



Welcome to San Jose!



WIRELESS GLOBAL CONGRESS

WIRELESS BROADBAND ALLIANCE

DRIVING NEXT WIRELESS EXPERIENCE



SAN JOSE

CONVENTION CENTER, USA

14 - 17 NOVEMBER 2016

SHOW GUIDE 2016

Getting the best out of your visit

COEXISTENCE & CONVERGENCE OF LICENSED & UNLICENSED

DRIVING NEXT GENERATION WIRELESS

Next Gen Wi-Fi

Connected Cities

Unlicensed Wireless & IoT

Convergence & 5G Roadmap

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INTRODUCTION FROM OUR CEO



Shrikant Shenwai
Chief Executive Officer
Wireless Broadband Alliance

I would like to take this opportunity to warmly welcome each and every one of you back to the Wireless Global Congress in San Jose.

Reflecting back on 2016, this has truly been a very significant year for the WBA. Our membership continues to grow at an incredible pace with key stakeholders in the industry joining the WBA. I hope you will join me in welcoming any new members that you may meet in San Jose. Our ongoing Vision 2020 plan continues to play a key role in our many initiatives, including Next-Gen Wi-Fi, Unlicensed Meets Licensed, 5G and Public Advocacy, among many others.

This event marks the one-year anniversary of the Connected City Advisory Board (CCAB), which has played (and will continue to play) a pivotal role in the economic development and sustainable operation of Connected Cities around the world. The first release of the Connected City Blueprint document highlights the importance of this work, as well as the first-ever City Wi-Fi Roaming project where users of Public Wi-Fi City networks from New York, Singapore, San Francisco and San Jose and subscribers from a large list of operators freely roamed between these City Wi-Fi networks.

The main theme for this year's conference programme is Innovation and Convergence. The wireless industry is at a major crossroads - the coexistence and convergence of licensed and unlicensed technologies are no longer merely buzzwords. In fact, as our latest industry report will show, they will play a key role in network strategies going forward. But still, major innovations are taking place now and will be discussed during the conference.

More than 50 speakers from all corners of the ecosystem will take the stage to share presentations and participate in panel discussions. Hundreds of executives and experts are expected to attend, offering a unique opportunity to be a part of the largest worldwide gathering of leaders from the Next-Gen Wi-Fi and city Wi-Fi ecosystem. Key presentations and discussions will focus on what's currently happening in the wireless industry. In addition, we will also be looking towards the future, with key technologists and young children from the area sharing their thoughts and ideas on the future of wireless.

The Wireless Global Congress is truly a one-of-a-kind event. I look forward to meeting and speaking with many of you over the course of the next few days, and I hope that you have a productive and enjoyable week in our great host city of San Jose.

I am pleased to welcome you to the Wireless Global Congress, back in the ever-friendly and inviting San Jose. This is the ninth Congress event held by the Wireless Broadband Alliance. Top-level speakers from around the world taking the stage to share ideas and opinions on the most prevalent issues facing our ecosystem today, and dozens of exhibitors ready to share their newest products and innovations, this promises to be our biggest and best event yet.

2016 has been a busy and important year for the WBA. Our Vision 2020 strategic plan has completed its first year and with the growth of areas such as Internet of Things (IoT), Big Data, Converged Services, Smart Cities and 5G, we've continued to expand the scope of our initiatives to include these developments. At the congress, you will see (or will have seen) a number of announcements indicating the increasing involvement and thought leadership of the WBA and its members in these areas.

In addition, the WBA continues to play a key role in the advancement of Wi-Fi and Wi-Fi related services on a global level. Our yearly Industry Report clearly shows the continuing importance of Next Gen Wi-Fi in topics such as convergence and 5G, with more than 80% of the respondents believe that Next Gen Wi-Fi will remain to play a key role in 5G network deployments and their future network strategies. We have also started to play an influential role in Spectrum and Policy related topics and are engaging much closer with governmental agencies than ever before.

It's a great time to be a part of the WBA, and I hope that you're as excited as I am by our organization's continued growth. Thank you for joining us here in San Jose at the Wireless Global Congress.



A handwritten signature in black ink that reads "JR Wilson". The signature is fluid and cursive, written on a white background.

JR Wilson
Chairman
Wireless Broadband Alliance

Join us – and help us shape the future.

Champion the Development of the Converged Wireless Broadband Ecosystem



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Ruckus Wireless, now part of Brocade, delivers simply better wireless for approximately 70,000 enterprise, service provider, government and small business customers worldwide. The company is focused on technology innovation, partner ecosystems and customer service—yielding the best possible wireless experience for the most challenging indoor and outdoor environments. Its Smart Wi-Fi platform delivers scalable, high-performance Wi-Fi with simplified control and management for on-premise and cloud-based Wi-Fi deployments, along with new services for secure on-boarding, policy management, location services and analytics that enable new business opportunities.

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With a unique crowdsourcing approach, Fon is built by people – for people. Fon’s goal is to blanket the world with WiFi. Find ‘Fon Spots’ wherever you go – walking down the street, having a coffee, or browsing around a shop.



We are passionate about great Internet experience, high quality code, and straightforward approaches to solving complex provider challenges. Now we have harnessed DNS to allow providers to deliver extraordinary value to their subscribers.

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Accuris Networks helps service providers monetise the connectivity between networks. Accuris solutions enable subscribers to move seamlessly and securely between LTE, GSM, Wi-Fi, IPX and fixed networks while ensuring a superior quality of experience.



We dare to say, no one knows carrier-class Wi-Fi service management better than we do. We help our 100+ carrier Wi-Fi customers to manage Wi-Fi hotspots, Offload 3G/4G traffic and deliver attractive, tailored B2B Wi-Fi services to venues, stadiums and businesses.



For more than ten years, BSG Wireless has been providing services that range from connection and hotspot clients to network interconnection services including data and financial clearing.



Front Porch enables carrier Wi-Fi operators to communicate to connected consumer’s smartphones during their visit. Front Porch provides a unique service that delivers compelling graphical and interactive content, as a watermark overlay, to Wi-Fi devices as consumers browse the Internet.



iPass is a cloud-based service that provides our customers access to the worlds largest Wi-Fi network, allowing them to stay connected to the information and people that matter most, whenever they need it.



Smith Micro provides software to simplify and enhance the mobile experience. As the leader in wireless connectivity, our applications help improve network Quality of Experience for mobile users while optimizing resources for service providers and enterprises. Using our intelligent policy-on-device platform, along with premium voice, video and content monetization services, we create new opportunities to engage consumers and capitalize on the growth of connected devices.



Syniverse is the leading global transaction processor that connects more than 1,500 mobile service providers, enterprises, ISPs and OTTs in nearly 200 countries and territories, enabling seamless mobile communications across disparate and rapidly evolving networks, devices and applications.

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More than just Wi-Fi, Boingo is a global leader in enhancing wireless access. We make it possible to travel the world and not rack up exorbitant wireless data bills. We enhance cell service in locations where concrete and steel kill throughput. We provide carriers and OEMs with a worldwide network their customers can use to stay connected. And we enable global brands to engage with high-value consumers in premier locations.

