boalt, he clerked for Judge Stephen F. Williams of the U.S. Court of Appeals for the D.C. Circuit, Judge Louis H. Pollak of the U.S. District Court in Philadelphia, and Justice Antonin Scalia of the United States Supreme Court. Before joining the Boalt faculty, Professor Shelanski practiced law with the Washington, D.C. firm of Kellogg Huber Hansen Todd & Evans. Professor Shelanski has twice taken leave from teaching to work in government. From 1999-2000 he served as chief economist of the Federal Communications Commission and from 1998-1999 he served as a senior economist for the President's Council of Economic Advisers at the White House. Professor Shelanski's teaching and research focus on antitrust, regulation, and telecommunications policy. In 2004, he received the Rutter Award for Teaching Distinction.

Gigi Sohn is a Senior Adjunct Fellow at Silicon Flatirons and President and Co-Founder of Public Knowledge. Ms. Sohn is an internationally known communications attorney. Ms. Sohn serves as PK's chief strategist, fundraiser and public face. She is frequently quoted in the New York Times, Washington Post and Wall Street Journal, as well as in trade and local press. Ms. Sohn has been published in the Washington Post, Variety, CNET and Legal Times. In addition, she has appeared on numerous television and radio programs, including the Today Show, The McNeil-Lehrer Report, C-SPAN's Washington Journal and National Public Radio's All Things Considered and Morning Edition. Ms. Sohn is a Non-Resident Fellow at the University of Southern California Annenberg Center, and a Senior Fellow at the University of Melbourne Faculty of Law. She has been an Adjunct Professor at Georgetown University and at the Benjamin N. Cardozo School of Law, Yeshiva University. Ms. Sohn served as a Project Specialist in the Ford Foundation's Media, Arts and Culture unit and as Executive Director of the Media Access Project, a public interest law firm that represents citizens' rights before the FCC and the courts. In 1997, President Clinton appointed Ms. Sohn to serve as a member of his Advisory Committee on the Public Interest Obligations of Digital Television Broadcasters. In May 2006, the Electronic Frontier Foundation gave Gigi its Internet "Pioneer" Award. Ms. Sohn currently serves on the board of the Telecommunications Policy Research Conference (TPRC) and Broadcasters' Child Development Center (BCDC). Gigi holds a B.S. in Broadcasting and Film, Summa Cum Laude, from the Boston University College of Communication and a J.D. from the University of Pennsylvania Law School.

*Larry Strickling* On June 25, 2009, the United States Senate confirmed Lawrence E. Strickling as Assistant Secretary for Communications and Information at

the Department of Commerce. In this role, Strickling serves as Administrator of the National Telecommunications and Information Administration (NTIA), the executive branch agency that is principally responsible for advising the President on communications and information policies, managing the Federal use of electromagnetic spectrum, performing cutting-edge telecommunications research and engineering, formulating and advocating for U.S. positions on international communications and information technology policy matters, and administering infrastructure and public telecommunications facilities grants. Mr. Strickling is a technology policy expert with more than two decades of experience in the public and private sectors. As Policy Coordinator for Obama for America, Strickling oversaw two dozen domestic policy committees and was responsible for technology and telecommunications issues. Prior to joining the campaign, Strickling was Chief Regulatory and Chief Compliance Officer at Broadwing Communications for three years. His private sector experience also includes serving in senior roles at Allegiance Telecom and CoreExpress, Inc. and as a member of the Board of Directors of Network Plus. In government, Strickling served at the Federal Communications Commission as Chief of the Common Carrier Bureau from 1998 to 2000. Prior to that, Strickling was Associate General Counsel and Chief of the FCC's Competition Division. During his tenure at the FCC, Strickling developed and enforced rules to foster competition and protect consumers in the telecommunications marketplace. Prior to joining the FCC, Strickling was Vice President, Public Policy at Ameritech. Before Ameritech, he was a litigation partner at the Chicago law firm of Kirkland & Ellis.

*Lisa Tanzi* is Vice President and Deputy General Counsel for the Business Division at Microsoft Corporation. She manages the team that provides primary legal support for the Office, SharePoint, Business Solutions and Unified Communications teams, which are responsible for developing both software and services offerings. She previously managed the business and legal team responsible for launching Microsoft's broad IP licensing practice, as well as the legal teams supporting the Windows product development and marketing efforts and Microsoft's standards activities. In addition to her management responsibilities as a member of the Senior Leadership Team of Microsoft's legal department, Ms. Tanzi's practice has focused on supporting a wide variety of commercial and IP-related transactions, and counseling on a broad range of issues (including antitrust, standards, open source, copyright, trade secret, privacy and telecommunications) related to product development and marketing activities. Prior to joining Microsoft in 1995, Ms. Tanzi practiced at Perkins Coie in Washington and Dorsey & Whitney in New York, where she represented multiple high-tech companies, as both licensees and licensors, in software licensing, development and distribution transactions. Ms. Tanzi is a graduate of Harvard Law School (1990, magna cum laude), where she was a member of the Harvard Law Review.

