



Dr. Larry Alder (Co-Chair) has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2011. Alder joined Google in 2005 and is Director of Access Strategy. He is responsible for a number of product, policy, and strategic investment activities promoting Internet access. Alder has been involved with a number of projects at Google including municipal Wi-Fi networks, Google's fiber to the home initiative, and Project Link – a shared infrastructure network in Africa. He has also been involved in a number of spectrum policy initiatives, including openness provisions in the 700 MHz band and the opening up of TV whitespaces for wireless

Internet uses. He is part of a team that developed Google's TV whitespace database that has been certified by the Federal Communications Commission. Additionally, he is involved with several of Google's strategic investments in the access area including Wi-Fi, satellite, and 4G networking companies. Alder also serves on the board of O3b Networks, a global satellite service provider. Prior to joining Google, Alder spent 10 years at ArrayComm, where he served as vice president of technology development. He has a Ph.D. in Engineering from Stanford University in the specialty of Control Theory and Bachelor's degree in Engineering from UCLA.



H. Mark Gibson (Co-Chair) has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2011. Gibson has more than 30 years of spectrum management experience and is responsible for developing domestic and international business opportunities for Comsearch. He has led Comsearch's spectrum management efforts including the development of spectrum sharing analysis protocols and sharing criteria, as well as development of Comsearch's engineering services and software products. Gibson

authored several papers on spectrum sharing and relocation and has advised numerous wireless participants in their system design. He is a Senior Member of IEEE. He received his BSEE from the University of Maryland.



***Audrey L. Allison** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Allison is Director of Frequency Management Services for The Boeing Company. She leads Boeing's global spectrum activities, including acquisition, compliance, and policy advocacy. Allison represents Boeing at the Federal Communications Commission (FCC), the International Telecommunication Union (ITU), the Inter-American Telecommunication Commission, and governments worldwide. She is Vice-Chairman of the ITU's Radiocommunication Advisory Group and has served on the U.S. Delegations to the last six World Radio Conferences (WRCs). She chairs the WRC Advisory Committee Working Group on Space, Maritime, Aviation, and Radar Issues. Prior to joining Boeing, Allison was an attorney for Iridium LLC, served as a consultant to the Department of Defense, and held several positions with the FCC, including in the Satellite and Radiocommunication Division of the International Bureau. Allison has an MBA, *cum laude*, from the International Space University, a Masters of Law in International and Comparative Law from Georgetown University, a J.D. degree from Catholic University's Institute for Communications Law Studies, and a Bachelor's degree in Communications from Penn State University.



Michael A. Calabrese has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2009. Calabrese directs the Wireless Future Project at the New America Foundation, a non-profit think tank based in Washington, D.C. As part of the Foundation's Open Technology Institute, he develops and advocates policies to improve our nation's management of the public airwaves and to promote pervasive connectivity, particularly through more ubiquitous and affordable high-speed wireless broadband access. He also served as an Invited Expert on the President's Council of Advisors on Science and Technology spectrum reform working group during 2011-2012. Calabrese has previously served as General Counsel of the Congressional Joint Economic Committee, director of domestic policy at the Center for National Policy, as a counsel at the national AFL-CIO, and as a Clerk to California Supreme Court Justice Allen E. Broussard. Calabrese is a graduate of Stanford Business and Law Schools, where he earned J.D. and M.B.A. degrees, and Harvard College, where he earned a B.A. in Economics and Government.



***Michael S. Chartier** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Chartier has spent the last 25 years at Intel and is Director of Spectrum Technology in the company's Public Policy Group, where he has served for the last decade, formulating policy, developing strategies and tactics, and executing them to create a regulatory environment that fosters innovation. He is involved in a wide variety of issues from increasing the amount of spectrum available to the market, to maintaining the existing industry led standards ecosystem. Chartier is responsible for

developing and prosecuting submissions to domestic and foreign regulatory proceedings including participation on United States and Intel delegations to many international regulatory meetings and treaty negotiations at the International Telecommunication Union. He has contributed to many of Intel's strategic initiatives such as digital television, digital photography, advanced displays, software defined radio, ultra-wideband technologies, TV whitespaces, and WiMAX. Prior to joining Intel, Chartier worked at RCA where he participated in pioneering digital television work at the David Sarnoff Research Center.



