



# Annual Report

2021

# Chairman's Letter

Dear members and industry colleagues,

2021 was a year in which both the broadband industry and the Broadband Forum dealt successfully with continuing challenges. In the industry, as record amounts of data continue to traverse the network, the broadband ecosystem has proven not just robust, but ready to differentiate and to increase its value to a multitude of diverse subscribers and partners. At the Broadband Forum, we continue to adapt to global health conditions, meeting virtually over the same networks we help define while still driving a tremendous volume of work in open standards to assure the continued success of our broadband industry.

Never has the important open standards work the Broadband Forum (BBF) represents been more in focus for safeguarding the economic and communication needs of residential, business, IoT, and public services stakeholders. Our open standards drive the right quality of experience for the subscriber, extending from endpoint devices in the home or business all the way to the cloud or data center, while ensuring that service providers realize the value stemming from proven use cases and the operating efficiencies resulting from further broadband investments.

The vital contributions and value that the Broadband Forum represents to the industry is epitomized by the sheer scale of new work published by an ever-increasing number of contributor and evaluating companies. Our range of members span companies large and small, and represent innovating vendors, eco-system partners and service providers. The BBF really does grow from strength-to-strength and ended 2021 with our highest number of members in over a decade!

Despite having to meet virtually throughout 2021, we still delivered and published a significant body of work across all our work areas and our Open Broadband projects. Identifying specific highlighted

work is always a challenge when all our work has significant impact to the industry, but here is some of the new areas of work delivered or initiated by the forum in the past year:

- The first deliverables from the SDN and NFV Work Area on the topics of Automated Intelligent Management (TR-436) and Metro Compute Networking (TR-466).
- The launch and expansion of our first self-testing tools and programs (BBF.069 and BBF.369) to enable faster and cost-effective industry recognized certification
- WWC Marketing Council was launched, delivering webinars, industry events, PR and blogs
- A new Open Broadband and opensource project (OB-5WWC) to fulfill the benefits of 5G delivered over fixed line services. OB-5WWC will create a reference implementation of BBF's Wireless-Wireline Convergence solution for 5G-capable Residential Gateways (5G-RG).
- PHY-tx NPIF on heterogeneous Home Distribution Networks encompassing Wi-Fi for broadband wireless technology, Ethernet/MoCA/G.hn for broadband wireline and Wi-Fi/Zigbee/Z-wave for IoT narrowband.
- Common YANG (TR-454) enabling the management of physical nodes with Yang interfaces to maintain and expose network map and equipment inventory information.

BASe, our industry education events initiative, recognized a record year in sponsorship and the number of virtual and physical events held throughout the year. Highlights of our BASe events program included our first successful 3 day "Virtual Broadband Summit", a record number of webinars and a return to 'in-person' industry events.

In addition, we ran a considerable number of BASe Knowledge webinars and seminars including updates from our WWC and SDN/NFV work areas as well as our USP, 5G Transport, and PEAT project streams. We also continued to virtualize Work Area demonstrations including our successful CloudCO and OB-BAA demo and our new WT-474 Subscriber Session Steering work.

In the testing and certification arena, the Broadband Forum launched the industry's first Wi-Fi Performance Program, BBF.398 Grade Wi-Fi, rising to the challenge to meet the needs of communications service providers to deliver the highest quality Wi-Fi services critical to successful broadband deployments, with the first devices already added to the Broadband Forum's product registry.

2022 will be an exciting year for the BBF with multiple brand-new work projects in progress and ever-increasing number of operators and vendors contributing to our work. In addition, I know I speak on behalf of all our members when I say that we are looking forward to a return to face-to-face meetings, conditions permitting, in the second half of the year.

Therefore, on behalf of the Board and staff, I would like to express our gratitude for your impressive support. It is through our members that we ensure the open standards and Open Broadband work we do remains crucial to the evolving broadband services of the future.

