Federal Communications Commission
Public Safety and Homeland Security
Bureau

4.9 GHz BAND:
Spectrum Dedicated to Public Safety for Broadband Use

Friday, February 25, 2011
9:00 AM—12:30 PM
Commission Meeting Room
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
Agenda

9:00 a.m. Welcome: James Arden Barnett Jr., Rear Admiral (Ret.), Chief, Public Safety and Homeland Security Bureau (PSHSB), Federal Communications Commission (FCC)

9:15 a.m. First Panel Discussion — How the 4.9 GHz Band Currently Supports Public Safety Today

Moderator: Pat Amodio, Chief, Radio Frequency Engineering, Emergency Response Interoperability Center (ERIC), PSHSB, FCC

Panelist:
- Bill Brown, Virginia Department of Transportation (VDOT), Chair, Special Committee on Wireless Communications and Technology, American Association of State Highway and Transportation Officials (AASHTO)
- Stephen Devine, Interoperability Program Manager, Missouri Department of Public Safety
- Mark Jules, Chief Executive Officer, Avrio RMS Group
- Martin Levetin, Senior Vice President, Worldwide Sales and Marketing, Strix Systems
- Scott T. Wilder, Director of Technology and Communications, Brookline (MA) Police Department
- Lt. Mark Wilkins, Los Angeles County Sheriff’s Department, Los Angeles Regional Interoperable Communications System (LA-RICS)

11:00a.m. Second Panel Discussion — What Can Be Done to Increase Use of the 4.9 GHz Band

Moderator: Jennifer A. Manner, Deputy Chief, PSHSB, and Acting Director, ERIC, FCC

Panelist:
- David Buchanan, Chair, Spectrum Management Committee, National Public Safety Telecommunications Council (NPSTC)
- Brett Kilbourne, Deputy General Counsel, Utilities Telecom Council (UTC)
- Dr. Nancy Merritt, Senior Policy Advisor, Department of Justice (DOJ), National Institute of Justice (NIJ)
- Pam Montanari, Radio and Data Systems Manager, Pinellas County, Florida
- Joe Ross, Senior Partner, Televate, LLC
- Edmond Thomas, Telecommunications Policy Advisor, Wiltshire & Grannis

12:15 p.m. Closing: Julius P. Knapp, Chief, Office of Engineering and Technology (OET), FCC
Panel One—Many public safety agencies have identified specific mission critical applications, day-to-day fixed use, and unique solutions using the 4.9 GHz band. The panel will address current 4.9 GHz deployments by public safety in the United States today. This will include system implementation, configuration, performance, types of uses, and applications running over the 4.9 GHz network.

Moderator
Pat Amodio, Chief, Radio Frequency Engineering, ERIC, PSHSB, FCC

Panelists:
Bill Brown, VDOT, Chair, Special Committee on Wireless Communications and Technology, AASHTO
Stephen Devine, Interoperability Program Manager, Missouri Department of Public Safety
Mark Jules, Chief Executive Officer, Avrio RMS Group
Martin Levetin, Senior Vice President, Worldwide Sales and Marketing, Strix Systems
Scott T. Wilder, Director of Technology and Communications, Brookline (MA) Police Department
Lt. Mark Wilkins, Los Angeles County Sheriff’s Department, LA-RICS

Panel Two—Since 2003, many 4.9 GHz systems have been deployed and studies produced, both in favor of and against widespread public safety use in this band. In order to collaborate in the use of the 4.9 GHz Spectrum, areas such as prior coordination, operating on non-interference basis, and other technical aspects may need to be enhanced. The panel will address possible enhancements of the 4.9 GHz band related to policy, rules, and regulations in order to increase utilization of the 4.9 GHz band by public safety.