**Pierre de Vries** is a Senior Adjunct Fellow at Silicon Flatirons and researches and advises clients on the intersection of information technology and government policy. His current projects include regulatory paradigms for the Internet/web, alternative conceptual models for wireless policy, spectrum allocation in the TV

white spaces, and the impact of intangibility on decision-making in the digital world. Mr. De Vries is a Research Fellow at the Economic Policy Research Center of the University of Washington, and a Senior Adjunct Fellow of the Silicon Flatirons Center at the University of Colorado, Boulder. He is also a technology advisor to the Washington, D.C., law firm of Harris Wiltshire & Grannis. He is a former Chief of Incubation and Senior Director of Advanced Technology and Policy at Microsoft Corporation. Prior to his twelve years at Microsoft, De Vries worked for Korda & Co, a London-based seed capital company and consultancy, advising corporate customers like Pearson and Scientific Atlanta on the likely evolution and business impact of new technologies. He evaluated potential venture capital investments, negotiated investments and relationships, and served as a start-up board member.

*Phil Weiser* is Deputy Assistant Attorney General, Antitrust Division at the Department of Justice. He is on leave as a professor of law and telecommunications at the University of Colorado Law School. At CU, he has worked to establish a national center of excellence in telecommunications and technology law, founding the Journal on Telecommunications & High Technology Law and the Silicon Flatirons Center for Law, Technology, and Entrepreneurship as well as writing and teaching in the areas of competition policy, innovation policy, and Internet policy. Over the last ten years, Weiser has co-authored two books (Digital Crossroads: American Telecommunications Policy in the Internet Age (MIT Press 2005) and Telecommunications Law and Policy (Carolina Academic Press 2006), numerous articles (in both law journals and publications such as the Washington Post and Foreign Affairs), and has testified before both houses of Congress. He was co-Chair of the Colorado Innovation Council and served as the lead agency reviewer for the Federal Trade Commission as part of the 2008 Presidential Transition. Prior to joining the CU faculty, Professor Weiser served as senior counsel to the Assistant Attorney General in charge of the Antitrust Division at the United States Department of Justice, advising him primarily on telecommunications matters. Before his appointment at the Justice Department, Weiser served as a law clerk to Justices Byron R. White and Ruth Bader Ginsburg at the United States Supreme Court and to Judge David Ebel at the Tenth Circuit Court of Appeals. Weiser graduated with high honors from both the New York University School of Law and Swarthmore College.

**Daniel Weitzner** serves as Associate Administrator for the Office of Policy Analysis and Development in the Commerce Department's National Telecommunications and Information Administration (NTIA). He directs the office that conducts research and analysis and prepares policy recommendations for the Assistant Secretary for Communications and Information. NTIA serves as the principal adviser to the President on telecommunications and information policy. In this role, NTIA formulates, advocates, and participates in the implementation of policies, frequently working with other Executive Branch agencies to develop and present the Administration's position. Since its creation in 1978, NTIA has been at the cutting edge of critical technology issues. The Office of Policy Analysis and Development (OPAD) is the domestic policy division of NTIA. OPAD supports NTIA's role as principal adviser to the Executive Branch and the Secretary of Commerce on telecommunications

and information policies by conducting research and analysis and preparing policy recommendations. The office generates policies that promote innovation, competition, and economic growth for the benefit of American businesses and consumers.

**Stephen Williams** is a Senior Judge for the U.S. Court of Appeals, D.C. Circuit. Mr. Williams was appointed in June 1986, and took senior status in September 2001. He graduated from Yale College (B.A. 1958) and from Harvard Law School (J.D. 1961). Judge Williams was engaged in private practice from 1962 to 1966 and became an Assistant U.S. Attorney for the Southern District of New York in 1966. From 1969 until his appointment to the bench, Judge Williams taught at the University of Colorado School of Law. During this time, he also served as a Visiting Professor of Law at UCLA, University of Chicago Law School, and Southern Methodist University and was a consultant to the Administrative Conference of the United States and the Federal Trade Commission. Judge Williams published Liberal Reform in an Illiberal Regime: The Creation of Private Property in Russia, 1906-1915 (Hoover Institution Press, 2006), and is currently working on a biography of Vasily Maklakov, a prominent lawyer and Constitutional Democrat of the Russian revolutionary era.