Martin Cooper has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Cooper is chairman and co-founder of Dyna LLC, an incubator established in 1986 that supports and inspires the advancement of insightful, innovative, and relevant technology solutions that benefit society. Cooper is a pioneer of the cellular and personal communications industry. Since 1954, he materially contributed to every mobile telephone system introduced, from the manual systems of the mid-1950s to the development of digital cellular telephony. Cooper conceived the first portable cellular phone in

1973 and led the 10-year process of bringing it to market while working for Motorola. During his 29 years with Motorola, Cooper built and managed both its paging and cellular businesses and served as Corporate Director of Research and Development. After leaving Motorola, Cooper co-founded Cellular Business Systems, Inc. and then co-founded ArrayComm, which he grew from a seed-funded startup into a world leader in smart antenna technology. He is a member of the National Academy of Engineering and received its Draper Prize in 2013. Cooper received the Marconi Prize, and is a Prince of Asturias Laureate awardee, an IEEE Centennial Medal awardee, a member of the Wireless Hall of Fame and the Engineering Hall of Fame. Mr. Cooper earned B.S. and M.S. degrees in Electrical Engineering from the Illinois Institute of Technology, where he is also a Life Trustee.



Mark E. Crosby has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Crosby serves as the President and CEO of the Enterprise Wireless Alliance (EWA), a national association representing the wireless communication regulatory and spectrum allocation interests of private business enterprises, wireless sales/service organizations, private and commercial communication service providers and technology manufacturers. From 2001 to 2004, Crosby served as President of Access Spectrum LLC, a band manager licensee dedicated to providing exclusive spectrum with state-of-the-art equipment and engineering to create end-to-end wireless

communication systems in the 220 MHz and 700 MHz bands. He is a member of Access Spectrum's board of directors, serves as Secretary/Treasurer of the Land Mobile Communications Council, and is President of Spectrum Equity, Inc., a wholly-owned subsidiary of EWA organized to pursue strategic spectrum ventures. Crosby served as President and CEO of the Industrial Telecommunications Association from 1975-2001. Crosby earned his B.S. degree in Finance from the University of Maryland and is a graduate of the U.S. Chamber of Commerce's Institute for Organization Management, University of Delaware.



Thomas S. Dombrowsky, Jr. has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2011. Dombrowsky is a Senior Engineering Advisor with the law firm of Wiley Rein LLP where he provides technical advice and guidance to clients concerning wireless spectrum matters. Dombrowsky specializes in spectrum policy matters, especially with respect to issues that affect commercial mobile service providers. Over the past few years, Dombrowsky has been involved heavily in the National Broadband Plan spectrum reallocation discussions, including the Mobile Satellite Service proceedings and the recent proceedings concerning the reallocation of additional TV broadcast spectrum for mobile broadband services. Prior

to joining Wiley Rein, Dombrowsky held several positions within the Federal Communications Commission's Wireless Telecommunications and Private Radio Bureaus where he worked on commercial mobile spectrum policy and licensing matters. He earned a B.S. in Electrical Engineering from Lehigh University.



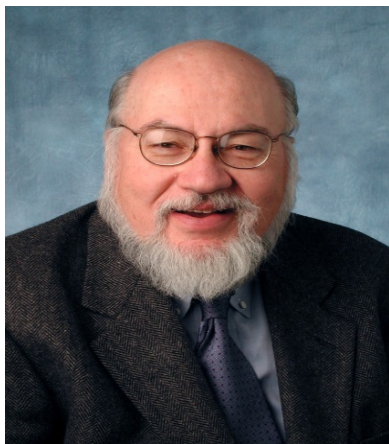
David L. Donovan has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2009. Donovan is President and Executive Director of the New York State Broadcasters Association in Albany, New York. From 2001 to 2011, he served as President of the Association for Maximum Service Television, Inc. (MSTV), the leading engineering and technical trade association of the television industry. During his tenure, MSTV guided the industry through the digital transition. Donovan served as the Vice President for Legal and Legislative Affairs for the Association of Local Television Stations from 1990 to 2000. He joined the Federal Communications Commission in 1983, serving in a number of important legal positions including as the chief media advisor for the Honorable James H. Quello for three years. Donovan earned a J.D. degree from the Suffolk University Law School in Boston and he received an M.A. degree in Communications and a B.A. in Political Science from the University of Massachusetts (Amherst).