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As mobile user expectations continue to grow, it's crucial to deliver high-quality experiences. Syniverse can help you keep your customers satisfied by enabling you to do the following:

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- Gain a 360-degree view of the subscriber experience to resolve issues proactively

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THE EVENT SPEAKERS



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Mayor

San Jose



ALAN NORMAN
Public Policy Director

Facebook



ALPHONSO JENKINS
Deputy Commissioner of
Telecom Planning

New York City



CHETAN SHARMA
Founder & President

Chetan Sharma Consulting



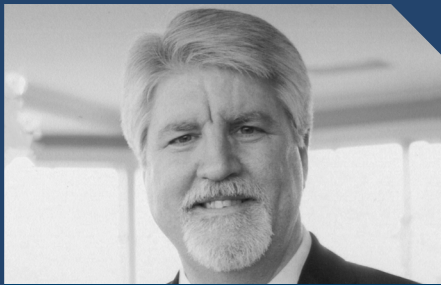
CHRIS BRUCE
Director of International Sales
& Consulting Services

BT



CHRIS SPENCER
CTO

GlobalReach



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Assistant Vice President
Radio Technology and Architecture

AT&T Technology and Operations



DELLA CONLEY
Director of Coverage Solutions

T-Mobile US



DEREK PETERSON
Chief Technology Officer

Boingo Wireless

THE EVENT SPEAKERS



ANGELOS MAVRIDIS
International Carrier Sales
& Solutions

Deutsche Telekom AG



CAM CULLEN
VP of Global Marketing

Procera Networks



CARL DALY
Vice President,
Global Sales Operations

Front Porch



CHRIS SZYMANSKI
Director, Product Marketing
& Global Government Affairs

Broadcom



DAN RABINOVITSJ
COO

Ruckus Wireless



DAVE WILSON
VP, Technology & Standards

Consumer Technology
Association



DOUG DAVENPORT
Founder and CEO

Prospect Silicon Valley



EDGAR FIGUEROA
President and CEO

Wi-Fi Alliance



ENRIQUE FARFÁN
COO

FON



THE EVENT SPEAKERS



ERIC SCHAEFER
SVP & General Manager,
Communications, Data & Mobility

Comcast



GARY MESSIANA
CEO

Nominum



HEMA PENTAKOTA
Principal Solution Architect

Nokia



JR WILSON
VP, Partnerships & Alliance

AT&T Mobility



MARIAN CROAK
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Access and Emerging Market

Google



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CMO

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Head of Broadband Evolution

CableLabs



RANDALL SCHWARTZ
Principal Consultant

Wireless 20/20



REZA JAFARI
Chairman & CEO

E-Development International

THE EVENT SPEAKERS



HILLOL ROY
Partner

IBB Consulting



JIM FORSTER
Chairman

Mawingu Networks



JINGYI ZHOU
Director of 5G Standards
& Industry Development

ZTE



MIGUEL GAMINO
CIO

City & County of San Francisco



NEVILLE MEIJERS
VP, Small Cells

Qualcomm



PAUL MIKKELSEN
CEO

Aptilo Networks



RICHARD S. WHITT
Corporate Director for Strategic
Initiatives, Google Access

Google



ROB LLOYD
CIO

City of San Jose



ROB VAN DEN DAM
Global Telecommunications
Industry Leader

IBM



THE EVENT SPEAKERS



RON MALENFANT
Global SP IOE Lead Solutions Architect

Cisco



SHRIKANT SHENWAI
CEO

Wireless Broadband Alliance



STEFAN WIMMER
Senior Manager

Deutsche Telekom AG



STEVE ANDREWS
CEO

AbbeyBarn Communications Ltd



STEVE DINOTO
Director of Civic Innovation & Digital Strategies

City of San Jose



STEVE MARTIN
Sr. Vice President

Ruckus Wireless



TERRY KRAMER
Adjunct Professor; Decisions, Operations and Technology Management

UCLA Anderson School of Management



TETSUZO (TED) MATSUMOTO
Chief Strategy Officer (retired)

SoftBank



VINAY THADANI
Senior Marketing Manager for Advanced Automotive Initiatives

Renesas Electronics America

Anticipated time frame for 5G standardization



expect that 5G will be standardized by 2020



expect the standardization process will run until 2025

5G deployment timelines

36% have deployments in place by 2020

52% have deployments in place by 2025



62% think that 5G will be a combination of

Licensed and Unlicensed

TECHNOLOGIES

80% think Wi-Fi will play a relevant role in 5G

Main drivers are

- Cost and coverage
- Energy/battery life
- Latency

How relevant are unlicensed spectrum technologies for 5G?

88%

find unlicensed spectrum critical or important for 5G



The TOP 3 critical topics for 5G:

- 1 Convergence of services and technologies
- 2 Regulation of shared spectrum models
- 3 Virtualization

What major applications and/or services will be enabled/improved by using unlicensed technologies as part of 5G?



Smart Cities



IoT Sensor Networks



Safety & Surveillance



Smart Home



Healthcare



Best-in-class WiFi solutions for Service Providers

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CONFERENCE PROGRAMME: WEDNESDAY 16TH NOVEMBER

KEYNOTE SESSION CREATING COEXISTENCE AND CONVERGENCE Moderator: Steve Andrews	
09.00	WELCOME ADDRESS: Opening Address JR Wilson VP, Partnerships & Alliances
09.10	OFFICIAL OPENING: San Jose Smart City - Future Visions Mayor Sam Liccardo Mayor, San Jose
09.20	SESSION CHAIRMAN & MODERATOR: Steve Andrews CEO, AbbeyBarn Communications Ltd
09.40	KEYNOTE SPEAKER: Mr. Anupam Srivastava CMD BSNL
10.00	KEYNOTE SPEAKER: Connected Intelligence: Conflict and Convergence Chetan Sharma Founder & President, Chetan Sharma Consulting
10.20	KEYNOTE SPEAKER: Carrier Wi-Fi Essential to Operator's Future Success Ted Matsumoto Former SoftBank CSO
10.45	KEYNOTE SPEAKER: John Apostolopoulos VP, CTO Cisco Innovation Labs
11.15	KEYNOTE SPEAKER: Coexistence and Convergence between Wi-Fi and Mobile, Data and Voice Cedric Gonin Senior Director Marketing Mobile Services
11.30	COFFEE/TEA BREAK Guided tour to Innovation Lounge