Yours Sincerely,




**John Blackford**  
Chairman of the Board



# In the 2021 Annual Report

Chairman's Letter	2
2021 Published Work	4
Forum Organization	5
Leadership Groups	6
Open Broadband	7
Open Broadband Labs	8
Certification   Program Impact	9
BASe Series	10
Technology Councils	11
Member Recognition	12
Participating & Membership Listings	13
Financial Report	14
BBF Team   Links & Contact	16



**John Blackford**  
Chairman, Commscope



**Mike Talbert**  
President, Verizon



**Dave Sinicrope**  
Vice President, Ericsson



**Manuel Paul**  
Vice President,  
Deutsche Telecom



**Frank Van der Putten**  
Treasurer, Nokia



**Bernd Hesse**  
CMO to The Board, DZS



**Aleksandra Kozarev**  
Secretary, MaxLinear



**Mauro Tilocca**  
Board Member,  
Telecom Italia



**Francisco de Carvalho**  
Board Member, Reply



**Hongyu Li**  
Board Member,  
Huawei Technologies



**Barbara Stark**  
Board Member, AT&T



**Lincoln Lavoie**  
Technical Committee  
Chair, UNH-IOL



**Ken Ko**  
Managing Director, BBF

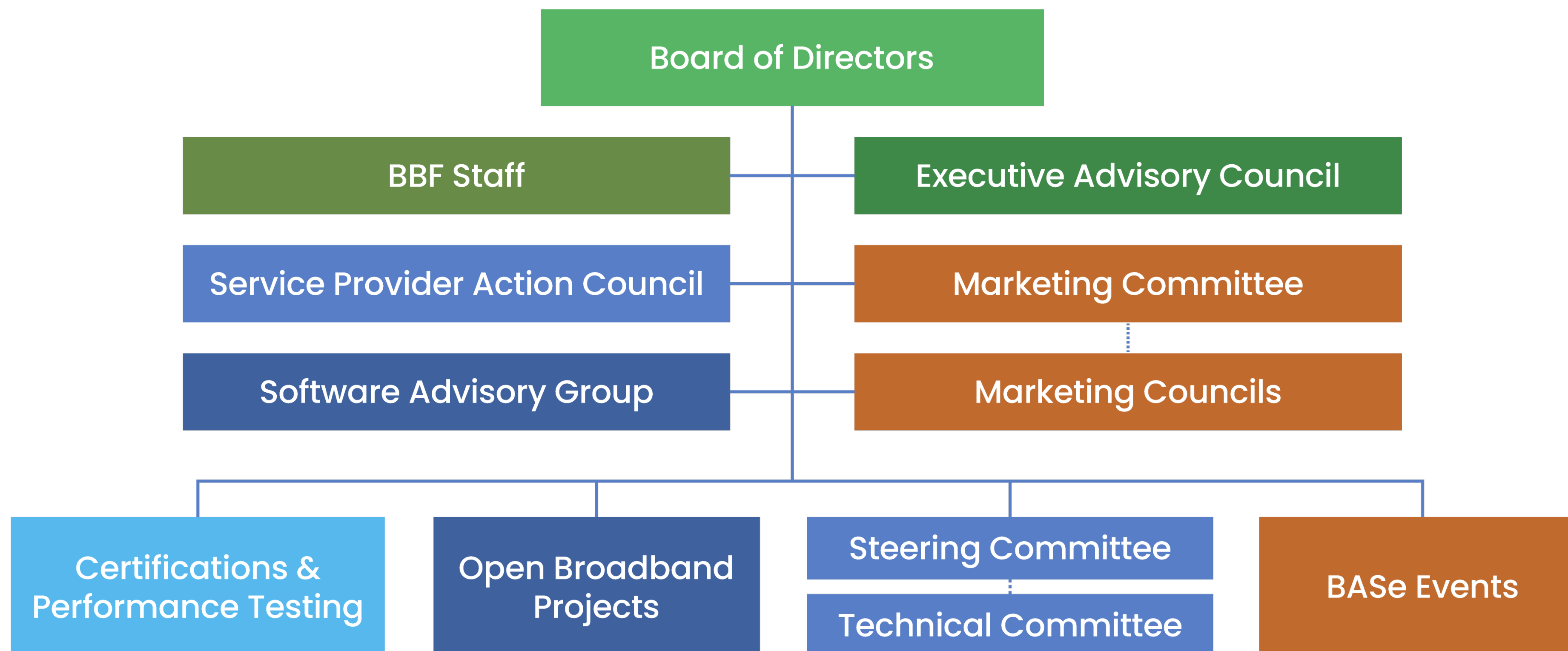


**Craig Thomas**  
VP SM and BD, BBF

# 2021 Published Work

<b>MR-452.4</b>	QED Uses in Lab Evaluation & Network Design	<b>TR-459.3</b>	Multi-Service Disaggregated BNG with CUPS; IPTV Multicast function
<b>TR-411</b>	Definition of Interfaces between CloudCO Functional Modules	<b>TR-466</b>	Metro Compute Networking: Use Cases and High-Level Requirements
<b>TR-398 Issue 2:</b>	Wi-Fi In-Premises Performance Testing	<b>TR 459.2</b>	Multi-Service Disaggregated BNG with CUPS; Integrated Carrier Grade NAT function.
<b>TR-280</b>	Corrigendum 1: ITU-T PON in the Context of TR-178	<b>TR-352 Issue 2 COR 1:</b>	Multi-wavelength PON Inter-Channel-Termination Protocol (ICTP) Specification
<b>TR-412</b>	CloudCO Test Cases	<b>TR-471 Issue 2:</b>	Maximum IP-Layer Capacity Metric, Related Metrics, and Measurements
<b>TR-436</b>	Access & Home Network O&M Automation/Intelligence	<b>OB-BAA</b>	Release 4.1.1
<b>MR-419</b>	Five Key Questions on the Fiber to the Extension Point (FTTep)	<b>OB-UDPST</b>	Release 7.3.0
<b>MR-452.2</b>	Use of DeltaQ to manage customer SLA	<b>OB-USP</b>	Agent Release Eagle
<b>TR-454</b>	YANG Modules for Access Network Map & Equipment Inventory	<b>OD-490</b>	BBF.398 Grade Wi-Fi Program Guidelines
<b>TR-380</b>	Issue 2: G.fast Performance Test Plan		
<b>TR-383</b>	Amendment 4: Common YANG Modules for Access Networks		
<b>TP-337</b>	Issue 3: Corrigendum 1: G.fast Certification Test Plan		