***Harold Feld** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Feld is Senior Vice President of Public Knowledge, a non-profit digital advocacy group dedicated to promoting ubiquitous and affordable broadband. Before coming to Public Knowledge in 2009, he worked as Senior Vice President at Media Access Project, advocating for the public interest in media, telecommunications, and technology policy for almost 10 years. Prior to this, Feld was an associate at Covington & Burling. Feld has written numerous articles on spectrum policy and testified multiple times on spectrum-related matters before Congress. He has worked extensively with the Federal Communications Commission, NTIA, and other federal agencies on proceedings relating to federal spectrum management and the development of shared spectrum technologies. Feld earned a B.A. degree from Princeton, received a J.D. degree from Boston University, and served as a law clerk for the District of Columbia Court of Appeals.



Dr. Harold Furchtgott-Roth has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2009. Furchtgott-Roth is President of Furchtgott-Roth Economic Enterprises, an economic consulting firm he founded in 2003. He is also the Founder and Director of the Hudson Institute's Center on the Economics of the Internet. Furchtgott-Roth was previously a visiting fellow at the American Enterprise Institute and, from 1997 to 2001, served as a Commissioner of the Federal Communications Commission (FCC). Before his appointment to the FCC, Furchtgott-Roth served as the Chief Economist for the House Committee on Energy and Commerce and was a principal staff member working on the Telecommunications Act of 1996. From 1984-1988, he was a research analyst at the Center for Naval Analyses, primarily analyzing problems for the U.S. Marine Corps. He is the author of scores of publications and has authored or coauthored four books. Furchtgott-Roth received a Ph.D. in Economics from Stanford University and an S.B. in Economics from the Massachusetts Institute of Technology.



Dale N. Hatfield has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Hatfield is a Senior Fellow at the Silicon Flatirons Center for Law, Technology, and Entrepreneurship and an Adjunct Professor in the Interdisciplinary Telecommunications Program – both at the University of Colorado at Boulder. Prior to joining the University of Colorado, Hatfield was the Chief of the Office of Engineering and Technology at the Federal Communications Commission (FCC) and, immediately before that, he was Chief Technologist at the agency. He retired from the FCC and government service in December 2000. Before joining the FCC 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, Hatfield was Acting Assistant Secretary of Commerce for Communications and Information and Acting Administrator at NTIA. Prior to joining NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Until recently, Hatfield was the Executive Director of the Broadband Internet Technical Advisory Group. He also serves on the FCC's Technology Advisory Council. Hatfield has nearly 50 years of experience in telecommunications policy and regulation, spectrum management and related areas. He holds an M.S. in Industrial Management from Purdue University and a BS in electrical engineering from Case Institute of Technology.



***Dr. Paul Kolodzy** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Kolodzy is an independent telecommunications consultant to government and commercial clients. His areas of expertise include the development of advanced component, device, and system technology; advanced architectures; interference analysis; and spectrum policy, regulation and acquisition. He has been active in broadcast; cellular including 700 MHz, AWS-1, AWS-3, and AWS4; and public safety spectrum policy and regulation. Prior to his work as an independent consultant, Kolodzy was the

Director of the Wireless Network Security Center at the Stevens Institute of Technology. He also served as the Senior Spectrum Policy Advisor and the Director of the Spectrum Policy Task Force at the Federal Communications Commission. He also has worked as a program manager at the Defense Advanced Projects Agency, and was the Director of Signal Processing and Strategic Initiatives at Lockheed Martin Sanders (now BAE). He began his career as a Group Leader and Staff Member at MIT's Lincoln Laboratory. Kolodzy is also a member of the National Research Council Panel on Active Sensing and founder and Executive Committee Member of the IEEE Dynamic Spectrum Access Network Symposium. He holds a Ph.D. degree in Chemical Engineering from Case Western Reserve University and a B.S. in Chemical Engineering from Purdue University.



***Dr. Robert Kubik** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Kubik is Director of Communications Policy and Regulatory Affairs for Samsung Electronics America, supporting Samsung's businesses regarding spectrum, regulatory approval and policy development. Kubik joined Samsung in 2010. From 1994-2010, Kubik worked for Motorola and developed domestic and international regulations related to the Iridium satellite system and expanded to developing regulatory policies for cellular, fixed/mobile broadband, license-exempt spectrum, and mobile

satellite networks. He also has been active in the development of several International Telecommunication Union (ITU) radio recommendations, served as a U.S. representative to ITU world radio conferences, and chairs the Alliance for Wireless Power regulatory group. Kubik holds B.S., M.S. and Ph.D. degrees in Electrical Engineering from the University of Nebraska.