KEYNOTE SESSION IMPROVING SPECTRUM AVAILABILITY AND ACCESS	
12.00	MODERATOR AND SPEAKER: 3.5 Ghz, Spectrum Frontier, 5.9 GHz - Spectrum access is evolving Michael Calabrese Director, Wireless Future Program, New America's Open Technology Institute
12.10	KEYNOTE SPEAKER: Carrier Wi-Fi update Edgar Figueroa CEO, Wi-Fi Alliance
12.30	KEYNOTE SPEAKER: David Wolter AVP - Radio Technology and Strategy at AT&T Labs, Inc
12.45	KEYNOTE SPEAKER: Connectivity in the Emerging Markets Marian Croak VP R&D Access and Emerging Market, Google
13.00	PANEL: Can licensed and unlicensed convergence save our networks? Chris Szymanski , Director, Product Marketing & Global Government, Affairs, Broadcom Richard S. Whitt , Corporate Director for Strategic Initiatives, Google Access Alan Norman , Public Policy Director, Facebook Anil Kaushal , Member, TRAI David Wolter , AVP - Radio Technology and Strategy at AT&T Labs, Inc
13.30	LUNCH

INNOVATION SERVICES AND BUSINESS MODELS Moderator : Adlane Fellah, CEO, Maravedis LLC	
14.30	MODERATOR: Adlane Fellah CEO, Maravedis LLC
14.40	SPEAKER: DNS Innovations for Monetizing Wi-Fi in a HetNet Environment Gary Messiana CEO, Nominum
15.00	SPEAKER: Scaling Wi-Fi for Large Events Kishore Raja Director, R&D Strategic Programs, Boingo Wireless
15.15	SPEAKER: Case study - Learnings from the City Wi-Fi roaming Programme Chris Spencer , CTO, GlobalReach Technology Ltd
15.30	SPEAKER: Rethinking roaming and inflight Wi-Fi Stefan Wimmer , Senior Manager, Deutsche Telekom AG
15.50	PANEL: Business Models 2.0 - impacts of innovation Carl Daly , Front Porch Cam Cullen , VP of Global Marketing, Procera Networks Angelos Mavridis , International Carrier Sales & Solutions, Deutsche Telekom AG Chris Spencer , CTO, GlobalReach Technology Ltd Gary Messiana , CEO, Nominum Neil Griffiths , Head of Product Marketing, iPass
16.20	COFFEE/TEA BREAK

CONVERGENCE AND 5G NEW SERVICE OPPORTUNITIES Moderator: Hillol Roy, IBB Consulting	
14.30	MODERATOR: Hillol Roy IBB Consulting
14.40	SPEAKER: Coexistence and Convergence in 5G - WBA Roadmap Tiago Rodrigues Senior Director Programmes and Membership
15.00	SPEAKER: Why are we waiting for 5G when it is already here? Paul Mikkelsen CEO, Aptilo Networks
15.20	PANEL: 80% expect Wi-Fi to be part of 5G - reality or myth? Mr. Jingyi Zhou , Director of 5G Standards & Industry Development, ZTE Paul Mikkelsen , CEO, Aptilo Networks Cedric Gonin , Senior Director Marketing Mobile Services Tiago Rodrigues , Senior Director Programmes and Membership
16.00	COFFEE/TEA BREAK

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Interact with the speakers and panellists, pose live questions and vote during live polls.

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INNOVATION INFRASTRUCTURE, DEVICES, PLATFORMS, AND SERVICES	
16.30	MODERATOR AND SPEAKER: Innovation to Implementation - Different paths to success Dave Wilson , Vice President, Technology & Standards, Consumer Technology Association
16.45	SPEAKER: Advances in Carrier Wi-Fi technologies YongHyun Park , Manager, Broadband Tech. Lab, N/W R&D Center, SK Telecom
17.00	SPEAKER: Network Approach to enable and ease Integration of Independent Multi-Operator/Technology networks Hema Pentakota , Principal Solution Architect, Nokia Advanced Mobile Network Solutions Business Unit, Small Cells and Wi-Fi Solutions Business Line
17.20	SPEAKER: Carrier Wi-Fi Service Certification - An Introduction Tiago Rodrigues , Senior Director Programmes and Membership
17.30	PANEL: Influencing the Innovation value-chain Niraj Trivedi , Product Marketing Manager, Qualcomm Technologies, Inc Hema Pentakota , Principal Solution Architect, Nokia Advanced Mobile Network Solutions Business Unit, Small Cells and Wi-Fi Solutions Business Line Tiago Rodrigues , Senior Director Programmes and Membership

CONVERGENCE AND COORDINATED SHARED SPECTRUM SOLUTIONS	
16.30	MODERATOR: Randall Schwartz , Principal Consultant, Wireless 20/20
16.40	SPEAKER: 3.5 GHz – The Democratization of LTE Peter Smyth , VP of Wireless, Head of Broadband Evolution, Cablelabs
17.05	SPEAKER: Harmonious Integration of Unlicensed and Licensed Spectrum Neville Meijers , VP, Small Cells, Qualcomm
17.30	PANEL: Peter Smyth VP of Wireless, Head of Broadband Evolution, Cablelabs Neville Meijers VP, Small Cells, Qualcomm Steve Martin Sr. Vice President, Ruckus Wireless



18:00 CLOSE OF DAY ONE

CONFERENCE PROGRAMME: THURSDAY 17TH NOVEMBER

KEYNOTE SESSION URBAN BROADBAND ACCESS – SUSTAINABILITY AND AFFORDABILITY	
09.00	WELCOME ADDRESS: Chris Bruce Director of International Sales & Consulting Services
09.15	SESSION CHAIRMAN & MODERATOR: Reza Jafari Chairman & CEO
09.30	KEYNOTE SPEAKER: Service convergence in fixed/wireless networks for urban access Eric Schaefer SVP & General Manager, Communications, Data & Mobility, Comcast
09.50	KEYNOTE SPEAKER: How convergence can improve sustainable urban access Dan Rabinovitsj COO, Ruckus Wireless
10.10	KEYNOTE SPEAKER: Joshua Breitbart , Special Advisor for Broadband at Office of the Mayor, New York City
10.30	PANEL: Urban Access - how to create affordable access Alphonso Jenkins , Deputy Commissioner of Telecom Planning, NYC Rob Lloyd , CIO, San Jose Doug Davenport , Prospect Silicon Valley Eric Schaefer , SVP & General Manager, Communications, Data & Mobility, Comcast Arvind Kumar , Advisor TRAI Dan Rabinovitsj , COO, Ruckus Wireless
11.00	COFFEE/TEA BREAK Guided tour to Innovation Lounge

KEYNOTE SESSION OUTLOOKS BEYOND 2020	
11.45	KIDS FUTURE PANEL: - #createourfuture Derek Peterson, Ph. D. Horace Mann Elementary School
12.00	MODERATOR: Terry Kramer Adjunct Professor, Decisions, Operations and Technology Management – UCLA Anderson School of Management
12.10	KEYNOTE SPEAKER: 2020 is not that far away! Rob van den Dam Telecom Industry Leader, IBM
12.30	KEYNOTE SPEAKER: How customer demand is driving innovation Mary Clark CMO, Syniverse
12.50	KEYNOTE SPEAKER: How FON is innovating wireless access Enrique Farfán COO, FON
13.10	PANEL: It's the future - but not as we know it... Mary Clark , CMO, Syniverse Rob van den Dam , Telecom Industry Leader, IBM Enrique Farfán , COO, FON Shrikant Shenwai , CEO, Wireless Broadband Alliance
13.30	LUNCH

