

Welcome from our Chairman, John Blackford

In the vibrant trading hub of Hong Kong, the Broadband Forum global membership came together for the Spring 2025 Member Meeting to exchange ideas about the latest innovations and challenges facing the broadband industry, particularly in enhancing end-user experiences.



The meeting marked the launch of our new work area restructure, reaffirming our commitment to ensuring every new project and specification drives the development of services-led and intelligent broadband.

Our membership heard insights from Broadband Service Providers (BSPs) and other key industry players during the Town Hall Innovation Series and Service Provider Action Council (SPAC) Special Session that took place in tandem with the meeting. Both sessions provided valuable feedback on how we can improve our standards and specifications to enable wholesale broadband access services and guarantee the appropriate end-user Quality of Experience (QoE) for BSPs.

We also took a moment to celebrate the outstanding contributions of our colleagues who have been instrumental in advancing our vision for intelligent networks. Congratulations to Jon Newton and Frank Van der Putten who received the Distinguished Fellow Award and Special Recognition Award, respectively, as well as all of our Circle of Excellence and Outstanding Contributor award winners.

We're excited to see everyone again in Munich, Germany, for the Summer Member Meeting and BAsE Technical Summit 2025. If you are interested in sponsoring or getting involved in our BAsE Technical Summit, you can learn more [here](#).

- Broadband Forum Chairman of the Board, John Blackford

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Thank you to our sponsor: Huawei



Huawei Vice President Standardization and Industry Developments Xuemin Wang delivered a keynote presentation during the Spring 2025 Meeting, which aligned with the key aims of the Broadband Forum.

Mr Wang emphasized the significant strides made so far in connectivity, including the latest progress of Fiber-to-the-Room (FTTR) and Fifth Generation Fixed Network (F5G), and the diverse use cases, beyond smart homes, that have been enabled by networking technologies. This includes video calling, storm tracking, and wildlife protection. The technology is applicable to a host of industries from railways to emergency services.

To sustain reliable connectivity and support these vital services moving forward, Mr Wang stressed the importance of close cooperation between industry standards development organizations to build unified standards and outline a global vision for the next generation of broadband and ultimately, a fully connected, intelligent world.

The membership in attendance were also treated to a number of Huawei-led demonstrations, showcasing innovations in FTTR and RFID technology that enable intelligent asset management, real-time video casting and streaming by mmWave Wi-Fi, and QoE for 3D video via FTTR.

Work Area Updates

For the full list of all Technical Reports published by Broadband Forum, [click here](#). Please feel free to share this information with your colleagues so they are engaged with and aware of the developments of this work. For additional insight and to get involved, [sign up for access to Broadband Forum tools](#) and access your account using your company email address.



Access to continue PON interoperability plugfest success and FWA innovations for MDU connectivity

The Access Work Area focuses on developing technical specifications and test plans that deliver multi-vendor interoperability for last mile broadband deployments across access network technologies such as fiber, copper, and wireless networks (HS-PON, XGS-PON, 25GS, NG-PON, Gfast, etc.).

In Progress:

The Access Architecture and Framework Project Stream has started a new project: WT-523 'Architecture and Requirements for Fiber and Multi-tenant Fixed Wireless Access Extension.' The specification will focus on describing the architecture and requirements for extending the fiber or multi-tenant wireless access to reach each apartment within an Multi-Dwelling Unit (MDU) using MoCA Access over existing point-to-point or point-to-multipoint coaxial cable.

The project stream also reviewed several energy saving contributions into WT-280 PON requirements, which generated good discussions and encouraged continued collaboration in this area.

The Access Interoperability and Test Project Stream continued work on PON and MoCA Access test plans:

- WT-255 OLT-ONT Interoperability Test Plan contributions were reviewed.
- WT-309 PON TC Layer Test Plan contributions were reviewed.
- WT-423 PON PMD Test Plan Straw Ballot resolution was completed and will be prepared for Final Ballot in the future.
- WT-500 MoCA Test Plan contributions were reviewed.

The Access Management Project Stream continued to work on PON contributions, specifically:

- WT-385 PON YANG contributions were reviewed.
- WT-489 ONU Authentication contributions were reviewed.

The project stream deferred WT-505 ONU Management at Scale and WT-496 MoCA YANG contributions for a future meeting.

Access Work Area held two brainstorming sessions on improvements to BBF PON certification and power saving/sustainability during the Spring 2025 Meeting, with a further session on security set to take place at the Summer 2025 Meeting in Munich.

