Broadband Forum publishes three new standards to accelerate global 5G adoption

Three landmark specifications cover entire ecosystem, including Fixed Mobile Convergence, the Access Gateway Function, and customer premises equipment, to help operators unlock the full potential of 5G

Fremont, California, 23 November 2020: Broadband Forum today published three new standards, marking a major step forward to unlock a new wave of 5G innovation and prepare telcos for the mass adoption of 5G.

The three new specifications will allow telcos to build their 5G networks with open, cloud-native platforms that utilize software and hardware components from different vendors, eliminating vendor lock-in and allowing operators to deploy new 5G services faster, more securely and in a more flexible way.

Building on the Forum's mission to drive a future consolidated approach to 5G, the standards will reduce development time, as well as capex and opex, from the traditional disparate fixed broadband and 5G networks. Ultimately, they will deliver a common and managed broadband experience to the end-user whatever the final connectivity technology.

"True convergence requires the use of a single converged 5G core network enabling us to provide exciting services to customers, irrespective of whether they connect to it via wireless or wireline technologies," said Santiago Tenorio, Head of Network Architecture at Vodafone. "It also requires a single view of the customer to enable a common approach to authentication credentials and associated network policies. This set of new Broadband Forum convergence standards is a significant step towards enabling the vision of seamless and consistent handling of customer connectivity in the era of 5G and Gigabit access."

There are three major sets of technical specifications that have been finalized, including 5G Wireless Wireline Convergence Architecture (TR-470), Access Gateway Function (AGF) Functional Requirements (TR-456) and Device Data Model (TR-181). Together, these documents provide functions and interfaces for Fixed Mobile Convergence (FMC), the AGF, and customer premises equipment (CPE) such as 5G-enabled routers.

TR-470 – produced in conjunction with 3GPP – describes the 5G FMC architecture, providing a high-level guide for network architects and planners and enabling fixed and mobile functions to coexist over a shared infrastructure. This will facilitate multi-access connectivity and give consumers a seamless, access-independent service experience.

For operators, the network functions required to operate their infrastructure will be streamlined and common technology, on-boarding, training, services and subscriber management between fixed and mobile divisions can be achieved. Furthermore, additional revenue streams will be created, with FMC extending the geographical reach of 5G core networks and the service offering of fixed networks.

"As the global adoption rate of 5G continues to proliferate, Broadband Forum's work represents a significant milestone for operators as they seek to provide a common and unified

broadband experience to their customer base," said Rosaria Persico, Principal Broadband Forum Delegate, TIM. "Especially for operators who can count on a large mobile and fixed customer base, the three new standards will provide a great opportunity to offer the revolutionary 5G services to households too, maximizing the key benefits of different access network assets and leveraging all the service platforms which will be deployed to unlock the full potential that 5G promises."

TR-456 describes the functional requirements of the AGF. The AGF resides between fixed access networks and the 5G core network to support 5G and wireline Residential Gateways, creating a truly converged deployment. Alongside this, Broadband Forum's Device: 2 data model (TR-181 Issue 2 Amendment 14), which is used by User Services Platform (USP), has been extended to address 5G Residential Gateways. The Device: 2 data model applies to all types of TR-069 or USP-enabled devices, including end devices, Residential Gateways, and other network infrastructure devices.

"Operators are keen to harness and deploy fifth generation technology to exploit new opportunities to enhance existing revenue streams and secure new ones by launching new services and applications," said Broadband Forum CEO Robin Mersh. "Spanning the full scope of the network, including CPE, these specifications take a holistic approach to network management and operation and will greatly accelerate 5G deployments, ensuring operator confidence through an open ecosystem."

In addition, the Functional Requirements for Broadband Residential Gateway Devices (TR-124) specification is expected to be finalized in Q4 2020. Moving from the network into the home, TR-124 has been extended to add requirements related to the 5G Residential Gateway extending the 5G control plane to the premises to open up new service opportunities with real time fulfillment.

Take a look at Broadband Forum's latest 5G video with David Allan, Work Area Director for Wireless-Wireline Convergence at Broadband Forum and Christele Bouchat, Innovation Group Director at Broadband Forum as they discuss what is coming up in the next phase of 5G work and what opportunities this has opened up for the industry - https://www.broadband-forum.org/christele-bouchat-innovation-group-director-david-allan-wwc-work-area-director-offer-a-5g-update.

For more information on Broadband Forum's 5G initiatives, visit: https://www.broadband-forum.org/projects/5g.

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About the Broadband Forum

Broadband Forum is the communications industry's leading open standards development organization focused on accelerating broadband innovation, standards, and ecosystem development. Our members' passion – delivering on the promise of broadband by enabling smarter and faster broadband networks and a thriving broadband ecosystem.

Broadband Forum is an open, non-profit industry organization composed of the industry's leading broadband operators, vendors, thought leaders who are shaping the future of broadband, and observers who closely track our progress. Its work to date has been the foundation for broadband's global proliferation and innovation. For example, the Forum's flagship TR-069 CPE WAN Management Protocol has nearly 1 billion installations worldwide.

Broadband Forum's projects span across 5G, Connected Home, Cloud, and Access. Its working groups collaborate to define best practices for global networks, enable new revenue-

generating service and content delivery, establish technology migration strategies, and engineer critical device, service & development management tools in the home and business IP networking infrastructure. We develop multi-service broadband packet networking specifications addressing architecture, device and service management, software data models, interoperability and certification in the broadband market.

Our free technical reports and white papers can be found at https://www.broadband-forum.org/.

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