CREATING VALUE FOR INDUSTRY VERTICALS WITH (UNLICENSED) IOT Moderator: Vijay Sammeta, CEO, Civic Foundry	
14.30	SPEAKER: IoT Platforms Ron Malenfant Global SP IOE Lead Solutions Architect, Cisco
14.50	SPEAKER: Smarter Cities - Data acquisition and outputs Martin Mantalvanos CEO@ RSM Ltd / RSM Technologies USA
15.10	SPEAKER: What 802.11ah Technology Means for IoT Derek Peterson, Ph. D. Chief Technology Officer at Boingo Wireless
15.30	PANEL: How can unlicensed wireless solve IoT urban connectivity Vinay Thadani , Renesas Electronics America Inc Martin Mantalvanos , CEO@ RSM Ltd / RSM Technologies USA Ron Malenfant , Global SP IOE Lead Solutions Architect, Cisco Derek Peterson, Ph. D. , Chief Technology Officer at Boingo Wireless
16.00	COFFEE/TEA BREAK

TRANSFORMING THE NETWORK TOWARDS OPEN 5G	
14.30	This presentation will cover perspective on future industry trends and the opportunities to transform the network to meet future customer demands and deliver next-generation services yet to be envisioned. The transformation of communications networks towards virtualized infrastructure is well underway from edge applications to the core of the network. The Panel will deliver perspective on industry progress towards broad deployments of virtualized network infrastructure and discuss how Open Network collaborations will fuel the delivery of the broad scale deployments ahead. MODERATOR: Mohammed Shakouri , CEO, Strat-us PANEL: Tom Tofigh , ON LAB/AT&T Sandhya Narayan , ON LAB/Verizon
16.00	COFFEE/TEA BREAK

BREAKING BARRIERS INNOVATING FOR SOCIAL INCLUSION Session chairman: Ton Brand, Wireless Broadband Alliance	
16.30	SPEAKER: Breaking (wireless) ground in remote area's Jim Forster Chairman, Mawingu Networks
16.50	SPEAKER: Smart Spectrum Sharing and Affordable Broadband Connectivity Fisseha Mekuria, PhD Chief Researcher, Council for Scientific & Industrial Research, CSIR, South Africa
17.10	PANEL: East Side Union High School District (ESUHSD) WiFi Project MODERATOR: Steven DiNoto , Director of Civic Innovation & Digital Strategies, City of San Jose Rob Lloyd , City San Jose CIO Tim Fowell , Smart Wave Randy Phelps , East Side Union High School District CTO
17.45	CONFERENCE CLOSE: Parting thoughts Shrikant Shenwai CEO, Wireless Broadband Alliance
20:30	CLOSE OF DAY TWO

ACCELERATOR Program FOUNDER'S FLOOR	
18.00	WBA Accelerator is a dedicated session within the Congress which allows companies from the wireless ecosystem to interact with each other, present their business ideas and propositions to an audience of industry specialists, (invited) investors and conference attendees. The session will be kicked off by 3 industry and investment specialists who will give their views on the developments within the wireless industry and how the future outlook will determine investment and innovation capabilities within the tech ecosystem. 3 – 4 startup companies will be invited to present their business ideas to the audience, followed by a panel discussion where the presented ideas will be discussed with the audience and the start-up companies.

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Interact with the speakers and panellists, pose live questions and vote during live polls.

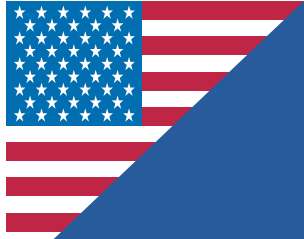
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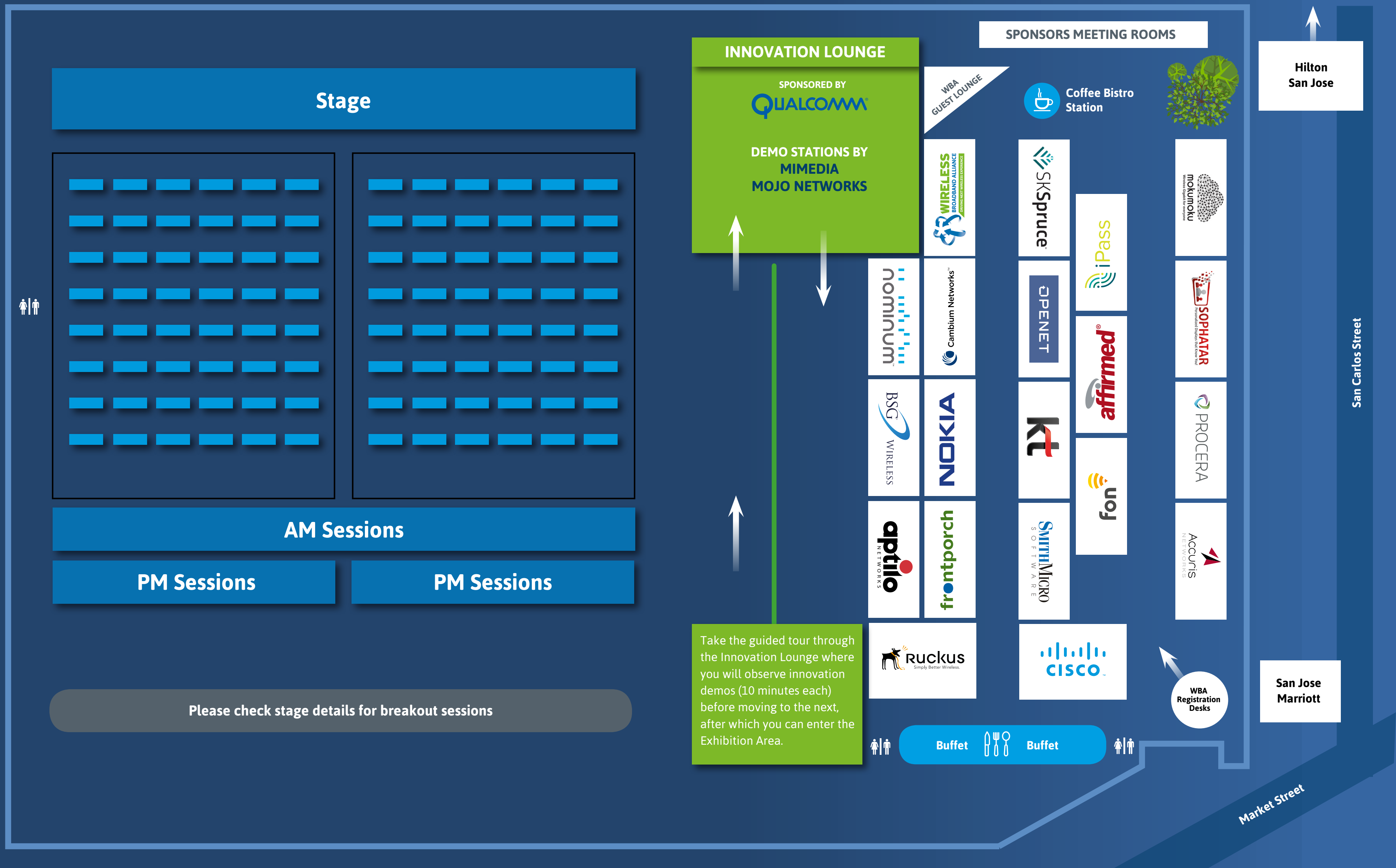
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THE WIRELESS GLOBAL CONGRESS FLOOR PLAN





THE WBA MISSION

WBA is the leading organization driving the adoption of wireless broadband and championing the development of the converged wireless broadband ecosystem through seamless, secure and interoperable unlicensed wireless broadband services for delivering outstanding user experience.



