



Federal Communications Commission

Forum
On
5G Open Radio Access
Networks

Monday, September 14, 2020

10:30AM-10:45AM — Welcome Remarks

FCC Chairman Ajit V. Pai
Secretary of State Michael R. Pompeo
Robert Blair
Jane Harman

Secretary of State Michael R. Pompeo

The Secretary of State, appointed by the President with the advice and consent of the Senate, is the President's chief foreign affairs adviser. The Secretary carries out the President's foreign policies through the State Department, which includes the Foreign Service, Civil Service, and U.S. Agency for International Development.

Robert Blair:

Mr. Blair is the Director of the Office of Policy and Strategic Planning within the Office of the Secretary of Commerce. In that position, Mr. Blair works with other senior Department leaders to set the Department's policy priorities and develop and implement plans to achieve them. Mr. Blair focuses especially on telecommunications, semiconductors and other technologies; export control policy; and reopening the economy following the COVID-19 pandemic.

Mr. Blair previously served as United States Special Representative for International Telecommunications Policy. In this capacity, Mr. Blair led the strategic prioritization of United States efforts to promote a secure and reliable global communications system and served as a liaison to industry, non-governmental, and international stakeholders. Mr. Blair was also Senior Advisor to the Chief of Staff of the White House, supporting Presidential decision-making and policy coordination on matters relating to foreign policy, intelligence, and national security.

Before joining the White House, Mr. Blair was the Associate Director for Defense Programs at the Office of Management and Budget, where he oversaw approximately \$1.3 trillion of projects, programs, and activities at the Departments of Defense, State and Veterans Affairs; the intelligence community; and other departments and agencies implementing our defense and foreign policy activities.

Mr. Blair served 14 years on the staff of the Appropriations Committee of the House of Representatives prior to joining the Administration. His last position on the Committee was as the staff director of the Defense appropriations subcommittee, overseeing nearly \$700 billion of defense and intelligence programs. Before that position, he was the staff director of the Energy and Water subcommittee, where he managed our nation's investments into energy research and development, nuclear weapons, and water infrastructure. His first assignment on the Committee was as a professional staff member on the Foreign Operations subcommittee, where he focused on development and humanitarian assistance.

Before joining the Committee, Mr. Blair was a Presidential Management Fellow at the Department of State. He began his federal service as a Peace Corps Volunteer in the Central African Republic.

Mr. Blair grew up in Illinois and holds degrees from Cornell University, Tufts University, and the Fletcher School of Law and Diplomacy. He has received the Meritorious and Superior Honor Awards from the Department of State, and the Decoration for Distinguished Civilian Service from the Department of the Army.

Mr. Blair lives in Virginia with his wife and three children.

Jane Harman:

Jane Harman, the Director, President, and CEO of the Wilson Center, is an internationally recognized authority on U.S. and global security issues, foreign relations and lawmaking. A native of Los Angeles and a public-school graduate, she went on to become a nine-term member of Congress, serving decades on the major security committees in the House of Representatives. Drawing upon a career that has included service as President Carter's Secretary of the Cabinet and hundreds of diplomatic missions to foreign countries, Harman holds posts on nearly a dozen governmental and non-governmental advisory boards and commissions.

Jane Harman resigned from Congress February 28, 2011 to join the Woodrow Wilson Center as its first female Director, President, and CEO.

Representing the aerospace center of California during nine terms in Congress, she served on all the major security committees: six years on Armed Services, eight years on Intelligence, and eight on Homeland Security. During her long public career, Harman has been recognized as a national expert at the nexus of security and public policy issues, and has received numerous awards for distinguished service.

She is a member of the Defense Policy Board and the Homeland Security Advisory Committee. She also serves on the Executive Committee of the Trilateral Commission and the Advisory Board of the Munich Security Conference. She co-chairs the Homeland Security Experts Group with former Homeland Security Secretary Michael Chertoff.

Harman is a Trustee of the Aspen Institute and an Honorary Trustee at the University of Southern California. She serves on the board of Iridium Communication Inc, a NASDAQ traded satellite communications company, and is a member of the Presidential Debates Commission and the Committee for a Responsible Federal Budget.