Events:

Access is involved in a number of PON plugfests for XGS, 25GS, and HSP PON systems taking place this year:

- A successful PON Plugfest was held with AT&T Labs and LANPARK in February, with testing taking place on 25GS-PON TC and OMCI, and HSP TC Layer.
- A PON Plugfest will be held on July 7-11 in LANPARK’s testing facility in France. The scope of the plugfest will be discussed in the interim before the Summer 2025 Meeting.
- A PON Plugfest will be held on October 6-10 in UNH-IOL’s testing facility in Durham, New Hampshire. The scope will be discussed after the Summer plugfest in France.

For more on the Access Work Area’s ongoing projects, please see: <https://wiki.broadband-forum.org/display/BBF/Access+Work+Area>.



Connected User continues Matter momentum and plans to relaunch TR-398

The Connected User Work Area (Formerly the Broadband User Services Work Area) develops specifications, implementation guides, reference guides, and test plans for the deployment, management, and consumption of services by the end-users.

The highly valuable TR-181 Data Model will release version Device:2.19 soon, incorporating Wi-Fi Alliance Data Elements R4, a revamped Cellular data model to empower Fixed-Wireless Access CPE, and the ability to manage Thread interfaces.

The work area continued combining the Matter protocol with the User Services Platform (USP), with ‘MatterService Data Model for USP-enabled Devices’ (WT-517) set to be completed by Summer 2025.

When integrated with the USP, the Matter protocol will enable BSPs to deploy compatible devices in the smart home faster and manage them more easily. Today, Matter networks and devices – such as a TV or speaker – are controlled via fragmented applications from multiple vendors. USP will allow all supported devices to be managed, monitored, and controlled by a

standards-driven application regardless of the brand in use.

In the Subscribe Networking Project Stream, the group reviewed a survey, that included 15 service providers, 14 vendors, a test lab, and consultants, to assess the necessary Wi-Fi 7 tests in TR-398. Issue 4 of this test plan is on track for release later this year.

Connected User also launched a new project, 'RG Performance Framework', that aims to help BSPs and its subscribers determine if a Residential Gateway can match the capabilities of their broadband service.

The group continues to pioneer the Application-enabled Smart Gateway using USP as the framework to deploy value-added applications on the CPE. Working closely with the open-source community, the Connected User Work Area plans to release USP 1.5 later this year. USP 1.5 will allow for more advanced and granular services to be deployed securely.

Discussions on security and initiatives – including power management, Wi-Fi related security, device security, and USP security – also took place during the meeting.

Take a look at the Connected User's latest work: <https://wiki.broadband-forum.org/display/BBF/Connected+User+Work+Area>.



Network Architecture publishes three new documents and progresses Multi-Tenant FWA work

The Network Architecture Work Area develops the architecture and nodal requirements for end-to-end broadband deployments across traditional and converged networks to ensure the best possible quality of experience for users. The work area is the formation of the merger of former Broadband Forum Wireless Wireline Convergence (WWC) and Access & Transport Architecture (ATA) Work Areas. It will lead the integration of the wireless wireline convergence architecture into the main BBF architecture.

The Broadband Service Architecture (BSA) Project Stream published two new documents on Multi-Service Disaggregated BNG with CUPS TR-459 Issue 3 and TR-459 Issue 2 . TR-459i3 offers updated QoS and Access Control List (ACL) capabilities, with new use cases and call flows. Additionally, it introduces several key enhancements including improved resilience with Subscriber Groups (SGRP) for IP prefix management, and optimized subscriber management with better session state handling and AAA functions. The project stream continued work on BNG Disaggregation, which included the submission of proposals on energy saving and updated QoS for TR-459 Issue 4.

The work area also discussed a number of new ideas related to future work, including a potential new project on 'Research on Microscopic Congestion Model of PON Ports'.

Work continued on 'Security Considerations for IPv6 Broadband Networks' WT-515. The document aims to provide development considerations and enhance IPv6. Progress was also made on the architecture of 'Subscriber Session Steering' WT-474, with work on key gap items, including system initialization, data models, and state model, moving the document towards completion.

The Quality of Experience (QoE) Project Stream continued its focus on the L4S project (WT-519), discussing the use cases and network requirements.

The Wireless Wireline Convergence (WWC) Project Stream continued key work on Multi-Tenant FWA, focusing on the BNG solution, with a full solution now described and specified. The group

is aiming to publish 'FWA solution for delivery inside an MDU/MTU' WT-507 by end of 2025. A marketing document (MR-470) on the Value of WWC was published, with another document (MD-516) on the 'Benefits of Multi-Tenant Fixed Wireless Access' in progress. Discussions and planning took place around a potential Multi-Tenant FWA demonstration as part of the Broadband Forum Innovation Demonstrations at Network X 2025.