<b>TR-398</b>	Issue 2 Corrigendum 1: Wi-Fi Residential & SOHO Performance Testing		

# Forum Organization





# Leadership Groups

## Broadband Innovation Group

The Broadband Innovation Group was formed as the incubator for new projects such as the developments in 5G. As envisaged in the Broadband 20/20 vision document, the Innovation Track began work on Broadband Assured IP Services. The Forum has long recognized the need for performance-assured services that are secure, standardized, on-demand and user-initiated and is leveraging several new technologies (SDN, NFV, Gfast, NG-PON2, etc.), its IP expertise and experience with more than 1 billion TR-069 installations. The Broadband Innovation Group also works with various member groups to host “Birds of a Feather” events held at most quarterly meetings.

Christele Bouchat, Nokia and Mauro Tilocca, Telecom Italia—Co-Chairs

## Executive Advisory Council

Introduced in 2017, the Executive Advisory Council was established to provide an executive C-level and forward-thinking lens through which the Forum can keep an insight on industry trends to shape our future. The genesis of the Council is the profound changes in the industry - a paradigm shift both in terms of technology and methodology. The questions regarding the impact on business value and what sort of deliverables are required is the main conversation of the BBF's Executive Advisory Council.

Craig Thomas, BBF—Chair

## Service Provider Action Council

The SPAC (Service Provider Action Council) is a key influential standing committee keeping the Forum connected to user requirements - the key financial realities of the market. Open exclusively to the service provider membership, it offers continuous direction on requirements to ensure that strategic work has the service provider engagement needed to achieve timely standards development.

Mauro Tilocca, Telecom Italia—Chair

## Software Advisory Group

The SAG (Software Advisory Group) comprises contributing Forum member companies and provides a center of software expertise acting as a “think tank” within the Forum. It advises on engagement with external SDOs and open source organizations on the processes and modeling tools needed to enable the Forum to work as an agile software-focused organization, the challenges of IPR, and balancing the Forum's role on the definition of requirements and service attributes with the implementation of code and prototyping.