***Dr. Giulia McHenry** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. McHenry is an Associate with The Brattle Group, providing expertise in economic and regulatory analysis in the telecommunications and media industries, and antitrust litigation. She has consulted on competition in the wireless sector, spectrum management and valuation, broadband deployment, state and federal regulatory proceedings, and Connect America and Universal Service Funds. Recently she has coauthored white papers on *Spectrum Sharing: Taxonomy and Economic* (February 2014) and *Canadian Wireless Market Performance and the Potential Effect of an Additional Nationwide Carrier* (May 2014). Prior to joining Brattle, McHenry was a senior economist at the Government Accountability Office, where she conducted economic analysis related to U.S. international policy, including trade and trade promotion, global financial linkages, and international development. McHenry received her Ph.D. in Economics from the University of Maryland in 2009, and her B.A. from Wesleyan University in 2001.



Dr. Mark A. McHenry has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. McHenry is President and Chief Technology Officer of Shared Spectrum Company, which he founded in 2000. McHenry was also a co-founder of San Diego Research Center Inc., which focused on Defense Department test and training systems. McHenry was a Program Manager at the Defense Advanced Research Projects Agency, where he managed multiple tactical wireless related programs. McHenry received the Office of Secretary of Defense Award for Outstanding Achievement in 1997 and the Office of Secretary of Defense Award for Exceptional Public Service Award in 2000. McHenry was an engineer at SRI International, Northrop Advanced Systems, McDonnell Douglas Astronautics, Hughes Aircraft, and Ford Aerospace. McHenry was named Engineer of the Year by the District of Columbia Council of Engineering and Architectural Societies in February 2006. McHenry received his Ph.D. in Electrical Engineering from Stanford University, M.S. in Electrical Engineering from the University of Colorado, and B.S. in Engineering and Applied Science from the California Institute of Technology.



Janice Obuchowski has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Obuchowski is President of Freedom Technologies, has held several leadership positions, both in the United States government and in the private sector. Obuchowski served as the U.S. Ambassador to the World Radiocommunications Conference 2003 in Geneva, Switzerland and as Assistant Secretary for Communications and Information at the Department of Commerce, (NTIA) under President George H.W. Bush. Mrs. Obuchowski also held several positions at the Federal

Communications Commission (FCC), including Senior Advisor to the Chairman. Milestones in her career included writing the legal support for not regulating computer and Internet services as Title II common carriers as an FCC staff lawyer, leading Executive Branch advocacy for spectrum auction legislation as NTIA's Assistant Secretary, and successfully driving the U.S. effort for international adoption of Wi-Fi at WRC 2003. Obuchowski's private sector career includes board service, corporate experience and entrepreneurship. Earlier in her career, Obuchowski was at NYNEX (now Verizon) and in private antitrust law. She earned a J.D. from the Georgetown University Law Center and graduated with Honors from Wellesley College.



Dr. Robert Pepper has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Pepper leads Cisco's Global Technology Policy team working with governments and business leaders across the world in areas such as broadband, IP enabled services, wireless and spectrum policy, security, privacy, Internet governance and ICT development. He joined Cisco in July 2005 from the Federal Communications Commission (FCC) where he served as Chief of the Office of Plans and Policy and Chief of Policy Development. While at the FCC, he led teams developing policies promoting the development of the Internet, implementing telecommunications legislation, planning for the transition to digital

television, and designing and implementing the first U.S. spectrum auctions. In addition to serving on CSMAC, he also has served on the UK's Ofcom Spectrum Advisory Board and the U.S. Department of State's Advisory Committee on International Communications and Information Policy. Pepper received his B.A. and Ph.D. in Communications from the University of Wisconsin-Madison.



Carl Povelites has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2011. Povelites is Assistant Vice President Public Policy, Mobility, for AT&T. He leads a group responsible for the development of public policy initiatives for AT&T's wireless business to advance and facilitate AT&T Mobility's business initiatives on a wide-range of issues, from spectrum policy to emerging devices and technologies to safe driving. With more than 20 years of experience in the wireless industry, Povelites has had the opportunity to participate in and actively shape its extraordinary growth. Povelites joined AT&T Mobility (formerly as known Cingular) as Executive Director

of External Affairs in December 2000. Prior to joining Cingular, he was Vice President of Regulatory Affairs for Evolution Networks, a start-up fiber-optic networking company. He began his telecommunications career as a pricing analyst for Contel Telephone Operations in 1986, joining GTE Wireless in 1990 and was responsible for state regulatory and legislative activities. While at GTE Wireless, his responsibilities expanded to include state and federal regulatory and legislative activities as the Assistant Vice President of Government Relations. Povelites earned his Bachelor's degree in Economics and Management and an MBA degree from New Mexico State University.



