News Fact Sheet

Intel Wireless Technology Zone at Mobile World Congress 2015

March 2, 2015 — Mobile operators have a broad array of business and capacity demands now and into the future as the mobile industry is on an evolutionary path toward system-level solutions that merge computing and connectivity. To meet their needs, Intel is developing end-to-end technologies – from wireless communications to device and network technologies – to help enable this migration and build more intelligence into the Internet of Things.

The Intel Wireless Technology Zone at Mobile World Congress will showcase the company's latest developments in mobile communications products and technologies. It will be located in Intel's main stand at the Fira Gran Via, Hall 3, Booth #3D30 from March 2-5.

Below are brief descriptions of some of the displays featured at Intel's Wireless Demonstration Zone.

Wireless Connectivity: This demo features a smartphone reference design that is built completely on Intel silicon including modem, AP, and new Wi-Fi and near field communications products. The demo consists of three parts to showcase the wireless technologies that power high-bandwidth applications, like video and music streaming, and a new wave of applications for mobile payment, tag reading and device pairing.

Positioning and Location: Intel's newest GNSS technology powers location-based services for tablets and smartphones. This demo features a smartphone reference design based completely on Intel silicon performing advanced GNSS and location capabilities such as tracking satellite signals from all of the world's major constellations and an indoor location application based on Wi-Fi time of flight positioning.

LTE Wi-Fi Aggregation: Intel and the mobile industry are looking for new ways to increase data capacity, including combining carrier channels across disparate network technologies, such as LTE, Wi-Fi and more. This demo showcases a live end-to-end system that combines the LTE and Wi-Fi downlink data path to increase the overall system throughput using a commercial handset that communicates with an Intel LTE small cell platform.

LTE Broadcast: Mobile data traffic continues to grow exponentially, and a large portion of this traffic consists of video and multimedia content. Intel's LTE Broadcast (eMBMS) demonstration shows the live reception of four channels of broadcast video streams simultaneously on several smartphones. To highlight the global reach beyond the standard LTE FDD mode, it specifically shows LTE TDD mode reception, a requirement in rapidly evolving geographies such as China, India and Africa.

LTE-Licensed Assist Access: LTE-Licensed Assist Access: License Assisted Access (LAA) technology—also sometimes known as LTE Unlicensed (LTE-U)—enables operators to increase their network capacity by making opportunistic use of high-frequency spectrum. This is done by coupling a licensed LTE anchor carrier with one or more unlicensed carriers. At Mobile World Congress, Intel will demonstrate end-to-

end operation of an LTE-LAA network that achieves a peak downlink throughput of 300 Mbps using our commercial Intel® Transcede™ Small Cell Platform and our Intel® XMM™ 7260 LTE Advanced Modem.

Pre-5G Anchor-Booster Concept: As mobile data demand continues to skyrocket, the mobile industry is exploring new ways to architect mobile networks to increase capacity. One approach expected to be part of the next-generation 5G standard is the Anchor-Booster design, which takes a licensed LTE carrier band used in a traditional macro cellular antenna, and supplements it with a higher frequency band. This demonstration uses Intel-based system components for both the macro cell and the client device, and is an example of Intel's end-to-end mobile strategy.

Enabling 5G Densification: Moving to smaller cell sizes is the foundation of achieving the capacity gains necessary for tomorrow's 5G systems. This live over-the-air demo showcases a prototype wireless mesh deployment operating in the Millimeter Wave band. It also shows multiple gigabits per second of data being relayed from a fiber location to multiple small cell locations nearby to achieve maximum reliability, throughput and system capacity at a fraction of the cost of wireline backhauls.

Pre-5G in Band Full Duplex: Intel has been researching and developing technologies for self-interference cancelation that will enable full-duplex communications – simultaneous transmit and receive – on the same channel to double a network's data capacity. This demo shows a real-time self-interference cancellation technique, and the demo is carried out in collaboration with Tampere University of Technology, Finland.

Open Interconnect Consortium: In July 2014, Intel, Samsung*, MediaTek*, Cisco* and others formed the Open Interconnect Consortium to provide the industry with a single, standards-based solution based on promoting interoperability across all vertical markets and transparent, royalty-free IPR policies. This demo allows users to wirelessly, from a mobile phone app, select a beverage from one of two countries, pour that beverage, see the flag from the selected country and simultaneously trigger music playback from that country.

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