A product of Los Angeles public schools, Harman is a magna cum laude graduate of Smith College, where she was elected to Phi Beta Kappa, and Harvard Law School. Prior to serving in Congress, she was Staff Director of the Senate Judiciary Subcommittee on Constitutional Rights, Deputy Cabinet Secretary to President Jimmy Carter, Special Counsel to the Department of Defense, and in private law practice.

She has four adult children and eight grandchildren.

10:50AM-11:30AM — Introduction to Open, Interoperable, and Virtualized Networks

FCC Chairman Ajit V. Pai, moderator

Tareq Amin (Rakuten)

Caroline Chan (Intel)

Sachin Katti (VMware)

Thierry Maupilé (Altiostar)

Tareq Amin:

As the first Chief Technology Officer of the newly-established Rakuten Mobile, Inc., Tareq Amin is leading the design and roll-out of the company's next-generation cloud-native mobile network in Japan.

With a career in the mobile network industry of almost two decades, prior to joining Rakuten in 2018, Amin was a key contributor to the transformation of the mobile industry in India as Senior Vice President of Technology Development and Automation for Reliance Jio. Prior to that, he served as Vice President of Carrier Solutions for Huawei and as Senior Director of National Planning & Performance at T-Mobile.

Amin holds a bachelor's degree in Electrical Engineering and Physics from Portland State University in Oregon.

Caroline Chan:

Caroline Y. Chan is Vice President in the Data Platform Group and General Manager of the group's Network Business Incubator Division at Intel Corporation. She is responsible for driving new services running across the network infrastructure, working closely with network service cloud service providers and enterprises. Chan and her team will lead pathfinding of advanced technology solutions that are enabled and accelerated by 5G capabilities such as AI, Machine Learning, Blockchain, Data Analytics, Immersive Media, Cloud gaming, and others.

Since joining Intel in 2009, Chan has worked closely with telecommunications vendors, operators and application developers to advance strategy and marketing in virtual RAN, mini Cloud-RAN and mobile edge computing technologies. Before joining Intel, Chan had a 15-year career at Nortel Networks Corp. as Director of 4G wireless product management.

She serves as an independent director on EnerSys Inc. (NYSE: ENS) board. In addition, Chan serves on the board of the Telecom Infrastructure Project (TIP) and CBRS Alliance. Chan was elected to be among the top 100 most influential individuals in the world of 5G charting the course for the next generation of global communications.

Sachin Katti:

Sachin Katti is an Associate Professor of Electrical Engineering and Computer Science at Stanford University and an Advisor in charge of Telco Strategy at VMware. He is also the Co-Chair of the Technical Steering Committee for O-RAN Alliance and the Director of the xRAN Foundation. He is also Co-Founder and ex-CEO of Uhana (now part of VMware) which built a network AI platform to monitor and optimize mobile networks and applications. He has previously co-founded Kumu Networks, which is commercializing breakthrough research from his lab on full duplex radios. He received his PhD in EECS from MIT in 2009. His research focuses on designing and building next generation high capacity wireless networks by combining techniques from information and coding theory, RF systems, and networking. His research has won numerous awards, including the 2008 ACM Doctoral Dissertation Award - Honorable Mention, the George Sprowls Award for Best Doctoral Dissertation in EECS at MIT, the IEEE William Bennett Prize, the Best Student Paper Award at ACM SIGCOMM 2012, USENIX ATC 2013, the Sloan Fellowship, the NSF Career Award as well as Okawa, Hoover, Packard and Terman Faculty Fellowships.

Thierry Maupilé:

Thierry Maupilé has a unique mix of experience in start-ups and in large scale technology companies. He speaks often at industry events and in the business press on the topics of innovation in mobile networks and the importance of Open RAN. Prior to joining Altiostar, he held leadership positions at Tech Mahindra and Cisco, where he was head of Strategy Service Providers and Global Vice President, Strategic Ecosystem Group. Prior to Cisco, he held leadership roles at two start-up companies, Starent Networks and IPWireless, which he led to successful exits. He is a visiting faculty at IMD business school in Switzerland.