Moderator
Jennifer A. Manner, Deputy Chief, PSHSB, and Acting Director, ERIC, FCC

Panelists:
David Buchanan, Chair, Spectrum Management Committee, NPSTC
Brett Kilbourne, Deputy General Counsel, UTC
Dr. Nancy Merritt, Senior Policy Advisor, DOJ, NIJ
Pam Montanari, Radio and Data Systems Manager, Pinellas County, Florida
Joe Ross, Senior Partner, Televate, LLC
Edmond Thomas, Telecommunications Policy Advisor, Wiltshire & Grannis
Pat Amodio, Chief, Radio Frequency Engineering, ERIC, PSHSB, FCC

Pat Amodio has over 30 years experience in the design, deployment and operational management of various radio frequency systems. His experience includes all aspects of commercial wireless and land mobile network design and deployment including radio planning & optimization; wireless switching; base station equipment design, operation and maintenance; data transmission; cell site design and construction; transport facilities planning and management. Pat earned a patent for a wireless security system including a test feature for locating emergency radio frequency transmissions and is a Senior Member of the Institute for Electrical and Electronics Engineers (IEEE).

James Arden Barnett Jr., Rear Admiral (Ret.), Chief, PSHSB, FCC

Chief Barnett is responsible for overseeing FCC activities pertaining to public safety, homeland security, emergency management and disaster preparedness, and represents the Commission on these issues before federal, state, and industry organizations. Chief Barnett served 32 years in the United States Navy and Navy Reserve, retiring in 2008. His last active duty assignments were Deputy Commander, Navy Expeditionary Combat Command and Director, Naval Education and Training in the Pentagon. Before coming to the FCC, Chief Barnett was a Senior Research Fellow at the Potomac Institute for Policy Studies, a policy think tank focusing on science and technology issues of importance to the nation, including cyber conflict and cyber security. From 1984 to 2001, he was a senior partner at Mitchell, McNutt and Sams, P.A. in Tupelo, Mississippi with a governmental law practice representing municipalities, counties, law enforcement agencies, schools and local government officials.

Bill Brown, VDOT, Chair, Special Committee on Wireless Communications and Technology, AASHTO

Bill Brown has worked as the manager of the radio and wireless programs for the Virginia Department of Transportation since 1997, earning the Commissioner’s Award for Excellence in Program Management. In 2006, Bill was elected Chair of the Special Committee on Wireless Communications Technologies for the American Association of State Highway Transportation Officials (AASHTO) and continues to serve in that position. Bill previously served for 20 years as an Officer in the United States Army Signal Corps supporting the combat arms with radio and wired communications. He has been an FCC licensed Amateur Radio Operator continuously since 1970.

David Buchanan, Chair, Spectrum Management Committee, NPSTC

David Buchanan was a Network Services Supervisor for the County of San Bernardino, California and is retired from the County. In his role as Network Services Supervisor, David was responsible for management and upgrades of an 800 MHz integrated trunked/conventional radio system. This system supports over 18000 units, serving 150 different agencies and departments in the 20,000 square mile county. David is a life member of the Association of Public-Safety Communications Officials - International (APCO) and is Chairman of APCO’s Spectrum Management Committee. He also serves as the Southern California Local Frequency Advisor for APCO. He is the Chairperson of the Southern California Region 5, 700 MHz Planning Committee. David served as President of the California Public-Safety Radio Association in 2002.
Stephen Devine, Interoperability Program Manager, Missouri Department of Public Safety

Stephen Devine is the Interoperability Program Manager for the Missouri Department of Public Safety in Jefferson City, Missouri. Steve was employed by the Missouri State Highway Patrol (MSHP) for 22 years in operational and technical roles supporting public safety communications. He served as the Patrol’s First Frequency Coordinator acting to coordinate the MSHP’s spectrum resources and act as APCO Local Advisor for Missouri. He also is Chairperson of both the Region 24 (Missouri) 700 MHz and 800 MHz Regional Planning Committees and participates on a national scale in the FCC’s regional planning process. Steve participated in the FCC’s National Coordination Committee (NCC) developing the rules for 700 MHz wideband and narrowband spectrum and worked in its interoperability subcommittee proposing interoperable recommendations for the 700 MHz public safety spectrum such as common interoperability channel naming standards and designated interoperable channel elements. He is recognized as a subject matter expert in public safety regional planning and spectrum management and has recently been named Chairperson for the National Regional Planning Council, a nationwide advocacy body supporting issues facing 700 and 800 MHz regional planning committees. He is a Senior Member of APCO international and has Chaired APCO’s AFC Advisory Committee and was a long time participant on APCO’s Spectrum Management Committee. His duties as Interoperability Program Manager for Missouri include leading interoperable outreach and education regarding all of Missouri’s public safety communications interoperability initiatives, narrowbanding below 512 MHz and all technical responsibilities associated with Missouri’s Statewide Interoperability Network (MOSWIN). Steve is also the Statewide Interoperability Coordinator for the State of Missouri and acts as a subject matter expert on public safety communications spectrum matters for Missouri State Government.