***Charla Rath** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Rath is Vice President of Wireless Policy Development at Verizon, where she leads a team engaged in the development of Verizon's public policy positions on long term spectrum policy issues. Previously, as Executive Director of Spectrum and Public Policy at Verizon Wireless, Charla worked with the company's business development and network planning groups to address policy and regulatory issues related to the acquisition of spectrum. Prior to joining Verizon Wireless, Rath served as Vice President – Strategic Affiliations, of NextWave Telecom, Inc. and Vice President of

Freedom Technologies, Inc., a Washington, D.C.-based telecommunications consulting firm. She also served as advisor to Federal Communications Commission Chairman Alfred C. Sikes on common carrier and spectrum policy issues and as a primary specialist in spectrum and Internet policy at the National Telecommunications and Information Administration. Rath has a B.S.F.S. (Foreign Service) in International Economics and Finance from Georgetown University and a M.A. degree in Science, Technology, and Public Policy from The George Washington University.



Richard L. Reaser, Jr. has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2009. Reaser is head of the Spectrum Management and Electromagnetic Environmental Effects Department for Raytheon Company's Space and Airborne Systems.

Reaser has more than 35 years of expertise in spectrum matters, engineering and program management. In his current position, he plans and coordinates SAS use of electromagnetic spectrum and executes E3 technical designs consistent with applicable specifications, standards, laws and regulations to meet customer product needs. Reaser joined

Raytheon in August 2006. Prior to joining Raytheon, he was deputy system program director and chief engineer for the \$32 billion Navstar Global Positioning System. He served as deputy director of spectrum management in the Office of the Secretary of Defense and held spectrum positions in the White House and State Department. He was technical advisor to the U.S. Ambassador to the World Radio Communications Conference (WRC) 2000 and was a U.S. Spokesperson at WRC-2003. He negotiated landmark navigation and communication signal and spectrum agreements between the United States, Russian Federation, France, Japan and European Union. Reaser earned his bachelor's degree in engineering mechanics from the U.S. Air Force Academy. He holds master's degrees in systems technology (command, control, communications) and national resource strategy from the Naval Postgraduate School and National Defense University, respectively. He retired from the Air Force after 28 years of service at the rank of Colonel.



***Dr. Jeffrey H. Reed** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Reed serves as Director of Wireless @ Virginia Tech. He is the Founding Faculty member of the Ted and Karyn Hume Center for National Security and Technology and served as its interim Director when it was founded in 2010. He is the author of *Software Radio: A Modern Approach to Radio Design*. He is co-founder of Cognitive Radio Technologies, a company commercializing of the cognitive radio technologies; Federated Wireless, a company developing technologies for 5G systems; and for Power Fingerprinting, a company specializing in security for embedded systems. In 2013, he was

awarded the International Achievement Award by the Wireless Innovations Forum. In 2012 he served as an advisor to the President's Council of Advisors of Science and Technology Group that examine ways to transition federal spectrum to allow commercial use and improve economic activity. Reed's area of expertise is in software radios, cognitive radios, smart antennas, wireless networks and communications signal processing. He has authored, co-authored, or co-edited ten books and proceedings, contributed to

six books, and authored or co-authored over three hundred journal and conference papers. His books include: *Software Radio: A Modern Approach to Radio Design*, *An Introduction to Ultra Wideband Communication Systems*, and *Cellular Communications*. Reed has a Ph.D. from the University of California, Davis.



Dennis A. Roberson has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2011. Roberson is Vice Provost for Research and a Research Professor in Computer Science at Illinois Institute of Technology (IIT) where he is responsible for the school's research efforts and the university's relationships with its various corporate partners. He is a co-founder of IIT's Wireless Network and Communications Research Center and a wireless networking educator. He is also President and CEO of Roberson and Associates, LLC, an IIT spin-out consulting firm primarily focused on wireless technology and technology management serving government and commercial customers. Roberson serves on the boards of several technology-based companies, Chairs the FCC's Technological Advisory Council and serves on the U.S. Commerce Spectrum Management Advisory Committee. Prior to joining IIT, he was Executive Vice President and Chief Technology Officer at Motorola. He had an extensive corporate career including major business and technology responsibilities at IBM, DEC (now part of HP), AT&T, and NCR. Roberson has a M.S. in Electrical Engineering from Stanford University and B.S. degrees in Electrical Engineering and Physics from Washington State University.