11:45AM-12:45PM — Benefits of Deployment/Driving Innovation

*Wireless Telecommunications Bureau Associate Bureau Chief Charles Mathias and
Office of the Chairman Policy Advisor Evan Swarztrauber, moderators*

Cristiano Amon (Qualcomm)

Craig Farrell (IBM)

Peter Gammel (GlobalFoundries)

Morgan Kurk (CommScope)

Diane Rinaldo (Open RAN Policy Coalition)

John Roesse (Dell)

Mariam Sorond (CableLabs)

Soma Velayutham (NVIDIA)

Cristiano Amon:

CRISTIANO R. AMON President Qualcomm Incorporated Cristiano Amon serves as president of Qualcomm Incorporated. In this role, he is responsible for the oversight of all activities related to Qualcomm's semiconductor business. Amon also serves as a member of Qualcomm's executive committee. Amon served as co-president of QCT for three years and prior to this was senior vice president of Product Management with QCT, managing the Company's wireless chipset portfolio. Amon joined Qualcomm in 1995 as an engineer and during this time he has held several other business and technical leadership roles at the Company. Prior to joining Qualcomm Amon served as the chief technical officer of Vésper, a wireless operator in Brazil and held positions in NEC, Ericsson and Velocom Inc. Amon holds a B.S. degree in Electrical Engineering from UNICAMP – Universidade Estadual de Campinas, São Paulo, Brazil.

Craig Farrell:

Craig Farrell is currently Vice President and Chief Technology Officer, Global Telecom Industry, at IBM. Craig is responsible for Telcom industry requirements, architectures, frameworks and standards efforts. With over 25 years industry experience Craig is also a member of the Telemanagement Forum (TM Forum) collaboration sub-committee. Craig joined IBM in 2006 as part of IBM's acquisition of Micromuse (NASDAQ: MUSE) where he served as the CTO. Craig joined Micromuse as part of its 2003 acquisition of NETWORK HARMONi, a company he co-founded in Australia and served as President and CEO. Craig holds a BSc (Hons) in Computer Science from the University of Western Australia and a Ph.D. in Computer Science from Curtin University. In 2009 IBM named Craig an IBM Distinguished Engineer and in 2010 he became a member of both the IBM Industry Academy and IBM Academy of Technology.

Peter Gammel:

Peter L. Gammel is vice president and CTO of the Mobile and Wireless Infrastructure BU at GlobalFoundries. He joined the company in 2019. Previously, he was the chief technology officer for Skyworks Solutions, Inc. and also served as chief technology officer and vice president of engineering at SiGe. Prior to this, he was vice president of engineering at Renaissance Wireless and chief technology officer at Advance Nanotech and for Agere Systems' Analog Products Business. He was also a distinguished member of technical staff at Alcatel-Lucent Bell Labs.

Gammel received a bachelor of science in physics and mathematics from Massachusetts Institute of Technology and a Ph.D. in physics from Cornell University.

Morgan Kurk:

Morgan Kurk is chief technology officer for CommScope with overall responsibility for CommScope's long term vision, technology roadmap, strategic direction and mergers and acquisitions. He is dedicated to driving wired and wireless network transformation through collaboration with suppliers and customers. Previously, he served as CommScope's Chief Operating Officer where he provided executive leadership for CommScope's Mobility Solutions and Connectivity Solutions segments, Global Supply Chain and Office of Technology organizations.

Mr. Kurk has 25 years of experience in information and communication technology industries. He focused on wireless coverage problems in 1997 when he joined Allen Telecom, which later became part of Andrew Corporation and ultimately CommScope. Mr. Kurk held a variety of positions including director of business development in the United States and China; vice president of R&D, PLM, and Strategy; vice president and general manager of the Wireless Innovations Group worldwide.

In 2009, he joined CommScope as senior vice president of the Enterprise Business Unit and then served as senior vice president of the Mobility Segment. Before joining Allen Telecom, Mr. Kurk worked for Motorola where he was a hardware development engineer for base stations and a product manager for a CDMA base station product line. He is a regular speaker at industry conferences and an expert in system integration.

Mr. Kurk holds a bachelor's of science in electrical engineering from Brown University, a master's degree in electrical engineering from the University of Michigan, and an MBA from the Kellogg School of Management at Northwestern University.

