



Liberty Global and CableLabs Join MulteFire Alliance

Next-generation wireless technology gets major boost as two leading players in cable join forces with Wireless Consortium

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Today, <u>Liberty Global</u>, the world's largest international TV and broadband company, and <u>CableLabs</u>, the innovation-focused R&D lab for the global cable industry, announced that they have joined the <u>MulteFire Alliance</u>, an independent, diverse and international member-driven consortium dedicated to developing next-generation wireless technology. Through collaboration with the Alliance, Liberty Global and CableLabs can improve the wireless experience and make the technology more widely available to consumers.

"Wireless connectivity has become critically important for consumers," said Balan Nair, CTO of Liberty Global. "By joining the MulteFire Alliance, we are driving the future of wireless for our customers."

The main focus of the MulteFire Alliance is to ensure that next-generation LTE mobile standards are compatible with shared and unlicensed spectrum. This compatibility ensures that the next generation technology is more widely available and that it can coexist alongside Wi-Fi and other technologies. What also makes this technology unique is that operators without access to the licensed spectrum still will be able to use it, breaking down barriers to entry and opening the door to greater innovation.

"This step will arm the cable industry with a new wireless technology that builds on our success in providing Wi-Fi and mobile services and complements the industry's fixed broadband technology leadership," said Ralph Brown, CTO of CableLabs.

Currently, the MulteFire Alliance is working to adapt 3GPP-based-mobile wireless standards for shared and unlicensed spectrum so that the technology is broadly available and fairly coexists with Wi-Fi and other technologies. MulteFire is based on 3GPP Release 13 License Assisted Access LTE (LAA) and Release 14 enhanced LAA (eLAA), which uses Listen-Before-Talk (LBT) etiquette to share spectrum in a manner similar to Wi-Fi.

Unlike LAA, however, which is anchored to licensed spectrum and must be used in conjunction with a mobile network, MulteFire will operate entirely in unlicensed or shared spectrum, so that operators without licensed mobile spectrum can utilize it. This "standalone" functionality has been proposed in the 3GPP standards body for both LTE and 5G. By building this capability in the Alliance, its member companies will enable its adoption in global standards and the corresponding broad benefit of wireless innovation.

"We appreciate that the Alliance is committed to transparency and collaboration, given the importance of unlicensed spectrum to broadband access," said Rob Alderfer, vice president of technology policy at CableLabs. "As we move toward ever greater sharing of scarce spectrum resources, reliable coexistence across technologies is essential as we continue to innovate. It's what we believe is the most critical aspect of the Alliance, and one that will be important as the industry moves toward 5G standards."





"Operators in the cable industry are ideal partners in our effort to develop new wireless technology and we are pleased to have CableLabs and Liberty Global join us," said Mazen Chmaytelli, MulteFire Alliance president. "The Alliance is open for broad, global participation, and since one of our goals is to drive our work into global standards, we are establishing liaisons with 3GPP, CBRS Alliance and IEEE to keep them apprised of our progress."

Other members of the Alliance include leading technology suppliers such as Qualcomm, Intel, Nokia and Ericsson. A full list of members can be found here.

About Liberty Global

Liberty Global is the world's largest international TV and broadband company, with operations in more than 30 countries across Europe, Latin America and the Caribbean.

We invest in the infrastructure that empowers our customers to make the most of the digital revolution. Our scale and commitment to innovation enables us to develop market-leading products delivered through next-generation networks that connect our 29 million customers who subscribe to over 59 million television, broadband internet and telephony services. We also serve 11 million mobile subscribers and offer WiFi service across seven million access points.

Liberty Global's businesses are comprised of two stocks: the Liberty Global Group (NASDAQ: LBTYA, LBTYB and LBTYK) for our European operations, and the LiLAC Group (NASDAQ: LILA and LILAK, OTC Link: LILAB), which consists of our operations in Latin America and the Caribbean. The Liberty Global Group operates in 12 European countries under the consumer brands Virgin Media, Ziggo, Unitymedia, Telenet and UPC. The LiLAC Group operates in over 20 countries in Latin America and the Caribbean under the consumer brands VTR, Flow, Liberty, Mas Movil and BTC. In addition, the LiLAC Group operates a subsea fiber network throughout the region in over 30 markets. For more information, please visit www.libertyglobal.com

About CableLabs

CableLabs is a non-profit Innovation and R&D Lab founded in 1988 by members of the cable television industry. With a strong focus on innovation, CableLabs develops technologies and specifications for the secure delivery of high speed data, video, voice and next generation services. It also provides testing, certification facilities and technical leadership for the industry.

CableLabs mission is to enable cable operators to be the providers of choice to their customers. Cable operators from around the world are members. For more information, please visit www.CableLabs.com

Contacts:

Liberty GlobalCableLabsMatt BeakeAurora SassoneTel: + 00 44 208 483 6300Tel: +1.415.619.1555

E: aurora.sassone@edelman.com