Mark Jules, Chief Executive Officer, Avrio RMS Group

Mark Jules serves as a CEO for Avrio RMS Group, a leader in IP-surveillance solutions for the public safety market. The company designs, engineers and deploys turnkey wireless security solutions for municipalities and organizations with wide area surveillance needs. Before his role as CEO, Mark was President of Business Development where he supported Federal, state and local agencies in the deployment of solutions that protect dozens of US cities, the Northern and Southern US borders, and numerous government assets. He has also overseen the design and deployment of solutions that have secured events such as the Presidential Inauguration, Democratic National Convention, Republican National Convention, G20 Summit and the Superbowl. Mark was involved in creating VistaScene and SensorScene, products are capable of providing situational awareness as well as investigative capabilities to government agencies required to protect critical infrastructure and human life. Prior to joining AvrioRMS, he served in executive positions at Protean Solutions, a provider of battlefield communications solutions, whose customers included various US Federal agencies.

Brett Kilbourne, Deputy General Counsel, Utilities Telecom Council

Brett Kilbourne is currently Deputy General Counsel at the Utilities Telecom Council (UTC) where he provides legal guidance to utilities on telecommunications issues pending before federal and state agencies and being considered in Congress. UTC is the national representative on telecommunications matters for its electric, gas and water utilities and natural gas pipeline company members, which range in size from large combination electric-gas-water utilities which serve millions of customers, to smaller, rural electric cooperatives and water districts which serve
Brett Kilbourne, Deputy General Counsel, Utilities Telecom Council (continued)

only a few thousand customers each. Prior to joining UTC in October 1998, Brett was employed at BellSouth Corporation from 1994-1998 in its Washington, D.C. office where he assisted the legal department on a variety of common carrier, wireless and cable issues. He was also employed at the law firm of Baker & Hostetler from 1991-1994 where he assisted the communications practice, primarily on broadcast and cable television matters. He graduated in 1987 with a Bachelor of Arts degree in History from the University of the South in Sewanee, Tennessee. He received his Juris Doctor degree in 1998 from The Catholic University, Columbus School of Law and is licensed to practice law in the State of Maryland.

Julius P. Knapp, Chief, Office of Engineering and Technology, FCC

Julius Knapp is Chief of the FCC’s Office of Engineering and Technology (OET), and he has been with the FCC for 36 years. He became Chief of OET in 2006, having previously served as the Deputy Chief since 2002. Prior to that he was the Chief of the Policy & Rules Division where he was responsible for FCC frequency allocation proceedings and for proceedings amending the FCC rules for radio frequency devices. Julius was Chief of the FCC Laboratory from 1994 – 1997 where he was responsible for the FCC’s equipment authorization program and technical analyses. He received a Bachelor’s degree in electrical engineering from the City College of New York in 1974. He is a member of the IEEE EMC and Communications Societies and is a Fellow of the Radio Club of America and was the 2001 recipient of the Eugene C. Bowler award for exceptional professionalism and dedication to public service. He was the 2010 recipient of the Federal Communications Bar Association Excellence in Government Service Award and has also received the FCC’s Silver and Gold medal awards for distinguished service.

Martin Levetin, Senior Vice President, Worldwide Sales and Marketing, Strix Systems

Martin Levetin is Senior Vice President-Worldwide Sales and Marketing at Strix Systems, where he has led the municipal effort including the successful deployment of the first integrated 2.4/5.8/4.9 network in Brookline, MA. Before joining Strix he was VP at MobilePro, where he pioneered the municipal wireless business and established MobilePro as an early leading municipal wireless operator. Prior to MobilePro, he was founder and CEO of Evergreen Open Broadband, a wireless service provider (acquired by MobilePro) that pioneered the wholesale model. Previously, he was CEO of Sharegate, a residential gateway company and founder and COO of CopperCom, where he pioneered a new class of integrated voice-data DSL products. He has been CEO of Socket Communications and a Venture Partner at Blueprint Ventures. Earlier he was a Senior VP at RAM Mobile Data, where he introduced the first wireless messaging service, which was evolved to the Blackberry. Prior to RAM, he was with Bell Labs and Alcatel-Lucent for 22 years where he held technical and product positions. He holds BS and PHD degrees in Electrical Engineering from Northeastern University and an MS in Management from Pace University.