William Lupton, BBF—Chair

## Steering Committee

The Steering Committee's primary goal is to execute the Forum's strategy via the Work Areas of the Technical Committee. It is the main conduit for the leadership to monitor work in progress across the Forum. The Steering Committee influences the technical work and acts as a clearinghouse for new projects. It also oversees the formation of project streams (groups of related projects) and the appointment of Work Area Directors. Implementation of procedures and use of tools and the technical content of Broadband Forum meetings also fall to the Steering Committee, as well as coordination of the important items in the Forum's Liaison Program with almost every industry standards body and open source organization.

Lincoln Lavoie, UNH-IOL—Technical Committee and Steering Committee Chair



# Open Broadband

Broadband Forum's Open Broadband initiative brings open source and open standards together, paving the way to dramatically change our industry and bring the full promise of broadband to fruition.

The future of broadband will be the result of the marriage between the flexibility, innovation, and speed of "open software" and with the discipline, efficiencies, and global scale made possible by "open standards".

Delivering excellent point solutions will always be critical. However, in a broadband ecosystem undergoing radical change of technology and approaches, focusing on individual elements alone is likely to be a limiting strategy. This is why the Forum is taking an approach to the drivers and technologies that feed broadband transformation to serve the industry and our members. By bringing the best ideas of open source together with the interoperability and standards required for mass market solutions, the Forum is bringing true innovation and scale to the industry.

Open Broadband projects within the forum continue to thrive since their inception in 2017. The following are currently active Open Broadband projects:

## Open Broadband—Broadband Access Abstraction (OB-BAA)

Enabling standardized, automated and accelerated deployment of new cloud-based access infrastructure and services. Link [here](#) for more information.

## Open Broadband Multi Access Point (OB-MAP)

Ensuring that the software of open-source innovators like [prpl Foundation](#), and their mesh software projects will be scalable to large service providers deployments via carrier grade manageability. Link [here](#) for more information.

## Open Broadband—UDP Speed Test (OB-UDPST)

Enabling an open source implementation tool to perform IP Layer Capacity metrics and measurement for gigabit broadband connectivity. Link [here](#) for more information.

## Open Broadband—User Services Platform Agent (OB-USP-Agent)

Creating a reference implementation of the User Services Platform (USP) specification from an "agent" perspective. Link [here](#) for more information.

## Open Broadband—WWC Reference Implementation for 5G-RG (OB-5WWC)

An open source project creating a Wireless-Wireline Convergence reference implementation for 5G-capable Residential Gateways (5G-RG). Deliverable to develop a production-grade 5G-Residential Gateway solution stack for integration into OpenWRT/RDK-B RG platforms.

OB-BAA | Virtual Demonstration 2021



OB-USP-Agent | Video Workshops and Tutorials





# Open Broadband Labs

Open Broadband Labs offer a common hardware and software platform for an open laboratory to promote the development of network transformation and cloud evolution leveraging open source software. Each Open Broadband Lab is a collaborative industry resource that encompasses proprietary, "open" source and standard implementations coming together to represent service provider existing and planned deployments. The initial intention for the scope of the Open Broadband Labs is:

- A rich set of test resources to be used for staging, functional, performance, interoperability, testing and continuous integration of broadband NFV/SDN, CloudCO, cloud-based services and applications, management, and orchestration
- Provides the industry and BBF members with defined interfaces and reference test environment for how their products and solutions can fit into the NFV/SDN cloud-based architecture
- The Forum's motivation stems from requirements related to BBF projects and is not a constraint for third parties
- The BBF's role is to select labs based on regional requirements, available funding
- Broadband Forum does not fund each Open Broadband Lab – but helps facilitate funding (Hosting Labs are independent of the BBF and independently funded)
- OB-Labs provide services according to fair, reasonable, and nondiscriminatory terms
- Make services available to the entire industry (without limitation), platforms may vary

The combination of Broadband Forum's Open Broadband, Open Broadband Labs, and Open Standards initiatives are providing an industry sandbox to accelerate multi-vendor innovation and incubation in areas like 5G, CloudCO, network slicing, and wire- less-wireline convergence.

These areas define a number of operator use cases and act as a blueprint for tests to be performed in the labs. Together, these initiatives are accelerating network transformation and migration to a cloud-based broadband infrastructure for carriers globally and bringing the promise of SDN and NFV to fruition.