For more information on Network Architecture Work Area's ongoing work, visit: <https://wiki.broadband-forum.org/display/BBF/Network+Architecture+Work+Area>.



Provider Cloud makes significant progress on device management and ignites collaboration with standards bodies

The Provider Cloud Work Area (formerly the Broadband Forum's SDN/NFV and Common YANG Work Areas) develops frameworks and specifications to enable broadband services and networks to utilize cloud-based deployment approaches, including automation and autonomous systems that will utilize machine learning and AI.

The work area published TR-451 Amendment 1 'vOMCI Specification'. The specification defines a framework for managing Optical Network Units (ONUs) in a virtualized environment, providing operators with greater flexibility and interoperability by enabling the separation of ONU management functions from physical devices.

The group moved key project, WT-383 Amendment 9 to Straw Ballot, with the aim to publish the new amendment by the Summer Meeting in June 2025. This amendment will bring the YANG model for VoIP, extending BBF YANG management support to nodes offering traditional voice services over a packet-based network. It will also add a range of improvements related to QoS, forwarding, and transceiver management.

The CloudCO Architecture Project Stream continued work on updating the architectural framework and on OLT disaggregation, with revisions made to both WT-384 and WT-477 Issue 2. The project stream also began a new project on Linux Foundation and BBF Alignment Analysis, Requirements, and Recommendations. The project brings together BBF and Linux Foundation to align their respective works on architectural alignment and initial gap analysis with recommendations, vOMCI, OpenOMCI, YANG, and Cloud-CO NBI.

The Cloud Components Project Stream continued work on data collection with a focus on protocols for WT-508. Revisions were made to a number of projects including SD-WAN (WT-495), AIM Architecture (WT-436 Issue 2), and AIM Interfaces (WT-486 Issue 2).

The Cloud Interfaces Project Stream will continue to work on the intent based interface between an orchestrator and controller (WT-411 Issue 2), on topology and inventory (WT-454 Issue 2), and on interface interoperability and conformance tests between an OLT and controller (WT-414 and WT-520).

More information about the Provider Cloud Work Area can be found at: <https://wiki.broadband-forum.org/display/BBF/Provider+Cloud+Work+Area>.



The Service Requirements Work Area kicks off and debuts project to define service QoE indicators

The Service Requirements Work Area defines user-centric, actionable service requirements and specifications for subscriber, access, and Broadband Service Providers' (BSPs') core networks. The work area is focused on providing guidance on the requirements relevant for the industry to drive the technical, services-led work of Broadband Forum's

Access, Connected User, Network Architecture and Provider Cloud work areas.

The Spring 2025 Member Meeting marked the start of the Service Requirements Work Area, with its integration underscoring the Broadband Forum's commitment to evolve with the industry's transition to 'services-led' broadband.

The work area started its first project on 'Service Types, QoE Parameters and Evaluation'. It will provide comprehensive definitions of QoE indicators for services and their quality requirements. The project will provide a useful tool for service providers to check the level of their service quality, and a reference for solution providers to verify functionality and pain points of their solution.

Discussions within the Broadband Forum's Town Hall Innovation Series and Service Provider Action Council (SPAC) sessions will flow directly into the Service Requirements Work Area and will be used as a foundation for future work.

While the work of the area holds significant importance for the industry and external service requirements, its progress is driven by membership engagement. The work area invites members to take the opportunity to contribute topics and work on where they would like to see greater innovations on existing requirements and address new service types.

You can learn more about the Service Requirements work area here: <https://wiki.broadband-forum.org/display/BBF/Service+Requirements+Work+Area>



YANG Ninjas: Leading YANG across the broadband industry

The newly formed "YANG Ninjas" is an advisory group of volunteers responsible for reviewing YANG data models created within the Broadband Forum. Its task is to ensure consistency and adherence to the Broadband Forum YANG Best Current Practices (OD-360). The group is overseen by the YANG Sensei: Joey Boyd (Adtran) and Sven Ooghe (Nokia).

The advisory group is actively looking for new volunteers to join the team and provide their expertise. Volunteers will help the development of high-quality YANG data models and management specifications within the BBF Work Area's including Access, Provider Cloud, Network Architecture and Connected User. Entry level criteria include a proven knowledge of YANG data modeling and preferably knowledge of the different tools used to create and publish YANG models.