Diana Rinaldo:

Diane Rinaldo is one of the country's leading authorities on 5G, telecommunications supply chain security, privacy, and Internet governance. She served as Acting Administrator of the National Telecommunications and Information Administration and Acting Assistant Secretary of Commerce for Communications and Information. During her time at NTIA, Ms. Rinaldo directed the Administration's efforts on privacy; testified in the House of Representatives and Senate on 5G and Internet security issues; served as a principal advising the White House and Congress on 5G and supply chain; as well as other successes in education and deployment of Internet access around the world.

John Roese:

John Roese is President and Chief Technology Officer of Products and Operations at Dell Technologies. In this role, John is responsible for establishing the company's future-looking technology strategy and fostering innovation to make sure Dell Technologies is at the forefront of the industry with ground-breaking technologies that anticipate customers' needs across the portfolio.

John joined Dell EMC in the fall of 2012 and has been instrumental in shaping Dell Technologies' strategy in the realms of 5G, Cloud, and AI/ML amongst others. He has worked with leading telecom providers in the ecosystem development and adoption of Cloud, SDN/NFV technologies as well as the transition to an open, disaggregated, cloud-native 5G/Edge environment. Prior to joining Dell EMC, John was the CTO, GM, and leader of several technology companies including Nortel, Broadcom, Futurewei, Enterasys, and Cabletron systems.

John is a published author and holds more than 20 pending and granted patents in areas such as policy-based networking, location-based services, and security. John has been active in numerous boards, including ATIS, OLPC, Blade Networks, Pingtel, Bering Media, and the Cloud Foundry Foundation.

Mariam Sorond:

Mariam Sorond is senior vice president and chief research and development officer at CableLabs, In this role, she leads research & development (R&D) directing the execution and adoption of new technologies for CableLabs' members and the industry, partnering closely with CEO, Phil McKinney, on technical thought leadership, vision and strategy for the future of connectivity.

An expert in mobile wireless, fixed, and satellite networks, Mariam previously held the position of chief wireless architect and vice president of technology development for DISH Network and led the team focused on the 5G network. She was also responsible for spectrum technology and strategy, end-to-end technology development, creating the next generation network architecture and standards development. Mariam brings more than 26 years of technical and strategy experience in the telecommunications industry to CableLabs and has also held leadership positions both within start-ups and Fortune 500 enterprises, responsible for developing the technology vision, deploying networks, analyzing trends, guiding business investments and participating in regulatory and standardization processes. Prior to joining DISH, she worked for vendors such as Lucent Technologies (now Nokia), and several operators, including ICO, Nextel, and PrimeCo, where she began her career as an RF Engineer.

Mariam has served as a member of the NTIA's Commerce Spectrum Management Advisory Committee since 2014. She has been awarded several patents, with others pending and is a frequent speaker and panelist at industry forums.

Soma Velayutham:

Soma is the General Manager, AI for Telecom at NVIDIA.

Soma evangelizes AI adoption into telecoms and 5G wireless communications. He is a successful serial Intrapreneur and product leader with more than 20 years in software and high-tech industry. He has incubated and launched multiple software products globally for large corporations. He is also a mentor to early stage start-ups and Stanford incubation program (iFarm).

Soma is an original thinker with the full product-lifecycle experience from product strategy to R&D. He has worked with customers across Americas, Asia and Europe, traveled to more than 40 countries and speaks 4 languages, giving him a truly global perspective.

Soma is swift in deciphering complex technologies and customer business needs to set a compelling product vision. Through collaborative engagements, he can rally internal and external stake holders towards the product strategy and passionately drive roadmaps. He has spearheaded and launched multiple successful products globally, including a few that have received 5 global industry awards. He also owns 11 patents.

1:40PM-2:50PM — Lessons from the Field: Where Do We Go from Here?

FCC Chairman Ajit V. Pai, moderator

John Baker (Mavenir)

Laurie Bigler (AT&T)

Stephen Bye (DISH)

Marie-Paule Odini (HPE)

Mathew Oommen (JIO)

Steve Papa (Parallel Wireless)

Marcus Weldon (Nokia)

John Baker:

John Baker is the Senior Vice President of Business Development at Mavenir. A veteran of the mobile industry, board member for 5G Americas, and sought-after industry speaker, John Baker leads the 5G team at Mavenir, intent on disrupting the market by transforming operator network economics.