Wi-Fi and unlicensed wireless have now become a serious part in the telecommunications field, and are stepping outside their traditional role of providing connectivity to consumers toward vertical market specific sectors such as Cities, IoT service platforms, etc. Interoperability and security between different technologies is rapidly becoming a key requirement in developing new services.

Wi-Fi is poised to play an important role in the development of 5G. The adoption of Next-Generation Wi-Fi services will need the coexistence and convergence of unlicensed and licensed networks in order to have significant impact on the future of wireless communications.



Learn from the combined expertise and experience of our members. Get insight into global trends in the converged and unlicensed wireless ecosystems in addition to industry best practices.



Leverage networking and partnership-building opportunities at our world-class industry events. Join us at the Wireless Global Congress, Vision Forum, or one of our many one-on-one meeting opportunities, attended by the world's largest telecommunications companies.



Engage the community of operators, global LTE and Wi-Fi convergence partners, business leaders and technical experts that form our membership.



Influence The development of technical specifications and frameworks and have you say on key WBA initiatives through involvement in our working groups or on our projects.

MEMBERSHIP CATEGORIES

GENERAL MEMBER

For network operators or technology companies interested in full participation in WBA Members Meeting and full voting rights.

OBSERVER MEMBER

Open to operators and vendors with an annual revenue below \$50m (USD)
Restricted participation in WBA projects and no voting rights.

GROUP MEMBER

Open to affiliate companies of existing WBA Board or general members.
Participation in WBA projects allowed but voting rights via parent member companies.

BENEFITS EXCLUSIVELY FOR WBA MEMBERS

Collaboration Tools and Extranet

Connect with a global community of 500+ industry experts. Collaborate, network, search and share information, intelligence and the resources that you need to influence and grow your business within the Wi-Fi ecosystem

Participation and Networking Programs and Projects

Participate in Members-only programmes, projects and working groups which enable you to work with other industry players in a structured and efficient way towards common business objectives.

Marketing and Market Intelligence

Leverage the WBA platforms to enhance your business profile and promote your brand on the world stage.

Events Opportunities

Participate and engage with the world's leading wireless industry events for the ecosystem, Wireless Global Congress, attract over 1,700 people from across the globe annually

To view all of the benefits available to WBA Members, please visit:
wballiance.com/join-us/membership-benefits
alternatively scan the QR Code



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DRIVING NEXT WIRELESS EXPERIENCE



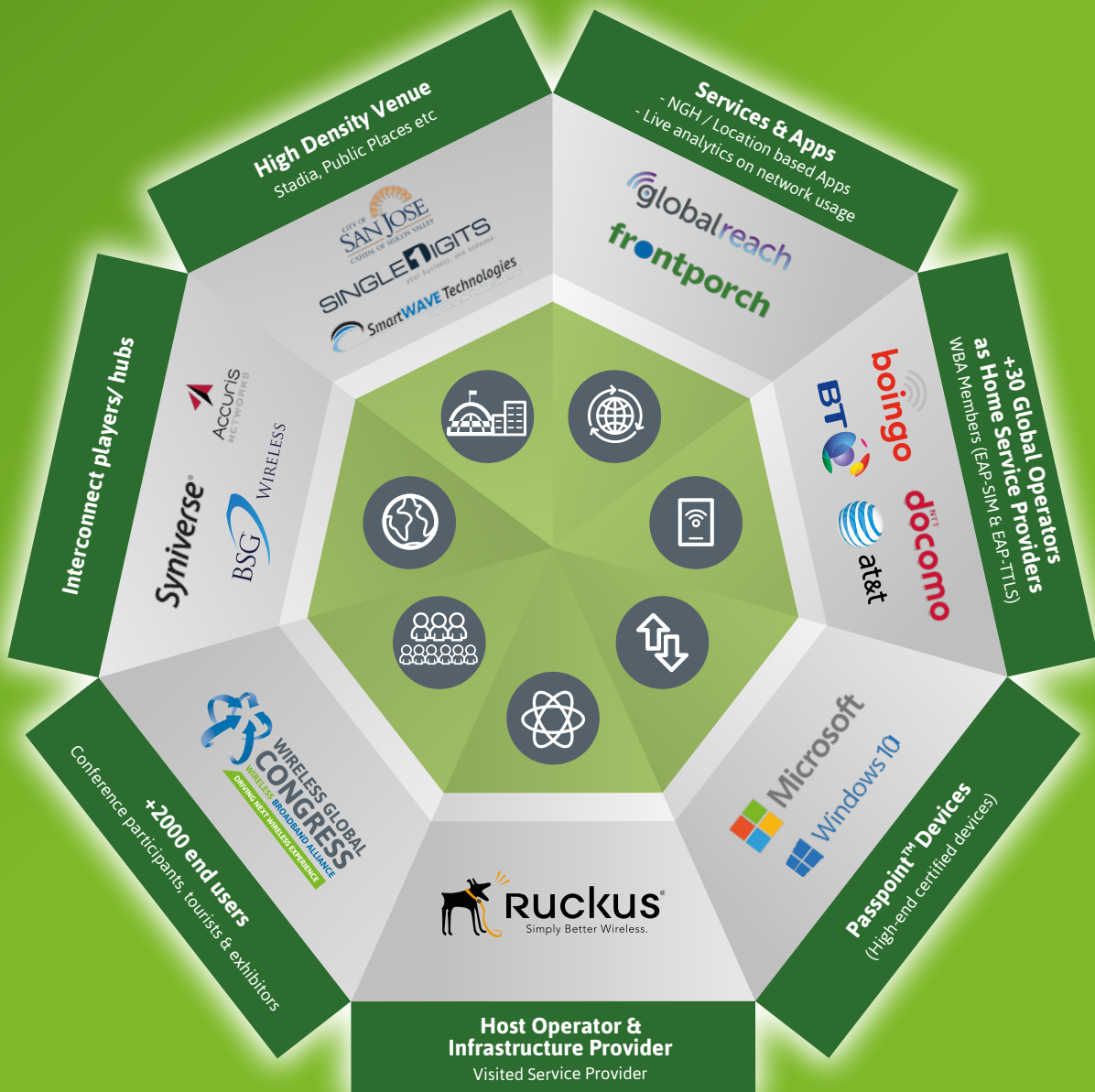
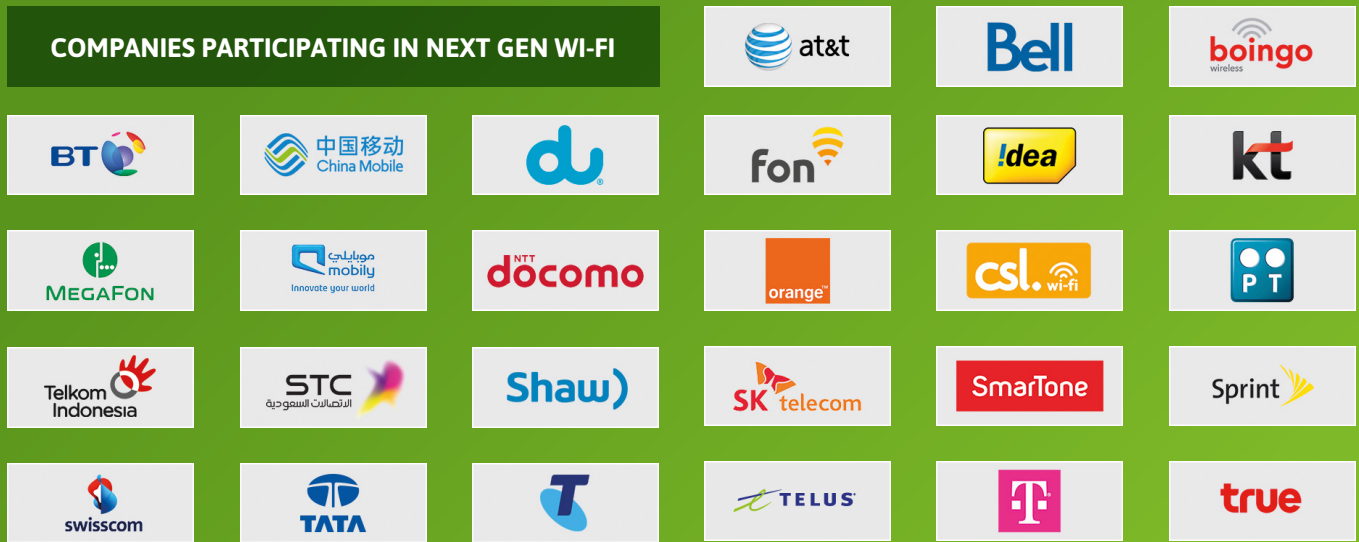
Enjoy the benefits of an automatic connection to the Next Gen Wi-Fi @ San Jose at the conference venue and various locations.