Jennifer A. Manner, Deputy Chief, PSHSB, and Acting Director, ERIC, FCC

Jennifer A. Manner is Deputy Bureau Chief and has a focus on strategy and new technology other related issues. She previously worked as a Principal at ZComm Strategies LLC, where she was a consultant on telecommunications regulatory policy issues. Before that, Jennifer was Vice President of Regulatory Affairs at SkyTerra Communications, LLC, where she handled the company’s domestic and international regulatory and policy issues. Before joining SkyTerra, she
Jennifer A. Manner, Deputy Chief, PSHSB, and Acting Director, ERIC (continued)

served as Senior Counsel to FCC Commissioner Kathleen Abernathy with responsibility for wireless, international and new technology issues. She joined the Commissioner's office after working at MCI Communications Corporation, later WorldCom, Inc., as Associate Counsel for Foreign Market Access and then as International Wireless Services and Director of International Alliances. Prior to this position, Jennifer was an associate in the Communications Group at Akin, Gump, Strauss, Hauer and Feld, L.P. Before joining Akin, Gump, Ms. Manner was an Attorney-Advisor at the FCC. Jennifer currently serves as an adjunct professor at Georgetown University Law Center and the Washington College of Law at American University. She has published several books on telecommunications issues and has written numerous law review articles. She received her B.A. from the State University of New York at Albany, from which she was recently awarded the Distinguished Alumni Award for Political Science. She received her J.D. cum laude from New York Law School and LL.M. with distinction from Georgetown University Law Center. Jennifer is admitted to practice in Washington, D.C., New York and Connecticut.

Dr. Nancy Merritt, Senior Policy Advisor, NIJ, DOJ

Nancy Merritt is Senior Policy Advisor with the National Institute of Justice. In this capacity she oversees research efforts in both the social and technical sciences; coordinates outreach; and leads agency policy and planning teams. She has held research positions with the RAND Corporation; Virginia and Pennsylvania Sentencing Guidelines Commissions; and the Virginia and Ohio Departments of Corrections. Dr. Merritt has designed and managed a wide variety of criminal justice research studies and aided in the analysis and modification of criminal justice policy in several states. She is a former faculty member with the California State University Los Angeles and received her PhD from Rutgers University and her MS and BS from the Pennsylvania State University.

Pam Montanari, Radio and Data Systems Manager, Pinellas County Florida

Pam Montanari is the Radio and Data Systems Manager for Pinellas County Government in Largo, Florida. She is responsible for the County’s Intergovernmental Smartzone/P25 700/800 MHz Trunked Radio and Data System with over 10,000 users countywide. Pam’s responsibilities include all aspects of public safety radio and data communications within Pinellas County and for 24 local municipalities. She has worked for Pinellas County for over 22 years. Her background includes a Bachelors Degree in Business Management, two Associate Degrees in Electronics, a graduate of the Florida Certified Public Manager Program, and she has over 30 years experience in communications. She is the chair for the Interoperable Communications Committee in the Tampa Bay Region, working with the Florida Regional Domestic Security Task Force (RDSTF) and the Tampa Bay Urban Areas Security Initiative (UASI). Pam has been involved in interoperability efforts in the Tampa Bay Region for the past nine years, coordinating and planning interoperability between all agencies for daily operations and large scale events. In conjunction with her local efforts, Pam has worked on several programs at the federal level to include the ICTAP program, TIC plans, SCIP plans, PSIC grant reviews, FPIC and NECP development and goal 1 demonstration. Pam serves as the interoperability committee co-chair for NPSTC, and was appointed to the SAFECOM Emergency Response Council (ERC) in 2009. She is a member of APCO, the Pinellas County Fire Chiefs’ Association, and serves on the MTUG (Motorola Trunked Users Group) executive committee.
Joe Ross, Senior Partner, Televate, LLC