The future of broadband will be the result of the marriage between the flexibility, innovation, and speed of an "open software" with the discipline, efficiencies, and global scale made possible by "open standards". The Open Broadband initiative brings together the best ideas of an open source with the interoperability and standards required for mass market solutions, thereby acceleration true innovation and scale in the industry. Key to this strategy has been the creation of an array of Open Broadband Labs around the world to enable open source collaboration and ensure interoperability. In 2019, the number of recognized Open Broadband Labs expanded to include a second lab in Asia, as well as in Europe (2), and North America. More information on the Open Broadband Labs can be found [here](#).





# Interop and Certification

Since its inception the Forum has had an objective to establish interoperability in the broadband marketplace. Today, the Broadband Forum Interoperability and Certification program encompasses end- to-end broadband testing requirements including fiber, DSL, MPLS and home networking related interoperability and conformance testing.

**The BBF Testing and Certification programs include:**

1. Developing common test requirements
2. Establishing a test suite which normally includes functional and performance tests
3. Hosting test events also known as plugfests, which can include private members only multivendor plugfests, conformance testing, public interoperability demonstrations and/or certification

## Certification Program Impact

- > Creates confidence and minimizes risks
- > Establishes a trusted industry standard for implementation and high customer satisfaction
- > Leverages vast experience and expertise
- > Avoids extensive provider testing before purchase
- > Significantly reduces costs and accelerates time to revenue for all stakeholders
- > Provides a starting point for service provider integration and fosters a diverse marketplace across silicon and products



welcome to



# Broadband Acceleration Seminar

## BAsE Series

Broadband Forum is the industry's most respected organization for accelerating broadband innovation and deployment, and its fast-growing Broadband Acceleration Seminar (BAsE) series provides key insights into the state of broadband innovation, technology, standards, and ecosystems.

Held in conjunction with major industry conferences, each BAsE event draws hundreds of key influencers from global broadband service providers, suppliers, analysts, and government officials who appreciate our uncompromising educational focus and our member's leading-edge perspectives.

BAsE series is driven around 3 major tracks: The Connected Home, Access Technologies and Network and Service Delivery. Including areas of focus of the Forum — 5G, Connected Home, Cloud, and Access | Next — and provides sponsors with unparalleled access to broadband industry innovators and leaders. BAsE events have become renowned throughout the industry as truly unique thought leadership events created by tech innovators for tech leaders.

2021 was a record year for The Broadband Forum both in the number of sponsors and also total number of events. In 2021 with the continued uncertainty of the global travel we integrated the flexibility of a virtual events platform to support the BAsE initiative. We successfully ran 18 virtual sessions from webinars and virtual conference sessions. Including our 3-day virtual Ultra-fast Broadband (UFBB) vBAsE conference and our first ever virtual Broadband Summit. In addition, we welcomed back a return to 'in-person' industry events

Meeting the challenge of remote events vBAsE (virtual BAsE) attracted an even wider participation audience to all our industry leading events with an average attendance of over 400 registration per event representing regularly over 50 countries. This has set the stage for continued success in 2022 with a balance of vBAsE and traditional BAsE 'in-person' events.

In total 17 companies took advantage of sponsorship opportunities to reach a global industry audience.

PLATINUM						
GOLD						
SILVER						





# Technology Councils

The charter of each technology council is to foster the global market development of its representative technology through educational and awareness initiatives.

Each council, the Gfast Council, the NG-PON2 Council, and the Connected Home Council, was formed to centralize and disseminate the expertise and experience of each respective market in order to facilitate the rapid deployment of each technology. Each council meets regularly and develops a roadmap for educating the market on their respective technology and providing deployment updates. Typical vehicles are formal published Market Updates,

technology White Papers, webinars, wall charts and surveys. In addition, the technology councils are very active as content engines in developing content for BAsE events and moderating BAsE panels. Lastly, as the technology councils are monitoring market trends and conducting surveys, they provide use case ideas back into the working areas and interoperability/certification programs to stimulate market expansion and ecosystem development.