When you're in the coverage area of the Next Gen Wi-Fi network, you will automatically and securely connect on to the network based on your user identity credentials (either SIM card or Cable operator profile).

The Next Gen Wi-Fi network will be available in all the areas highlighted on the Coverage Area where **FREE** Wi-Fi is available.

The Next Gen Wi-Fi Experience is brought to you by







WHAT IS NEXT GEN WI-FI?

Wi-Fi has experienced a phenomenal growth in recent years. Not just a huge growth in the number of hotspots being deployed by several operators, but also new players emerging in the ecosystem (cities, venue owners, retail brands and specific vertical market service providers) and new value-added services being deployed (Wi-Fi Calling, Location Based Services).

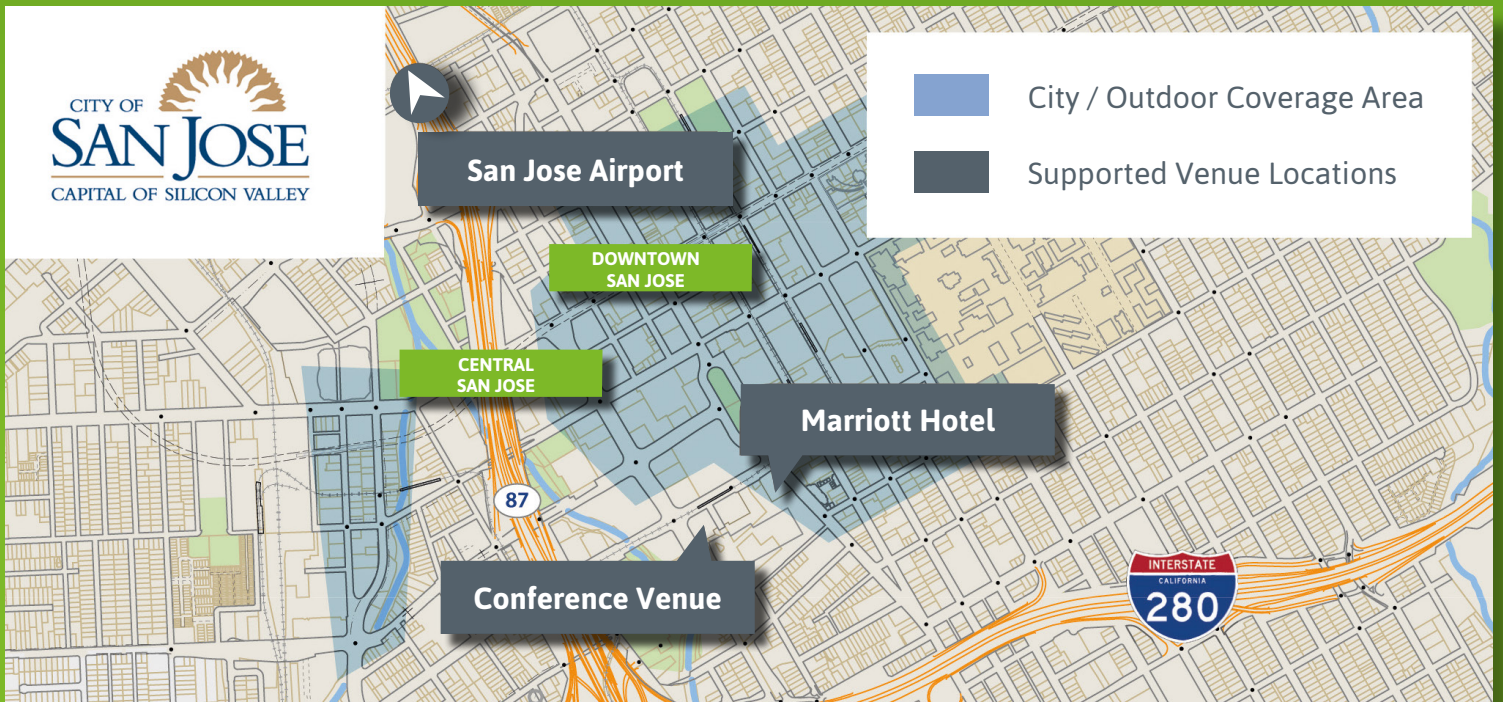
Carrier grade Wi-Fi platforms, Wi-Fi roaming and Passpoint have enabled the Wi-Fi ecosystem to develop new services for consumers and enterprises and to develop new monetization strategies and business models (e.g. Wi-Fi First operators, advertising, location based services).