If you are interested in joining the YANG Ninjas, contact Joey or Sven or find out more on the Wiki: <https://wiki.broadband-forum.org/display/BBF/YANG+Ninjas>.



OB-CAS nears completion of first release

The Open Broadband CloudCO Application Software Development Kit (OB-CAS) aims to make monitoring and maintenance easier for BSPs, enabling them to easily integrate applications into their access network management platforms. BSPs will also have access to a greater selection of fit-for-purpose applications from a community of software vendors. The OB-CloudCO Application SDK team is continuing its journey to develop an open API framework through which applications can interact with an access domain controller. These applications typically consume and analyze network data for enhancing or automating service assurance.

OB-CAS is progressing towards the first release (1.0) of its SDK, containing the wrappers for KAFKA, Opensearch, FluentD and NETCONF APIs, as well as a sandbox environment comprising OLT simulators. It also includes the alarm correlation app, which was demonstrated at Network X 2024. The release is planned for completion this month.

This year, the project team aims to add the Open TSDB API to its SDK. Open TSDB is an efficient way to store a time-series of KPIs/metrics retrieved by a data collector from the network, and is a fundamental capability to enable 24/7 assurance, troubleshooting analysis and planning. The OB-CAS team will be developing a “smart threshold setting” application, which can detect anomalies in a running time-series of metric values without using pre-defined and/or manually set thresholds on the network elements.

The OB-CAS team is aiming to demonstrate the open software, with its new features, as part of the Broadband Forum Innovation Demonstrations at Network X 2025.

Management and data analysis software application providers are invited to join OB-CAS' project to help shape the API requirements and test and grow the SDK to see how their applications can operate in a CloudCO environment.

To learn more about the OB-CAS project's ongoing work, please see: <https://wiki.broadband-forum.org/display/OBCAS/OB-CAS+Home>.



OB-STAMP makes a breakthrough in CPE monitoring

The OB-STAMP (Open Broadband – Simple Two-Way Active Measurement Protocol) tool aims to reduce the cost and time of deploying and implementing infrastructure for measuring network latency in broadband service provider (BSP) networks. Broadband Forum standards, including Quality of Experience Delivered (QED) and User Services Platform (USP), will play a key part in the project.

OB-STAMP provides an easy-to-deploy component that simplifies network performance data generation, collection, and analysis. This data is crucial for training and operating AI deep learning tools, which are key enablers of the Automated Intelligence Management (AIM) framework. The project allows BSPs to proactively monitor their networks to avoid network failures.

The open-source project has developed a STAMP Sender and Reflector, that is fully compatible with RFC 8762 and its associated extensions, to be installed on Customer Premises Equipment (CPE).

The overarching aim of the project is to develop a component outlined in the TR-390.2 document, enabling greater performance measurement between the CPE and the IP Edge. The TR-390.2 Amendment 1 document also outlines the feasibility of using the STAMP protocol to record performance measurements in the subscriber home network.

The project is holding regular meetings with its contributors – including Damos, Outsys, Radisys, UNH-IOL and an individual member of the BBF – to progress the work.

To learn more about the OB-STAMP project's ongoing work, please see: <https://wiki.broadband-forum.org/pages/viewpage.action?pageId=331612538>.

OB-STEER calls for collaborators to build a reference implementation for Subscriber Session Steering



At the Spring 2025 Meeting, the OB-STEER team called for interested parties to get involved and help progress the existing open source code base. The OB-STEER project started with code that was developed for last year's Broadband Forum Innovation Demonstrations at Network X. Building on Broadband Forum's working text WT-474, OB-STEER aims to create a reference implementation of the Subscriber Session Steering architecture to deliver flexible, on-demand connectivity and simplify network management.

Interoperability of Subscriber Session Steering is of utmost importance as it will be implemented in access network equipment of various vendors. OB-STEER therefore aims to reach out to vendors to agree on implementation options that remain compatible.

If you would like to get involved and contribute to the project, please contact hagen.woesner@bisdn.de.



OB-UDPST announces first deployment by a service provider

The OB-UDPST project team announced that its current release (version 8.20) has been deployed by Broadband Forum service provider member AT&T in its new broadband measurement system.

Version 8.2.0 builds on the previous OB-UDPST, 8.1.0, making minor fixes and enhancements. The addition of multi-key authentication allows each individual server instance to better support a variety of client instances across different service offerings and device types. For large deployments, it is expected to significantly improve key management and maintenance.