Examples of Market Updates created by technology councils include:

Register for Free Now  
**Quality Of Experience Delivered:**  
**Why Just Broadband Speed is not Enough**  
 A Broadband Forum Webinar  
 February 17th (10am EST / 4pm CET)

**State of Broadband Virtual Summit**  
 May 10-13

Jonathan Newton, Vodafone  
 5G+ Access Architecture Project Stream Lead

**WT-474**  
 Subscriber Session Steering Introduction

Help, I am Jonathan Singh, I am a software engineer with network platform group in Intel.

Access Architecture at the Broadband Forum, This is a short introduction to an exciting work item.

sessions are load balanced across an user planes as all of them support basic internet service.

**BLOG**  
**Accelerating the Connected Home – why standardize?**  
 READ MORE

**BLOG**  
**Why the transport network is key to supporting new 5G capabilities**  
 READ MORE

**BLOG**  
**Accelerating network management and automation via Common YANG**  
 READ MORE

**BLOG**  
**Making the most out of the Connected Home – Broadband Forum to host free Virtual Workshops**  
 READ MORE

# Recognizing Member Contributions

The BBF recognizes the outstanding contributions of those who have shaped the growth of Broadband, worldwide.

## Distinguished Fellow Award

The Distinguished Fellow title is bestowed by the Broadband Forum to exceptional individuals who have over time provided a major influence on the direction and success of broadband development.

### 2021 Recipients:

- ▶ John Blackford, CommScope

## Leadership Awards

The Leadership award is given to outgoing, commendable working group chairs or Board members. These individuals, who have dedicated their time and leadership ability to establishing our success, have gone above and beyond the call of duty within The Broadband Forum and we thank them for their service.

### 2021 Recipients:

- ▶ Barbara Stark, AT&T
- ▶ David Allan, Ericsson
- ▶ George Dobrowski

## Circle of Excellence

The Broadband Forum recognizes the exceptional contributions of its members through the "Circle of Excellence" award, which is awarded at our annual meetings.

### 2021 Recipients:

- ▶ Greg Mirsky, Ericsson
- ▶ Richard Holme, CommScope
- ▶ Rosaria Persico, TIM
- ▶ Peter Thompson, PNSol

## Outstanding Contributors

Once a year, at the annual meeting, the Outstanding Contributor awards are given to individuals who, during the previous year, went above and beyond the call of duty within the Forum work areas.

### 2021 Recipients:

- ▶ Al Morton, AT&T
- ▶ Antonio Marchetta, Net Reply
- ▶ Fabio Giudici, Outsys
- ▶ Ludwig Pauwels, Nokia
- ▶ Nagaraj Turaiyur, Juniper
- ▶ Thales Fragoso, Axiros
- ▶ Venkatesh Padebettu, Juniper

Visit [broadband-forum.org/contributors](https://broadband-forum.org/contributors) for information on BBF member recognition



# Participating Organizations

2021 recognized an increase in membership and participation. Below is a list of member companies organized alphabetically by membership level. Please note that Open Broadband initiative projects include a wide variety of non-member companies and industry organizations not listed.

## PRINCIPAL LEVEL

A1 Telekom Austria AG  
ADTRAN  
Advanced Digital Broadcast S.A.  
AEPONYX  
Airoha Technology (Suzhou) Limited (formally ECONET)  
Airties  
Alethea Communications Technologies Pvt Ltd  
Allion Labs  
Altice Labs, S.A.  
Aprecomm Private Limited  
APS Networks GmbH  
ASSIA, Inc.  
AT&T  
AVM GmbH  
AVSystem  
Axiros  
Axon Networks  
Bell Canada  
Benu Networks  
BiFrost Communications  
BISDN GmbH  
Broadcom Corporation  
BT  
CableLabs  
Calix Networks  
Cambridge Industries Group Limited  
Candela Technologies  
Capgemini Engineering (formerly Altran)  
Casa Systems