Get to know all the capacities of Next Generation Hotspot to Offload and Roaming

Get a better understanding of the network implications of developing NGH

Understand all the procedures needed to implement and manage a Wi-Fi roaming service

Understand the NGH security and network discovery and selection capabilities



Participate in the next stage of Next Gen Wi-Fi Network and Device testing for WBA Members and WBA projects with leading wireless broadband operators and technology players from around the world.

Take advantage of the unique ecosystem initiative to validate and implement the Next Gen Wi-Fi capabilities in real-world end-to-end operators' environment.

The Next Gen Wi-Fi Live Experience will be featured throughout the entire Wireless Global Congress (14 – 17 November)

To prepare your smart device* visit:
<https://wba.odysys.net> to register your device for the Next Gen Wi-Fi experience @ San Jose.

Once you arrive at the San Jose Convention Center you will be automatically connected to the **WBA_NGH (HS2.0) Wi-Fi**

Provisioning SSID: WBA_NGH_Setup
HS2.0 SSID: WBA_NGH

*for a full list of supported devices please visit:
<https://wba.odysys.net>

If you have further questions or require further technical support please email:
nghlive@wballiance.com

OBJECTIVES OF NEXT GEN WI-FI LIVE EXPERIENCE:

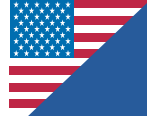
- Promote the adoption and awareness around Next Gen Wi-Fi for Carriers and End Users
- Showcase seamless and automatic roaming between Wi-Fi and cellular networks (3G, 4G) with an outstanding user experience
- Mobilize a large number of Carriers to participate on the NGH Live Experience @San Jose 2016
- Attendees and citizens benefit from the seamless and secure Wi-Fi experience
- Engage the local community around Next Gen Wi-Fi benefits and foster live deployments

Do you want to provide the Next Gen Wi-Fi to your customers?
contact nghlive@wballiance.com to join the initiative now!

NEXT GEN WI-FI NOW SUPPORTS WINDOWS 10 DEVICES

 Windows 10





WBA INDUSTRY AWARDS 2016

WBA INDUSTRY

Awards 2016

CELEBRATING ECOSYSTEM EXCELLENCE

CORINTHIAN GRAND BALLROOM SAN JOSE, USA

Champagne Reception: 7:00pm

AWARD CATEGORIES SHORTLIST



SPONSOR OF "BEST WIRELESS INNOVATION AND EXCELLENCE IN SOCIAL IMPACT AWARD"



SPONSOR OF "BEST CONNECTED CITY DEVELOPMENT AWARD"

1 - BEST OPERATOR DEPLOYMENT

1a - Best Next Gen Wi-Fi Operator Deployment



Reimagining Wi-Fi with S.M.A.R.T. Networks



Certificate-based Next Generation Hotspot (NGH) Deployment



Telstra Air Largest Australian Wi-Fi Network

1 - BEST OPERATOR DEPLOYMENT

1b - Best Converged Operator Deployment



Championing Convergence: Boingo DAS and Wi-Fi Networks Win Big at Philips Arena



olleh tv air



Telia Company pioneer in convergence enabled by Aptilo Networks

2 - BEST WIRELESS NETWORK INFRASTRUCTURE

2a - Best Next Gen Wi-Fi Network Infrastructure



Affirmed Networks' fully virtualized, Wi-Fi Gateway (built on top of its leading Mobile Content Cloud solution)



One of the Largest Wi-Fi Network, with over 460,000 APs seamlessly integrated into SoftBank's LTE network



SmallCellSite.com

2 - BEST WIRELESS NETWORK INFRASTRUCTURE

2b - Best Converged Network Infrastructure



Aptilo SMP Wi-Fi Calling™



conn4 – the unified solution for digital convenience



OpenG defeats in-building cellular coverage for consumers

3 - BEST WIRELESS SERVICE INNOVATION

3a - Best Consumer Centric Wireless Service Innovation



Harnessing Wi-Fi to Create a Better Wi-Fi Experience



Creating a seamless global user experience over Wi-Fi whilst minimizing latency



olleh tv air

3 - BEST WIRELESS SERVICE INNOVATION

3b - Best Industrial Wireless Service Innovation



Aptilo SMP Venue Wi-Fi Manager™



AT&T Foundry for Connected Health at Texas Medical Center



Broken Bridges and Roads - from a connected city network roaming perspective, how to connect them

4 - BEST CONNECTED CITY DEPLOYMENT



MK Smart – a live deployment of multiple smart city applications to make tangible improvements to public service delivery, business



LinkNYC - The First of It's Kind!



Wireless@SG plays a key role in a connected Singapore

5 - BEST WIRELESS DEPLOYMENT IN RURAL OR REMOTE AREAS



Wi-Fi deployment in a rural / remote village in South of India



Innovative solutions bring rural Limpopo online



Smart Wireless Backhaul Solution by SK Telecom

6 - BEST WIRELESS INNOVATION AND EXCELLENCE IN SOCIAL IMPACT



Digital Island Moheshkhali



YO! Connectivity to the Unconnected



Wi-Fi TV - lights, camera, citizenship!

7 - WBA WIRELESS LEADERSHIP AWARD

JESSICA ROSENWORCEL
FCC Commissioner

IMDA - WIRELESS@SG
Singapore's largest city wide federated public Wi-Fi network

DAVID HAGAN
CEO, Boingo Wireless

8 - DISTINGUISHED MEMBER AWARD (NON-OPERATOR)



9 - DISTINGUISHED MEMBER AWARD (OPERATOR)





OBJECTIVES & PROGRAMS OF WBA



Founded in 2003, the mission of the Wireless Broadband Alliance (WBA) is to champion the development of the converged wireless broadband ecosystem through seamless, secure and interoperable unlicensed wireless broadband services for delivering outstanding user experience. Building on our heritage of NGH and carrier Wi-Fi, WBA will continue to drive and support the adoption of Next Generation Wi-Fi services need coexistence and convergence of unlicensed and licensed networks across the entire public Wi-Fi ecosystem, including IoT, Big Data, Converged Services, Smart Cities, 5G, etc.

The key activities of the WBA aim to address the ever-changing market requirements and opportunities through the following 5 programmes and objectives:

OBJECTIVES

Accelerate Next Gen Wi-Fi across existing and new ecosystems and market opportunities

Empower connected cities ecosystem through best practices and public-private collaboration

Champion the Licensed convergence and co-existence of Licensed & Unlicensed Wireless services

Promote innovation using Wi-Fi & unlicensed (in IOT, Big Data etc) with ventures & investors

Advocate WBA agenda globally & influence spectrum, security, privacy & regulatory policies

PROGRAMS

1 - NEXT GEN WI-FI

2 - CONNECTED CITIES

3 - UNLICENSED MEETS LICENSED

4 - WIRELESS INNOVATION

5 - PUBLIC ADVOCACY

INTERESTED IN CONTRIBUTING YOUR THOUGHTS ON ENHANCING CUSTOMER EXPERIENCE AND DRIVE COMMERCIAL OPPORTUNITIES?