The project team will look to implement further enhancements, including a service function that provides near real-time software monitoring capability as well as sub-second capturing of performance data. It is also continuing work on formalizing the client-server protocol via an IETF RFC (which is still in draft form).

OB-UDPST Project Lead, Len Ciavattone, took part in a [vBAsE webinar](#) to discuss how TR-471 and OB-UDPST helps assure QoE.

For more information about the OB-UDPST project team's current progress, please visit: <https://wiki.broadband-forum.org/display/OBUDPST/OB+UDP+Speed+Test+Home>.



OB-USP-Agent closes in on Jackdaw release; prpl and RDK integrations improved

The OB-USP-Agent (OBUSPA) team is close to completing Release 10 (Jackdaw release), which is anticipated for mid-Q2 2025. The release will incorporate updates to align with changes to the USP 1.4 specification and the USP Test Plan v1.3. It will also introduce the MQTT bulk data collection mechanism and implement USP Broker optimizations as per an agreement with prpl Foundation.

The open-source software from OBUSPA has been part of upstream integrations with open-source communities prpl and RDK. OBUSPA is a key component of open-source middleware solutions (e.g., prplOS and RDK-B): it enables the remote management of the device and opens up the possibility to decentralize the device's data model into USP-enabled containerized applications.

The project team will up-step prplOS to the OBUSPA 9.0.8 patch release for the upcoming prplOS 4.0 release ahead of the code freeze at the end of March 2025. The organization is also looking to up-step to a 9.0.8 or later release with a future RDK-B release.

The OBUSPA team is continuing to work with QA Cafe to develop and implement a plan for executing USP compliance testing against new major releases of OBUSPA and the best options for making these reports available for downstream consumption.

For more information about the team's latest work, visit: <https://wiki.broadband-forum.org/display/OBUSPA/OB-USP-Agent+Home>.

Board of Directors nominations and elections 2025

Nominations are now open for the Broadband Forum Board of Directors. Five seats are available for two-year terms. The nomination process will close on May 19th, with election voting taking place from May 26th to June 23rd.

You can learn more about the candidacy here: <https://wiki.broadband-forum.org/display/BBF/2025+Board+of+Directors+Election>

Upcoming events

- [April 2-4, BREKO fiberdays, Frankfurt, Germany](#)
- [June 1-4 2025, BAsE at FBA \(Fiber Connect\), Nashville, United States](#)
- [June 3-5 2025, BAsE at ANGA COM, Koln, Germany](#)
- [June 26-27 2025, BAsE Technical Summit, Munich, Germany](#)
- [September 29- October 1 2025, BAsE at SCTE TechExpo, Nashville, United States](#)
- [October 6-10, PON Plugfest at UNH-IOL](#)
- [October 14-16 2025, BAsE at Network X, Paris, France](#)

Save the dates! Broadband Forum face-to-face 2025 meetings

- [June 23-26, Summer 2025 Meeting, Munich, Germany](#)
- [November 17-20, Fall 2025 Meeting, TBC, Americas](#)



Keep up to date on our latest activities and whereabouts!

- Follow us on LinkedIn ([@Broadband Forum](#)) and subscribe to us on YouTube ([@BroadbandForumVideos](#)) for more BBF content.

Welcome to our new and returning members!

We welcomed a mix of new members and guest companies during the Spring Member Meeting 2025. We had 158 registered attendees, with 24 first-time attendees and seven guests from four companies. Our eight new members included: [Bitdefender](#), [Digital Platforms](#), [Infosys](#), [Telkomsel](#), [Telus](#), [Turk Telekom](#), [VeEX](#), and [Windstream](#)!

The four guest companies were [Hong Kong Polytechnic University](#), [Network Innovation Development Alliance](#), [World WLAN Application Alliance](#), and [Swisscom](#).

Are you interested in becoming the newest member of the industry's leading standards body for defining broadband networks? Broadband Forum membership will not only accelerate your company's progress but enable you to become a key influencer developing 5G, the cloud, the connected home, and access networks.

We have a range of membership options for companies of all sizes, from startups to large corporations and not-for-profit organizations. Our new regional [Operator Membership category](#) has further opened participation; take a look for further details of the access level privileges, benefits, and requirements.

To learn more about the benefits of membership, watch the video interview with Rhonda Heier, Director of Membership Development, discussing the value of the Broadband Forum membership [here](#) or email rheier@broadband-forum.org for more information.

Contact information

Questions or ideas? Contact the Broadband Forum on +1 510.492.4020 or email info@broadband-forum.org.