CenturyLink  
Charter Communications  
China Mobile Research Institute  
China Telecom Global Limited  
China Unicom  
Chunghwa Telecom Labs  
Ciena  
Cisco Systems  
cnlab  
CommScope  
Company  
Cyta  
DZS  
Deutsche Telekom AG  
D-Link  
Domos AS  
EANTC  
Ericsson  
Friendly Technologies (FTL)  
F-Secure  
Futurewei Technologies Inc.  
Genesis Technical Systems  
Genew Technologies Co. Ltd.  
Go Foton  
Google Fiber  
H3C  
Heights Telecom Ltd.  
Huawei Technologies Co., Ltd.  
Hybrid Access Technologies  
InCoax Networks AB  
Incognito Software Systems Inc.  
Intel

Inteno Group AB (Genexis BV)  
Interlink  
IO Intelligence  
ISPApp  
Juniper Networks  
Kaloom  
KAONMEDIA Co., Ltd.  
KPN  
Lambda Networks AS  
LAN  
Liberty Global  
Maxlinear  
Merocom Solutions  
Metanoia Communications  
Microsoft (formally Metaswitch)  
MT2 SAS  
National Broadband Network  
National Information Solutions Cooperative (NISC)  
NEC  
Netplus.ch S.A.  
Netsia  
Nokia  
NTT Corporation  
Octoscope  
OpenVault  
Orange  
OutSys  
PBN INNOVATION (BEIJING) CO., LTD.  
PIC Advanced SA  
Plume  
POST Luxembourg

Predictable Network Solutions Ltd  
Proximus  
QA Cafe  
Qualcomm Incorporated  
RAD Data Communications  
Radisys Corporation  
Reply AG  
RTBrick Inc.  
Sagemcom Broadband  
SaskTel  
SK Broadband  
Snom Technology GmbH  
Sparnex Instruments  
Spirent Communications GmbH  
Stechs  
Sterlite Access Solutions BU  
Support Robotics Limited  
TalkTalk Group PLC  
Technetix, Inc.  
Technicolor  
Telecom Argentina  
Telecom Italia S.p.A  
Telefonica S.A.  
Telenet NV  
Tellabs  
Telstra Corporation Ltd  
TELUS Communications, Inc.  
Tibit Communications  
Travelping GmbH  
Ubilinx Technology, Inc.  
UNH InterOperability Lab  
VCTI

Vecima Networks Inc.  
Verizon  
Viavi Solutions  
VMware  
Vodafone Group Services  
Zoom Telephonics  
ZTE Corporation

## AUDITING LEVEL

Actiontec Electronics  
Arcadyan Technology Corp.  
Askey Computer Corp.  
Comtrend Corporation  
Dish Network  
Fiberhome Telecommunications Technologies CO., LTD.  
Furukawa Latam  
Gemtek Technology Co.  
General Mobile (TELPA TEKNOLOJI HIZ. A.S.)  
Genew Technologies Co. Ltd.  
Harmonic Inc.  
Hitron Technologies Inc.  
Humax Networks, Inc.  
Icotera Sp. z o.o.  
MitraStar Technology Corp.  
Reply AG  
Seliro  
Sercomm  
Shenzhen Skyworth Digital Technology Co. Ltd.  
Sumitomo Electric Industries  
TDC A/S

Telekom Slovenije, d.d.  
Telenor Norge As (SY)  
Telkom SA Ltd  
TP-Link  
Triductor Technology  
Westermo  
WISI Communications GmbH & Co KG  
Zyxel Communications Corporation

## ASSOCIATE & OBSERVER LEVEL

China Academy of Information and Communications Technology (CAICT)  
Comcast  
Continental Automated Buildings Association (CABA)  
ETRI  
Industry Development Augmentation Division  
Informa T & M (Broadband World Forum)  
Layer123  
Mocalliance (MoCA)  
National Exchange Carrier Association  
National Media and Infocommunications Authority  
Northforge Innovations Inc.  
Ofcom  
Point Topic  
RDK  
Swisscom (Schweiz) AG  
TNO  
University of New South Wales

# Financial Report

John Waddell & Co, Certified Public Accountants, conducted the audit of the 2021 Broadband Forum financial statements. The following tables provide an overview of the financial position and key financial metrics of the organization at the close of 2021.