# Upcoming Events

Silicon Flatirons' Annual Mile High Tech Entrepreneurship Conference: Entrepreneurial Immigration, Improvisation, and Innovation

University of Colorado Law School March 18, 2010, 2:30 - 6:30PM CLE: Credit Available

**Patents and Open Source Software** University of Colorado Law School April 29, 2010, 1:00 - 6:00PM CLE: Credit Available

# SILICON FLATIRONS

The Silicon Flatirons Center for Law, Technology and Entrepreneurship brings to campus individuals from legal, technical, regulatory and business backgrounds to discuss issues facing the telecommunications and information technology communities. It creates an environment for analyzing the continually changing dynamics in the telecommunications and information technology industries and the resulting entrepreneurship in these fields; prepares students for leadership in these important areas; and supports initiatives to encourage entrepreneurship at the University and surrounding community. More information about Silicon Flatirons is available at *www.silicon-flatirons.org*.

## THE JOURNAL ON TELECOMMUNICATIONS AND HIGH TECHNOLOGY LAW

The Journal on Telecommunications and High Technology Law is the most recent addition to CU's tradition of student publications. JTHTL is sponsored by the Silicon Flatirons Center and is committed to providing a meaningful experience to students who have an interest in telecommunications, technological convergence, intellectual property, and regulatory law. Strategically, JTHTL capitalizes on the University of Colorado at Boulder's tradition as a pioneer in interdisciplinary telecommunications scholarship and the strong base of technology companies located in the Denver-Boulder corridor. Accordingly, JTHTL encourages interdisciplinary inquiry, publishing articles by technologists and economists as well as by law professors, practicing lawyers, and policy experts. Furthermore, in conjunction with the Silicon Flatirons Center, JTHTL presents a symposium each spring for scholars, practitioners, faculty and students to discuss and debate the relevant, pressing issues of the day. More information concerning the journal and upcoming issues is available at http://www.colorado.edu/law/jthtl/.

### In Memoriam: Peter Rohrbach



In 2009, the Silicon Flatirons Center lost a great friend and champion, Peter Rohrbach.

Peter was a leading communications lawyer in the US, with over 30 years of experience in mergers and acquisitions, regulatory proceedings, and compliance counseling. Cochair of Hogan & Hartson's communications practice since 1998, Peter's expertise cut

across several major sectors of the communications industry, including wireline communications, satellite communications, and information services, as well as broadcast and new media matters. His clients included Qwest, SES, Clear Channel, Tribune, XM Radio and Spacenet, to name a few. His many accomplishments included handling major telecommunications mergers and related regulatory approvals at the federal and state levels, as well as successfully leading his clients through numerous complex regulatory and litigation matters. He taught law school seminars on telecommunications policy and was a frequent speaker on major telecommunications-related issues.

Peter was born in Hartford, Connecticut, to a family descended from William Brewster, preacher on the Mayflower and the first religious leader of the Plymouth colony. He graduated from Philips Exeter Academy and from Yale College, magna cum laude, in 1975. After a year working at the National Endowment for the Humanities, he attended Stanford Law School, where he was senior note editor of the Law Review. Upon graduation from Stanford Law School in 1979, Peter began his long career in the Washington, D.C. office of Hogan & Hartson. During his 30 years there, he was instrumental in expanding the firm's communications practice, both inside and outside the US, and served two terms as an elected member of the firm's Executive Committee. Peter was a kind and generous man whose thoughtful, unpretentious manner belied the depth of his convictions and passions. He was devoted to his family, had a deep appreciation for culture, and loved travel and the outdoors. He would often say that his experience climbing Mount Kilimanjaro with his son in 2007 was a personal highlight that rivaled his professional accomplishments. He also drew great satisfaction from his work as a volunteer teacher with the outreach program of Thurgood Marshall Academy, a successful Washington, D.C. public charter school.

Peter loved (and was a tremendous supporter of) the Silicon Flatirons Center. Until his diagnosis with cancer in 2009, he had been a panelist at every Digital Migration Conference since 2002 and was the driving force behind Hogan & Hartson's support for and participation in the conference. He looked forward to the conference each year and always emerged from it with renewed enthusiasm for his profession. He also was a uniquely valuable supporter and contributor to other Silicon Flatirons projects, including the Hatfield Fund and our Flatirons Summits, including one on Network Management that he participated in. Survived by his wife, Linda Rohrbach, and their sons James and Andrew, Peter will be remembered for his numerous contributions to the practice of communications law, as a leader by example in the best tradition of Hogan & Hartson and the communications bar in general, and as a friend and mentor to many inside and outside the communications industry.

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