A visionary and driving force behind Mavenir's business strategy, John is at the forefront of the company's drive to change operator views on wireless infrastructure deployment—promoting a software-focused approach to innovation, with no ties to supporting legacy hardware. Prior to joining Mavenir, John held senior positions with leading wireless companies, including:

GM Mobility Infrastructure at Spirent Communications

VP & GM Network Solutions at CommScope

VP & GM Base Stations at Nokia

VP of Technology and Chief Technology Officer at Pacific Bell Mobile Services

John also contributed significantly to the development of the GSM standards. He graduated with an Honors Degree in Electrical Electronic Engineering from Loughborough University in Leicestershire, UK. John is frequently quoted in major wireless industry publications including Wireless Week, Fierce Wireless, Light Reading, SDX Central, RCR Wireless and Mobile World Live

Laurie Bigler:

Laurie has over 25 years of experience in telecommunications, focused on identifying key emerging technologies, shaping them to meet customer and service provider needs, and moving them from the lab into the network. Laurie started her career in SBC TRI Labs, holding various technical positions in development, applied research, and architecture for wireless communications. Laurie's responsibilities within AT&T have included radio access network design and architecture as well as device certification and testing for AT&T's wireless network.

In her current position, Laurie is responsible for Video, Broadband, and Mobility Customer Experience and Network Performance Analytics.

Laurie has a Bachelor of Science degree in Electrical Engineering from Georgia Institute of Technology and a Master of Science degree in Electrical Engineering from the University of Texas at Austin.

Stephen Bye:

As Executive Vice President and Chief Commercial Officer of DISH's wireless business, Stephen's responsibilities include network services strategy and architecture, capacity planning, network service quality, product and service integration, and partner management.

He brings to DISH three decades of experience with wireless, cable and wireline providers in the U.S. and several other countries. A seasoned senior executive, Stephen has experience in sales and marketing, product management and development, technology and network development, network operations, engineering, IT, network deployment, as well as corporate strategy and M&A.

Prior to DISH, Stephen was CEO of Connectivity Wireless, a provider of carrier-grade in-building wireless solutions. Before that, he served as the President of C Spire with responsibilities for the day-to-day operations of the company and its three lines of business: wireless, fiber to the home services and enterprise business services. Prior to becoming President, Bye was the CTO for C Spire, leading the organization's development and testing of its early 5G wireless solutions. He is the former CTO for Sprint and has held a range of executive positions at Cox Communications, AT&T, BellSouth International, Optus Communications and Telstra.

Stephen's partner in life is Christine and they have two sons, Ethan and Justin. Stephen holds a Bachelor of Engineering (Hons.) degree in electrical engineering from the University of Tasmania (Australia) and a Bachelor of Science degree (Hons.) in banking and finance from the London School of Economics (UK). He is a Chartered Engineer, a Senior Member of IEEE and a Fellow of the Institute of Engineering and Technology. Prior to his career in telecom, Stephen served as an officer in the Royal Australian Navy.

Marie-Paule Odini:

Marie-Paule Odini is Distinguished Technologist in HPE Telecom Division focused on customer innovation and emerging trends in the communication industry including NFV, SDN, IoT, AI and 5G. She holds a worldwide position and drives technical discussions towards 5G with customers and inside HPE around strategy and roadmaps. Active in industry forums and standard organization she held key positions such as ETSI NFV Vice Chair, IEEE SDN Chair, Editorial board member, 5G Americas key contributor and more recently co-chair of TIP (Telecom Infra Project) E2E network slicing project. Prior to HPE she worked in France Telecom/Orange labs in charge of Value Added Services for Corporate Enterprise. She holds a Master Degree in EE from Utah State University. She is also teaching telecom in the master program of University Savoie-Mont Blanc in the French alps.

Mathew Oommen:

Mathew Oommen as President of Reliance, leads Jio's Network, Strategy, and Service Platforms enabling India's digital transformation to affordable and scalable broadband connectivity for the creation and adoption of digital services leveraging cloud centric open source platforms disaggregating hardware, software and services. Mr Oommen has been part of Jio since the beginning of its ambitious green field all-IP network build. Mr. Oommen is a member of the board of directors for the GSMA, O-RAN Alliance, Netradyne, and Airspan.

