

## Broadband Forum achieves 5G convergence milestone

Three new specifications mark the completion of Phase 2 of Broadband Forum's 5G work, bringing more deployment options and new revenue opportunities for operators

**Fremont, California, 17 March 2022:** The convergence of wireless and wireline networks to provide a seamless 5G experience no matter how consumers are connected has been made possible for the first time as <u>Broadband Forum</u> completes Phase 2 of its 5G work.

Three new specifications have been released - <u>TR-456 Issue 2 'Access Gateway Function</u> <u>Functional Requirements'</u>, <u>TR-470 Issue 2 '5G Wireless Wireline Convergence Architecture'</u>, and <u>TR-124 Issue 7 'Functional Requirements for Broadband Residential Gateway Devices'</u> which together provide operators with new 5G deployment options, including 5G hybrid access using wireline and LTE or NR.

The latest Broadband Forum 5G convergence standards will increase the service capabilities of the network for operators while providing them with more opportunities to transition from a legacy to 5G network. Phase 2 of the specification development work builds on the foundations of Broadband Forum's Phase 1 specifications to expand the deployment options, provides added functionalities, and unlocks more value of the 5G system.

"The Phase 2 work has delivered multi-session and enhanced authentication support for legacy Residential Gateways that do not have any 5G capability. Multi-session will enable the same user to connect to multiple service networks, while previously the user was limited to a single data network. This additional improvement can be considered a foretaste of what will be possible with 5G-Residential Gateways," said Rosaria Persico, Principal Broadband Forum Delegate, TIM. "Operators are able to leverage innovation and common procedures specified by Broadband Forum that result in enhanced customer experience across available access network assets, and this specification development will ensure a smooth evolution path to a standardized 5G hybrid model."

The capabilities introduced by TR-456 Issue 2 include ensuring operators have the capacity to multiplex multiple sessions between the 5G-Residental Gateway and Access Gateway Function



on top of the customer VLAN. This enables each session to be unique in terms of User Plane Functions (UPFs) selection, and operators can place video traffic, business traffic or community Wi-Fi all on their own wireline connection with different policies for each. The specification also expands support for legacy CPE in the form of multi-session support and expanded legacy authentication models. It also addressed other operational aspects such as maximum transmission unit handling, improved NAS transport reliability and Quality of Service enhancements.

"The Broadband Forum's 5G Wireless Wireline Convergence standards bring more options and value to converged and fixed operators which can deploy fifth generation technology confidently," said Jonathan Newton, Principal Network Architect at Vodafone's Fixed Access Centre of Excellence. "This important work provides the opportunity to make more effective and efficient use of fixed and mobile assets, while simultaneously creating the potential for new and improved converged services."

Hybrid-access with the functionality of ATSSS (Access Traffic Steering, Switching, Splitting) supports multiple traffic distribution mechanisms and policies, and is another key enabler from TR-470 Issue 2. This is based on the Residential Gateway with dual access: PON or DSL on the wireline side and 5G or LTE on the wireless side. The LTE support is critical as the operator can create and manage logical sessions that leverage existing network coverage and therefore can offer services with seamless availability for connectivity, bandwidth aggregation and policy-based forwarding, even if the 5G radio deployment is not complete yet.

Broadband Forum TR-124 Issue 7 adds Multi-Access support and specifies requirements for the Residential Gateways connected to the 5G System which allow operators to maximize throughput, redundancy, and reliability. This provides the ability to not only run isolated sessions on each access, but to run multiple sessions that use multiple access either as active-standby or simultaneously.

Broadband Forum has been focused on a true convergence play, with its Phase 1 work published in 2020 that has underpinned all of its future work. For more information about Broadband Forum, visit: <a href="https://www.broadband-forum.org/">https://www.broadband-forum.org/</a>.



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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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