Joe Ross is a Senior Partner at Televate, LLC, a Falls Church, VA-based consultancy specializing in comprehensive system engineering and program management for public safety communications. He has 20 years of leadership in designing and operating Land Mobile Radio, wireless broadband, and commercial cellular systems and chairs the Public Safety Spectrum Requirements Working Group for the National Public Safety Telecommunications Council (NPSTC) Technology Committee. Joe also serves on MissionCritical Communication’s Editorial Advisory Board.

Edmond Thomas, Telecommunications Policy Advisor, Wiltshire & Grannis

Edmond Thomas, in his 40 plus year career, has held senior positions in business management, R&D, satellite and cellular/land based radio system design, strategic planning, operations, regulatory matters, and telecommunication/data network design and implementation. Immediately after leaving the position of Chief Engineer of the Federal Communications Commission in 2005, he joined the law firm of Harris, Wiltshire & Grannis as a partner specializing in technical analysis, technical policy formulation and business strategy. In 2003, for the role he played at the FCC in advancing digital wireless communication he was selected by Forbes Magazine’s as one of five people in the magazine’s E-gang. In the same year he was named by Wired Magazine as one of the four most influential technical people in Washington. One of his recent notable successes at Harris, Wiltshire & Grannis was that he led the White Spaces Coalition to victory in the FCC white spaces proceeding resulting in a favorable FCC order which authorized the unlicensed use of vacant TV channels. Ed is presently a member of the Board of Directors of Petra Solar Inc. and Validus Corp. He is also a member of the Corporate Advisory Board of Spectrum Bridge. Prior to joining the Commission, he served as President and CEO of MMRadiolink, a manufacturer of millimeter wave digital radio equipment based in the U.K. He also served as President and CEO of RSL USA, a $500 million dollar international telecommunications company. In 1998, for his work at RSL, he was named as one of the 50 most influential people in long distance by Phone Plus Magazine. Prior to his tenure at RSL USA, Ed was President of Science and Technology at Bell Atlantic and Bell Atlantic’s CTO. In this position he was responsible for the development of the firm’s wire line and wireless new products and services. He also had full operational and P&L responsibilities for Bell Atlantic’s large customer data products and services. He has also served on the academic advisory boards of the University of Colorado, the Polytechnic University and the State University of New York College of Technology.

Scott T. Wilder, Director of Technology and Communications, Brookline, (MA) Police Department

For over 25 years, Officer Scott Wilder has served as a police officer for the Brookline Police Department. Officer Wilder is currently the Director of Technology and Communications for the Department. In this capacity, he is responsible for designing, installing, and maintaining the software/hardware and communications networks for the public safety systems, serving a metropolitan Town with a population of 58,000. Officer Wilder currently serves as the Vice Chair, Metro Boston Homeland Security Region’s Interoperability Committee, Chairmen for the PSnet Executive Committee, and Chairmen for the Technology and Wireless Data Subcommittee, for the Boston UASI-Region, member of the Regional Catastrophic Planning Team-Cyber Working Group, and a member of Technology Working Group for the National Institute of Justice. Officer Wilder holds a B.S. in criminal justice from Western New England College.
Lieutenant Mark S. Wilkins, Los Angeles County Sheriff’s Department, LA-RICS

Lieutenant Wilkins is a 21-year veteran of the Sheriff’s Department, currently assigned to the Los Angeles Regional Interoperable Communications System (LA-RICS) project. LA-RICS is an interoperable voice and data communications system being designed and built to include all public safety throughout the 88 municipalities within the Los Angeles region, serving over 10 million residents. Lieutenant Wilkins is the executive manager in charge of planning. He also manages the Los Angeles Regional Tactical Communications System (LARTCS) and serves as Vice- Chair on the California Statewide Interoperable Executive Committee (CalSIEC), Southern Planning Area. Mark has spent the majority of his career working in Training and Field Operations serving as a Field Training Officer, Advanced Officer Training Instructor, Academy Drill Instructor and Academy Instructor Supervisor.
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