Statement of Financial Position  
December 31, 2021  
(With Comparative Totals for December 31, 2020)

ASSETS				
		2021		2020
Cash and cash equivalents	\$	1,400,980	\$	888,184
Investment in marketable securities		1,921,041		1,747,059
Accounts receivable		8,000		10,000
Prepaid expenses and deposits		85,933		98,430
Website, net of accumulated amortization of \$15,453 and \$8,871, respectively		4,292		10,874
	\$	<b>3,420,246</b>	\$	<b>2,754,547</b>

LIABILITIES AND NET ASSETS				
<b>Liabilities</b>				
Accounts payable	\$	40,586	\$	174,064
Accrued liabilities		127,056		—
Deferred membership dues		821,168		707,750
<b>Total Liabilities</b>		<b>988,810</b>		<b>881,814</b>
<b>Net Assets</b>				
With donor restrictions		16,083		16,083
Without donor restrictions:				
Designated for reserves		1,000,000		1,000,000
Undesignated		1,415,353		856,650
<b>Total Net Assets</b>		<b>2,431,436</b>		<b>1,872,733</b>
	\$	<b>3,420,246</b>	\$	<b>2,754,547</b>



Statement of Activities  
For the Year Ended December 31, 2021  
(With Comparative Totals for December 31, 2020)

	WITHOUT DONOR RESTRICTIONS	WITH DONOR RESTRICTIONS	2021 TOTAL	2020 TOTAL
<b>Revenue</b>				
Membership dues	\$ 1,537,700	\$ —	\$ 1,537,700	\$ 1,381,150
Meeting fees	—	—	—	31,500
Sponsorship fees	225,250	—	225,250	258,250
Interest and investment income	172,608	—	172,608	190,220
<b>Total Revenue</b>	<b>1,935,558</b>	<b>—</b>	<b>1,935,558</b>	<b>1,861,120</b>
<b>Expenses</b>				
Program services:				
Meetings	135,089	—	135,089	214,143
Member services, tools, and other	208,261	—	208,261	136,428
Trade shows, marketing and PR	486,443	—	486,443	496,325
<b>Total program services</b>	<b>829,793</b>	<b>—</b>	<b>829,793</b>	<b>846,896</b>
General and administrative	547,062	—	547,062	453,053
<b>Total Expenses</b>	<b>1,376,855</b>	<b>—</b>	<b>1,376,855</b>	<b>1,299,949</b>
<b>Change in Net Assets</b>	<b>558,703</b>	<b>—</b>	<b>558,703</b>	<b>561,171</b>
<b>Net Assets</b>				
<b>Beginning of Year</b>	<b>1,856,650</b>	<b>16,083</b>	<b>1,872,733</b>	<b>1,311,562</b>
<b>End of Year</b>	<b>\$ 2,415,353</b>	<b>\$ 16,083</b>	<b>\$ 2,431,436</b>	<b>\$ 1,872,733</b>

# BBF Team

**Managing Director** | Ken Ko | [kko@broadband-forum.org](mailto:kko@broadband-forum.org)  
**VP SM & BD** | Craig Thomas | [cthomas@broadband-forum.org](mailto:cthomas@broadband-forum.org)  
**Membership Development** | Rhonda Heier | [rheier@broadband-forum.org](mailto:rheier@broadband-forum.org)  
**Member Support** | April Nowicki | [anowicki@broadband-forum.org](mailto:anowicki@broadband-forum.org)  
**Secretariat** | Gabby Bond | [gbond@broadband-forum.org](mailto:gbond@broadband-forum.org)  
**Software Architect** | William Lupton | [wlupton@broadband-forum.org](mailto:wlupton@broadband-forum.org)  
**Marketing Coordinator** | Tiffany Groves | [tgroves@broadband-forum.org](mailto:tgroves@broadband-forum.org)  
**Media & Public Relations** | Brian Dolby | [brian.dolby@proactive-pr.com](mailto:brian.dolby@proactive-pr.com)

# Links and Contacts

Enquiries | [info@broadband-forum.org](mailto:info@broadband-forum.org)  
Support | [tools@broadband-forum.org](mailto:tools@broadband-forum.org)  
Member Sites and Sign-up | [wiki.broadband-forum.org](http://wiki.broadband-forum.org)  
Public Site | [broadband-forum.org](http://broadband-forum.org)  
Download this report | [broadband-forum.org/about-bbf/annual-report](http://broadband-forum.org/about-bbf/annual-report)