At Reliance Jio, Mr Oommen drives innovation across product and services, network, applications, devices, and systems, having successfully implemented new technologies and solutions leveraging automation, big data analytics, software centric cloud native infrastructure and solutions across Jio's Network and Business Operations delivering digital experiences to more than 400 million customers. All of these platforms have become key building blocks in transforming the industry as a whole and have set the stage for India's rapid inclusive growth in digital services adoption across verticals and segments.

Prior to Reliance, Mr Oommen was Chief Technology Officer of Sprint, responsible for product, network and technology development, systems architecture, device development, including leading the M2M/Connected Car Service development. He has also held executive positions at Williams Communications/Wiltel and MCI Worldcom/Verizon.

Steve Papa:

Steve leads the senior management team in setting the company's strategic direction and is guiding the company's evolution from its successful first customer deployment into broad commercialization and growth. Steve has been part of reimagining the technology landscape for over 25 years. As founder and CEO of Endeca, he reimagined the database to support faceted information ultimately leading to Oracle acquiring the company as its 6th largest acquisition ever when announced (reported at \$1.1 billion). He was part of the team creating Akamai that reimagined global Internet content distribution – now carrying peaks of 15 terabits/s of web traffic on any given day – and led the team at Inktomi that reimagined the network cache to create carrier class caching. Earlier he worked with AT&T Teradata where enterprise computing was reimagined with the first use of Intel processors for enterprise servers. He has a BS from Princeton University and MBA from Harvard Business School.

Marcus Weldon:

As Corporate Chief Technology Officer, Marcus Weldon is responsible for coordinating the technical strategy across the company and driving technological and architectural innovations into Nokia's end-to-end networking systems and software portfolio. In addition, as President of Nokia Bell Labs, Marcus is responsible for driving the next disruptive innovation and research agenda for the company.

Marcus is considered one of the luminaries in the ICT industry in terms of the clarity, depth and breadth of his vision. He combines his vision with the power of Bell Labs, to create a unique innovation engine whose goal is to 'invent the future' of the networking and communications industry.

Marcus holds a Ph.D (Physical Chemistry) degree from Harvard University in Cambridge, Massachusetts, USA, and a Bachelor of Science (Computer Science and Chemistry) joint degree from King's College in London, UK. Marcus has a physical science, computer science and networking background, but is broadly knowledgeable about many subjects as part of a never-ending quest to understand human techno-economic evolution.

In 1995, he joined the Physics Division at AT&T Bell Labs as a post-doctoral researcher, before becoming a Member of Technical Staff in the Optical Materials Division, before being chosen to lead the organization in various technical and leadership capacities. He has won a series of scientific and engineering society awards for his work and technical vision and leadership throughout his career.

He was selected as one of the Global Telecoms Business Power 100 of the most influential people in 2014 and one of their 'Top CTOs to watch in 2015'. He has served on the Board of Trustees of the Liberty Science Center in New Jersey and serves as an advisor to select Venture Funds. He was awarded the prestigious New Jersey Medal of Science and Technology in 2016 for his technical vision and leadership. He is the editor and lead author of the book "The Future X Network: A Bell Labs Perspective"

3:00PM-5:00PM — Technical Deep Dive

FCC Chief Technology Officer Monisha Ghosh, moderator

Mihai Banu (Blue Danube)

Charles Clancy (MITRE)

Cheryl Davis (Oracle)

Ashutosh Dutta (JHU/APL)

Lori Fountain (Verizon)

Abhimanyu Gosain (Northeastern University)

Amit Jain (Verana Networks)

James Kimery (Spirent)

Ivan Seskar (Rutgers University)

Jacobus Van der Merwe (University of Utah)

Mihai Banu:

Dr. Banu received a PhD degree in Electrical Engineering from Columbia University in 1984. He was with Bell Laboratories from 1980 until 2001 (intern, MTS, Dpt. Head and R&D Director), with Agere Systems until 2004 (R&D Director) and did independent consulting and IP development until 2013 under MHI Consulting LLC. He founded Blue Danube Systems Inc. where currently he is CTO and VP R&D. Dr. Banu is an IEEE Fellow, received several IEEE and Lucent awards and is author of many publications and patents.

