Panel Description:

Mobile Edge Computing (MEC) provides access to cloud-like computing and storage resources at the "mobile edge" – i.e. at the within the radio access network. A deployment at the Mobile Edge can provide applications with significant benefits, for example the ultra-low latency necessary for emerging applications such as Tactile Internet.

The benefits of Mobile Edge Computing stem from the unique characteristics of the Mobile Edge that differentiate it from a typical cloud application hosting platform. These include extreme proximity to the user (typically just one or two network hops away); context associated with the radio access network; access to radio network information and integration with operator's core network services. These can be leveraged by mobile network operators, vendors as well as application service providers to both improve existing services and deploy new ones and thus realize significant complementary value-add to their respective business models. ETSI's recent launch Industry Specification Group (ISG) to define a standardized open environment for deployment of applications across multi-vendor MEC (https://portal.etsi.org//tb.aspx?tbid=826&SubTB=826) environments highlights an emerging industry consensus that MEC's time has come.

In many ways, Small Cells and networks of Small Cells may provide the strongest case for MEC. They often possess the strongest context – associated with a particular enterprise, business (e.g. a coffee shop) or a venue (a stadium), thus allowing application providers to target their deployments to such specific contextual references. In many cases, most notably for enterprise applications, they are often highly integrated with the networks of potential application providers. In fact, the Small Cells Forum has recognized the Small Cells' usefulness as service hosting points and published several white papers on the topic (see, e.g. http://scf.io/en/documents/080_-_Enterprise_services_leveraging_small_cells.php, http://scf.io/en/documents/084_-_Small_Cell_Zone_services_RESTful_Bindings.php, http://scf.io/en/documents/093_-_Extensions_of_small_cell_zone_API.php).

Nonetheless, positioning small cells as a generic compute and storage node poses some challenges associated with the capabilities of such devices (both computing capability and storage may be more limited at small cells then at larger RAN nodes), access to core network information (mobile operators consider many small cell nodes less than fully secure and limit exposure of certain information), limitations of backhaul that connect small cells both to the Mobile Network Core and the public Internet, etc.

Consequently, the purpose of this panel is to explore both the business benefits and the technical challenges associated with positioning Small Cells as a generic service hosting platform. The panelists represent several important industry players in the Small Cell and MEC spaces as well as key organizations such as Small Cells Forum and ETSI MEC ISG.

Panel Moderator: Alex Reznik, Senior Principal Engineer, InterDigital

Alex is currently leading the company's research and development activities in the area wireless internet evolution. Since joining InterDigital in 1999, he has been involved in a wide range of projects, including leadership of 3G modem ASIC architecture, design of advanced wireless security systems, coordination of standards strategy in the cognitive networks space and development of advanced IP mobility and heterogeneous access technologies. Alex earned his B.S.E.E. Summa Cum Laude from The Cooper Union, S.M. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology, and Ph.D. in Electrical Engineering from Princeton University. He is the Vice-Chair of the Services Working Group in the Small Cells Forum. He also holds a visiting faculty appointment at WINLAB, Rutgers University, where he collaborates on research in cognitive radio, wireless security, and future mobile Internet. Alex is an inventor of over 100 granted U.S. patents, and has been awarded numerous awards for Innovation at InterDigital.

Panelist Bios:

Art King, Director of Enterprise Services & Technologies, SpiderCloud Wireless, Board Member of Small Cell Forum

As the Director of Enterprise Services & Technologies, Mr. King leads the development of enterprise services definitions and business case propositions for customers and partners. Mr. King is a Small Cell Forum Board member and a Vice Chair of the Services Working Group. Mr. King was formerly the Mobility/Collaboration lead in Global Architecture for Nike Inc. where he held various global roles over 10 years. Prior to Nike, he led the build out of two multinational engineering and consulting organizations for an IP Services network vendor in the service provider industry.

Mr. King holds a BS in Computer Engineering from Portland State University. LinkedIn: http://www.linkedin.com/in/kingart

Caroline Chan, Director of Wireless Access Strategy and Technology at Intel Network Platform Group (NPG).

She is responsible for driving strategy and marketing to bring Intel processor into the Wireless infrastructure, projects such as virtualized RAN, mini-Cloud RAN, small cell, mobile edge computing, and 5G. In her role, she closely works with telecommunication vendors, operators, and application developers. Caroline also represents Intel at industry forums. Her research interests include 5G and HetNet performance. Prior to joining Intel, Caroline was director of product management at Nortel Networks where she managed a portfolio of 3G and 4G infrastructure products.

Caroline received her BS EE from University of Texas at Austin, and MS EE from University of Massachusetts at Amherst. Outside of her family and work, Caroline is passionate about the Texas Longhorn Football.

Narayan Menon, CTO/EVP Engineering & Founder, XCellAir

At XCellAir, Narayan develops and evangelizes the technology strategy and roadmap, and leads the development of XCellAir's cloud-based network management and optimization solutions. Prior to XCellAir, he drove research and development for InterDigital, developing next-generation wireless solutions – covering topics such as small cells and Wi-Fi, spectrum management, M2M/IoT and millimeter-wave technology. Narayan previously held leadership roles at Siemens Mobile Networks, Omnipoint Technologies and Hughes Network Systems in the development of TDMA, GSM/GPRS and 3G systems. Outside of work, Narayan follows a variety of sports and is an avid movie buff.

Narayan holds Engineering degrees from the Indian Institute of Technology, New Delhi and an Executive MBA from Hofstra University in New York.

Patrice Hédé, Standard Expert, Wireless Department, Huawei Technologies

Patrice is responsible for driving the standardization of Mobile Edge Computing and is the rapporteur of the Framework and Reference Architecture in ETSI ISG MEC. He is also involved in the standardization of the evolution of the core network (5G Core Network, NFV, MEC) and is working closely with operators

from all over the world to make sure the standards match their needs. Patrice has also been focusing in the past on 3GPP SA2 (architecture), SA4 (codecs) and ETSI ISG NFV (network virtualization).

Patrice received a master's degree (diplôme d'ingénieur) and a master of research degree (DEA) from the Université de Technologie de Compiègne, France.

Randy Cook, VP Sales and Business Development, Saguna Networks

Randy leads the sales and business development opportunities for Saguna. Randy's previous experience includes similar global responsibilities at Alepo, and Nokia Siemens Networks. Prior to NSN, Randy was the World Wide Vice President of Sales & Business Development at Atrica, a Silicon Valley-based carrier Ethernet market leader, and led the private start-up to an eventual acquisition by Nokia Siemens Networks. Prior to Atrica, Randy held Sales leadership positions at Nortel Networks, Bay Networks and Racal Datacom. Randy holds a BA degree in Marketing from Texas A&M University.

Meir Cohen, Director Business Development – Strategic Partners, Nokia.

Meir was participating in the creation of Mobile Edge Computing Group. He was leading Nokia global business development activities for Mobile Edge Computing working with top industry players (including Enterprises, OTTs, etc.). He hold Master of Business Administration degree from The University of Texas at Dallas. Meir served as global solution sales manager for Nokia IP business 2009-2012 and overall has over 17 years experience in the telecommunication market.