Contact WBA Project Management Office
pmo@wballiance.com and be part of the WBA projects.

To learn more visit: www.wballiance.com





CONNECTED CITY Advisory Board

What is the Connected City Advisory Board?

The Connected City Advisory Board (CCAB) develops, shares and promotes thought-leadership and practical framework for the social and economic development and sustainable operation of the Connected City ecosystem.

It's a unique platform for City Managers and CIOs to knowledge-share challenges and opportunities in the development and execution of Smart Cities, establish best practice and determine a strategy to leverage public-private partnerships.

This invitation-only group is comprised of representatives from major governmental and industry associations that are involved in Connected and Smart City development.



Who Should Participate?

The membership of the Connected City Advisory Board (CCAB) consists of a select group of City CIOs and senior city and government officials along with invited industry experts and members of the WBA Board of directors.

Current participants of the CCAB include leading cities which includes New York, San Francisco, Barcelona, London, San Jose, Dublin, Delhi, Mexico City, Calgary, Singapore and many more.



HAVE A VOICE IN THE FUTURE OF CONNECTED CITIES

Cities and associations that are interested in participating are invited to contact us at:

contactus@wballiance.com

For more information about the CCAB please visit:

wballiance.com



WORLD WI-FI DAY



WORLD™
Wi-Fi Day

Join us and celebrate World Wi-Fi Day on 20 June every year!

WHAT IS WORLD WI-FI DAY?

World Wi-Fi day is a global initiative to help bridge the digital divide.

It is a platform to recognize and celebrate the significant role Wi-Fi is playing in cities and communities around the world by driving exciting and innovative projects to 'connect the unconnected'.

World Wi-Fi Day is a unique worldwide initiative organized by Wireless Broadband Alliance under the leadership of Connected City Advisory Board (CCAB).

HOPE FOR CONNECTIVITY CHARTER

Our HOPE for Connectivity charter calls on cities, government bodies, fixed and mobile operators, technology vendors and Internet giants. Help us bridge the digital divide and create the critical influence to bring wireless connectivity by pledging your support to our initiative.

Help

Fund and support Wi-Fi deployments for underserved & unconnected

Offer

Access to more affordable internet through public Wi-Fi networks

Promote

Wi-Fi initiatives of industry & governments to connect the unconnected

Engage

Recognize the role of Wi-Fi in addressing the digital divide

“Connectivity continues to transform and improve the way we live in the world. There’s tremendous opportunity and responsibility for government leaders, technology providers, and innovators to participate and collaborate to make Wi-Fi available to anyone and everyone. World Wi-Fi Day gives the world a day to celebrate and commit to a connected life.”



Miguel Gamino
Chief Information Officer
City & County of San Francisco

WBA's World Wi-Fi Day and the HOPE for Connectivity charter has already received support from over 100 of the industry's biggest names
(as of June 2016)



The World Wi-Fi Day will offer an excellent opportunity for different stakeholders to support the World Wi-Fi Day by identifying and supporting a significant number of activities based on their areas of interest and focus.



Pledge your support now and be part of this initiative for the coming years!

The Wireless Broadband Alliance invites and urges you to take part in World Wi-Fi Day. For information on how to participate please visit: worldwifiday.com alternatively e-mail us at: contactus@wballiance.com



WBA 2017 CALENDAR OF EVENTS

2017 **Get ahead of the game, and put the dates in your calendar now!**

We're excited to share our 2017 Events with you so you can book the dates in your diary and share the plans with your colleagues around the world. Our preparations for our 2017 line-up are already underway, and we'll be getting in touch with you to plan your involvement as we release new and exciting partnership opportunities.

16 JAN

WBA VISION FORUM ASIA

16 January 2017,
Novotel Singapore,
Clarke Quay

17 - 19 JAN

**WORKING SESSIONS
SINGAPORE**

17 - 19 January 2017,
Novotel Singapore,
Clarke Quay

26 FEB

**BOARD MEETING
BARCELONA**

26 February 2017,
Mobile World Congress 2017,
Barcelona

27 FEB - 2 MAR

**MWC 2017 PARTICIPATION
BARCELONA**

27 February - 2 March 2017,
Mobile World Congress 2017,
Barcelona

8 - 11 MAY

**WIRELESS GLOBAL
CONGRESS EUROPE 2017**

8 - 11 May 2017,
London ExCel

13 - 16 NOV

**WIRELESS GLOBAL
CONGRESS USA 2017**

13 - 16 November 2017,
The Roosevelt, New York City

If you want to discuss Sponsorship, Speaking Opportunities, or Attending, email events@wballiance.com while you're at the event and one of our team will share more details with you over a coffee during the event.



BROCADE



BETTER CONNECTION WHERE YOU NEED IT MOST

BETTER MANAGED SERVICES

Our solutions are built to enable service providers to deliver high performance, always-on wireless services at significantly lower cost and complexity of conventional alternatives.

BETTER CONNECTED CITIES

Our Smart Wi-Fi technology delivers carrier-class reliability, simple management and wicked-fast speeds in Smart Cities around the globe.

BETTER INDOOR COVERAGE

OpenG technology combines coordinated shared spectrum capabilities in the U.S. with neutral host capable small cells to enable building owners of all sizes to deploy cost-effective in-building cellular coverage.

COME VISIT US AT OUR WBA BOOTH

ruckuswireless.com

JOIN US ON 8-11 MAY 2017 FOR THE WIRELESS GLOBAL CONGRESS
AT THE EXCEL LONDON FOR OUR BIGGEST EVENT YET



WIRELESS GLOBAL
CONGRESS

WIRELESS BROADBAND ALLIANCE

DRIVING NEXT WIRELESS EXPERIENCE



ExCel LONDON

8 - 11 MAY 2017

We take the discussion around the coexistence and convergence of licensed and unlicensed technologies to the next level, and assess how Next-Gen Wireless is being driven across the carrier and connected city ecosystems.



WBA WILL BRING YOU EXCITING NEW FEATURES ALONGSIDE THE RENOWNED CONGRESS IN LONDON, INCLUDING:

- Keynote Speakers from the Carrier and Connected Cities Ecosystems
- An Evening of Networking in the World's Most Sustainable Smart Building
- 4 Day Congress:
 - 2 days of by-invitation meetings:
 - Invitation Only Executive Roundtable Sessions
 - Working Group Sessions for WBA Members
 - 2 Full Day Conference Programme:
 - Discussions on 5G, Convergence, Future Networks, Shared Spectrum Solutions, Next Gen Wi-Fi, Privacy & Security, Connected Cities, New SP Ecosystem Boundaries, Unlicensed Wireless Solutions for IoT, and more!
- The WBA Accelerator
- Champagne Reception
- Alliance Partnership Opportunities

EXCLUSIVE PRE - LAUNCH OFFER

Register your place before we officially launch Wireless Global Congress 2017 and receive a 10% discount on any sponsor package or 30% discount on a pass to attend.

Book your place before 31 December 2016 by emailing events@wballiance.com with 'pre-launch London' in the subject line