Charles Clancy:

Dr. Charles Clancy is Senior VP and General Manager of MITRE Labs, MITRE's research, technology, and innovation organization. Prior to joining MITRE in 2019, Clancy was the Bradley Professor of Electrical and Computer Engineering at Virginia Tech and led the Hume Center for National Security and Technology. He started his career at the National Security Agency, leading wireless R&D programs. Clancy has led the development of international security standards for the IEEE, IETF, and Wireless Innovation Forum. He has published over 250 books, academic papers, and patents related to telecommunications.

Cheryl Davis:

Cheryl Davis is the Senior Director for Strategic Initiatives at Oracle. Previously, she served as the Director for Cyber Response Policy at the U.S. National Security Council, where she led the development of whole-of-government responses to malicious cyber activity that threatened the United States and its allies. Before serving on the National Security Council, Cheryl was the Principal Director for Cyber Policy at the Department of Homeland Security, where she worked to coordinate and unify the Department's cyber policy positions. She has also served on the staff of the Office of the Secretary of Defense, where she focused on cyber and intelligence policy issues. Prior to joining the government, Cheryl conducted research and analysis for the Center for Naval Analyses as well as the Penn State Applied Research Lab. She received a Bachelor's and Master's Degree in Chemical Engineering and a minor in French from Penn State University.

Ashutosh Dutta:

Ashutosh Dutta is currently senior scientist and 5G Chief Strategist at the Johns Hopkins University Applied Physics Laboratory (JHU/APL). He is also a JHU/APL Sabbatical Fellow and adjunct faculty at The Johns Hopkins University. Ashutosh also serves as the chair for Electrical and Computer Engineering Department of Engineering for Professional Program at Johns Hopkins University. His career, spanning more than 30 years, includes Director of Technology Security and Lead Member of Technical Staff at AT&T, CTO of Wireless for NIKSUN, Inc., Senior Scientist and Project Manager in Telcordia Research, Director of the Central Research Facility at Columbia University, adjunct faculty at NJIT, and Computer

Engineer with TATA Motors. He has more than 100 conference, journal publications, and standards specifications, three book chapters, and 31 issued patents. Ashutosh is co-author of the book, titled, “Mobility Protocols and Handover Optimization: Design, Evaluation and Application” published by IEEE and John & Wiley. Ashutosh obtained his BS in Electrical Engineering from NIT Rourkela, India; MS in Computer Science from NJIT; and Ph.D. in Electrical Engineering from Columbia University, New York under the supervision of Prof. Henning Schulzrinne. Ashutosh is a Fellow of IEEE and senior member of ACM.

As a Technical Leader in 5G and security, Ashutosh has been serving as the founding Co-Chair for the IEEE Future Networks Initiative that focuses on 5G standardization, education, publications, testbed, and roadmap activities. Ashutosh serves as IEEE Communications Society's Distinguished Lecturer for 2017-2020 and as an ACM Distinguished Speaker (2020-2022) Ashutosh has served as the general Co-Chair for the premier IEEE 5G World Forums and has organized 65 5G World Summits around the world.

Ashutosh served as the chair for IEEE Princeton / Central Jersey Section, Industry Relation Chair for Region 1 and MGA, Pre-University Coordinator for IEEE MGA and vice chair of Education Society Chapter of PCJS. He co-founded the IEEE STEM conference (ISEC) and helped to implement EPICS (Engineering Projects in Community Service) projects in several high schools. Ashutosh has served as the general Co-Chair for the IEEE STEM conference for the last 10 years. Ashutosh served as the Director of Industry Outreach for IEEE Communications Society from 2014-2019. He was recipient of the prestigious 2009 IEEE MGA Leadership award and 2010 IEEE-USA professional leadership award. Ashutosh currently serves as Member-At-Large for IEEE Communications Society for 2020-2022.