***Kurt Schaubach** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Schaubach is Vice President and Chief Technology Officer of the National Rural Telecommunications Cooperative (NRTC). At NRTC, he directs the organization's technology strategy and leads the development of products and services that serve the information and communication technology interests of 1,500 rural utilities and affiliates in 48 states. Prior to joining NRTC, Schaubach worked at NextWave Wireless, LCC International, SBC Laboratories, and as an independent consultant. He has more than 22 years of experience in the wireless industry and 12 years of experience in senior engineering positions. This experience includes communications network design, deployment, operation and advanced technology development. Schaubach earned his B.S. and M.S. degrees in Electrical Engineering from Virginia Polytechnic Institute & State University



***Steve Sharkey** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Sharkey is Senior Director, Chief Engineering and Technology Policy in T-Mobile's Government affairs office in Washington, D.C. He is responsible for T-Mobile's technical policy agenda and manages a team of technical experts to achieve the company's policy goals. Prior to joining T-Mobile, Sharkey was Senior Director, Regulatory and Spectrum Policy in Motorola's Global Government Affairs office in Washington, D.C. where he had overall responsibility for Motorola's global regulatory and advocacy efforts. He managed a global technical, regulatory and advocacy team that includes expertise in a wide variety of spectrum, technology and trade related issues. Prior to joining Motorola, Sharkey was the lead technical representative for the Washington, D.C. office of AirTouch Communications. In this capacity he worked on a number of spectrum and mandate-related issues, including CALEA, TTY, and location based initiatives. Prior to AirTouch, Sharkey served in a variety of roles at the Federal Communications Commission, including in the Office of Engineering and Technology, where one of his responsibilities was as an alternative liaison representative to the IRAC, and as Chief, Satellite Engineering Branch in the International Bureau. Sharkey has a B.S. in Electrical Engineering from the University of Delaware.



***Mariam Sorond** became a member of NTIA's Commerce Spectrum Management Advisory Committee in 2014. Sorond is Vice President of Technology Development for DISH Network, LLC. In this position, she is responsible for spectrum technology and strategy, Radio Access Network and LTE development, technology evaluations, and standards development. Sorond's expertise covers both domestic and international spectrum frequency bands. Sorond has been involved with the wireless industry for more than nineteen years. Prior to joining DISH, she worked for several operators, including ICO, Nextel, and PrimeCo and vendors such as Alcatel-Lucent. She has a broad range of experience and significant technical expertise working across most wireless technologies for both mobile and fixed terrestrial and satellite networks. Sorond holds B.S. and M.S. degrees in Electrical Engineering from the University of Houston.



Bryan Tramont has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Tramont is Managing Partner at Wilkinson Barker Knauer, LLP, specializing in communications law and policy. As Managing Partner since 2008, he has designed and executed the firm's growth strategy and managed client development. He regularly provides advice to clients on the full range of communications issues, especially spectrum. For more than six years, Tramont served as a key spectrum advisor to the FCC Chairman and two FCC Commissioners. As the Chief of Staff to

Chairman Michael K. Powell, he led efforts to reform spectrum policy, improve coordination with NTIA, and streamline the World Radio Conference process. Tramont earned his law degree from Yale Law School, where he served as editor of the *Yale Law & Policy Review*, and graduated *summa cum laude* from The George Washington University with a degree in Political Science.



Jennifer Warren has served as a member of NTIA's Commerce Spectrum Management Advisory Committee since 2006. Warren serves as Vice President, Technology Policy, and Regulation, in the Lockheed Martin Washington Operations' Government and Regulatory Affairs. In this position, she is responsible for managing the development and implementation of corporate domestic and international regulatory, licensing and associated policy strategies, including in the areas of spectrum access/operations, commercial space, cyber security, and sustainability. Prior to joining Lockheed Martin in 1996, Warren served in

various capacities at the Federal Communications Commission, including Senior Legal Advisor, International Bureau and Assistant Chief, Wireless Telecommunications Bureau. Since 1995, she has served on the U.S. Delegations to the International Telecommunication Union's World Radio Conferences, and oversees Lockheed Martin's participation in the ITU and regional organizations. Prior to joining the FCC, Warren was at the Commission of the European Union in Brussels, and in Washington, D.C. Warren is a graduate of Georgetown University (B.S. in Languages) and Georgetown University Law Center (J.D.).