Lori Fountain:

Lori Fountain is the Director, Radio Access Network Spectrum and Strategy Planning at Verizon. Lori is responsible for the strategy and planning for the Verizon Wireless radio access network with a focus on spectrum. Lori's team also coordinates Verizon's participation in industry leading technologies like ORAN, 5G, and LTE Advanced features. Lori is active in developing deployment strategies for new technologies within the wireless network.

Since she began her career in telecom in 1996, Lori has held a number of network leadership positions at Verizon including leadership positions in Washington/Baltimore, New England, and New Jersey where she shaped the wireless networks by performing roles in Engineering, Operations, or the Network Design teams.

Lori is a licensed Professional Engineer and received a BSEE degree from Virginia Tech.

Abhimanyu Gosain:

Abhimanyu (Manu) Gosain is a Technical Program Director for PAWR and Director of Industry Engagement for Institute of Wireless Internet of Things at Northeastern University. In this role, he is in charge of setting strategic goals and the research agenda for a \$100M public-private partnership for the NSF Platforms for Advanced Wireless Research (PAWR) program and \$25M DARPA Colosseum program. He serves as a board member for the OpenAirInterface Alliance and represents PAWR in O-RAN Alliance, TIP, and ONF. His numerous professional publications and experience exemplify use-inspired basic research in the field of networking technologies such as LTE, 5G, mmWave, UAS, dispersed computing, edge computing and Internet of Things. He is an IEEE Senior Member. He received his M.S. degree from Tufts University and M.B.A. from Boston University with High Honors.

Amit Jain:

Amit Jain is Co-founder and Chief Commercial Officer of Verana Networks, a startup that is building an innovative mmWave 5G RAN solution. Prior to founding Verana Networks, Mr. Jain was the vice president for product management and marketing at SpiderCloud Wireless and the vice president for sales, marketing and service at Airvana, two companies that were pioneers and leaders in the small cell market. Mr. Jain started his career in the cellular network infrastructure industry as a software engineer at Qualcomm. He holds an MBA from MIT's Sloan School of Management, an MS in Electrical Engineering from University of California at Irvine and a Bachelor Technology in Electrical Engineering from the Indian Institute of Technology, Bombay.

James Kimery:

James Kimery is a Vice President of Product Management at Spirent Communications. In this role, he leads the product management organization in the company's Connected Devices Business Unit encompassing wireless service experience, channel emulation and OTA testing, and mobile-based location testing. Prior to Spirent, James was a Director of Marketing for NI's Wireless Research and SDR businesses which entailed leading NI's advanced wireless research initiatives while also managing the company's software defined radio business including the Ettus Research subsidiary. Prior to joining NI, James was the Director of Marketing for Silicon Laboratories' wireless division. As Director, the wireless division grew revenues exceeding \$250M (from \$5M) and produced several industry innovations including the first integrated CMOS RF synthesizer and transceiver for cellular communications, the first digitally controlled crystal oscillator, and the first integrated single chip phone, AeroFONE. AeroFONE was voted by the IEEE as one of the top 40 innovative ICs ever developed. James also worked at National Instruments before transitioning to Silicon Labs and led several successful programs including the concept and launch of the PCI eXtensions for Instrumentation (PXI) platform. He has authored over 50 technical papers and articles covering a variety of wireless and test and measurement related topics. James holds degrees from the University of Texas at Austin (MBA) and Texas A&M University (BSEE).

Ivan Seskar:

Ivan Seskar is the Chief Technologist at WINLAB, Rutgers University responsible for experimental systems and prototyping projects. He is currently the program director for the COSMOS project responsible for the New York City NSF PAWR deployment, the PI for the NSF GENI Wireless project, which resulted in campus deployments of LTE/WiMAX base stations at several US universities, and the PI for the NSF CloudLab deployment at Rutgers. He has also been the co-PI and project manager for all three phases of the NSF-supported ORBIT mid-scale testbed project at WINLAB, successfully leading technology development and operations since the testbed was released as a community resource in 2005 and for which the team received the 2008 NSF Alexander Schwarzkopf Prize for Technological Innovation. Ivan is a co-chair of the IEEE Future Networks Testbed Working Group, a Senior Member of the IEEE, a member of ACM and the co-founder and CTO of Upside Wireless Inc.

Jacobus Van der Merwe:

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