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WIRELESS BROADBAND ALLIANCE

28 SEP – 21 OCT 2021

WI-FI: POWERING INNOVATION SERIES

Creating new possibilities in a virtual society

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19 OCT 2021 – 15:30 CET

Wi-Fi: Enabling the Smart Connected Enterprise

Creating new possibilities in a virtual society

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WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Introduction & Welcome

STEVE NAMASEEVAYUM

DIRECTOR, MEMBERSHIP & INDUSTRY ENGAGEMENT

Wireless Broadband Alliance

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Wi-Fi Powering Innovation Series

Full Program Agenda

September 28th & 29th – WBA Members Only Working Sessions

September 30th – WBA Members Only Working Sessions: Briefing for Asia-based members

WI-FI POWERING INNOVATION SERIES: 06:30 PT; 09:30 ET; 15:30 CET; 23:30 Singapore

Tuesday October 5th	Thursday October 7th	Tuesday October 19th	Thursday October 21st
Wi-Fi Leadership Conference & WBA Industry Awards 2021	**Wi-Fi: Public and Private Networks and Convergence with 5G**	**Wi-Fi: Enabling the Smart Connected Enterprise**	**Innovation for Service Providers, Cities and Venues with Public and Guest Wi-Fi**

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Wi-Fi: Enabling the Smart Connected Enterprise

OCTOBER 19, 2021

Steve Namaseevayum

Wireless Broadband Alliance

Anthony Fontivero

London Stadium

Simon Vaughan

GlobalReach Technology

Massimo Mazzeo Ocello

CommScope RUCKUS

Yang Jie

Huawei Technologies

Seemab Kadri

Intel Corporation

Bruno Tomás

Wireless Broadband Alliance

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Wi-Fi: Enabling the Smart Connected Enterprise

TODAY'S AGENDA	
15:30pm (CET)	**Introduction & Welcome** Steve Namaseevayum, Director of Membership & Industry Alliances, Wireless Broadband Alliance.
15:35pm (CET)	**Challenges and Opportunities for Smart Connectivity within the Stadium Environment** Anthony Fontivero, IT Technical Lead, London Stadium
15:55pm (CET)	**Changing Customer Relationship with Enterprise-Grade Connectivity** Simon Vaughan, Chief Commercial Officer, GlobalReach Technology
16:15pm (CET)	**Unfailing Wi-Fi6 connects America's Cup Italian team on land, sea and air – Luna Rossa Prada Pirelli** Massimo Mazzeo Ocello, VP, Global Systems Engineering, CommScope RUCKUS
16:35pm (CET)	**Wi-Fi 6 Advanced, Powering Speedy, Stable, and Smart Wireless Production Networks** Yang Jie, Vice President, Campus Network Domain, Huawei Technologies
16:55pm (CET)	**Wireless transformation for smart enterprises** Seemab Kadri, Director, Strategic Partnerships and Marketing, Wireless Solutions, Intel Corporation
17:15pm (CET)	**WBA Vision and Roadmap for 2022+** Bruno Tomás, Director of Programs, Wireless Broadband Alliance.
17:35pm (CET)	**Close** Steve Namaseevayum, Director of Membership & Industry Alliances, Wireless Broadband Alliance.

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Challenges and Opportunities for Smart Connectivity within the Stadium Environment

ANTHONY FONTIVERO

IT TECHNICAL LEAD

London Stadium

LONDON STADIUM

London Stadium

Challenges & opportunities for smart connectivity within a stadium environment

LONDON STADIUM

About us

60,000 seats
80,000 capacity

Hospitality lounges & executive boxes with a combined capacity of 3600

Longest cantilevered roof in the world

Events

LONDON STADIUM

Connected Stadium Project

Goals

- Seamless user experience
- Commercial benefits
- Operational usage
- Enhanced capabilities for stakeholders

Infrastructure

2x 10GB fibre lines

Cisco High-Density WiFi

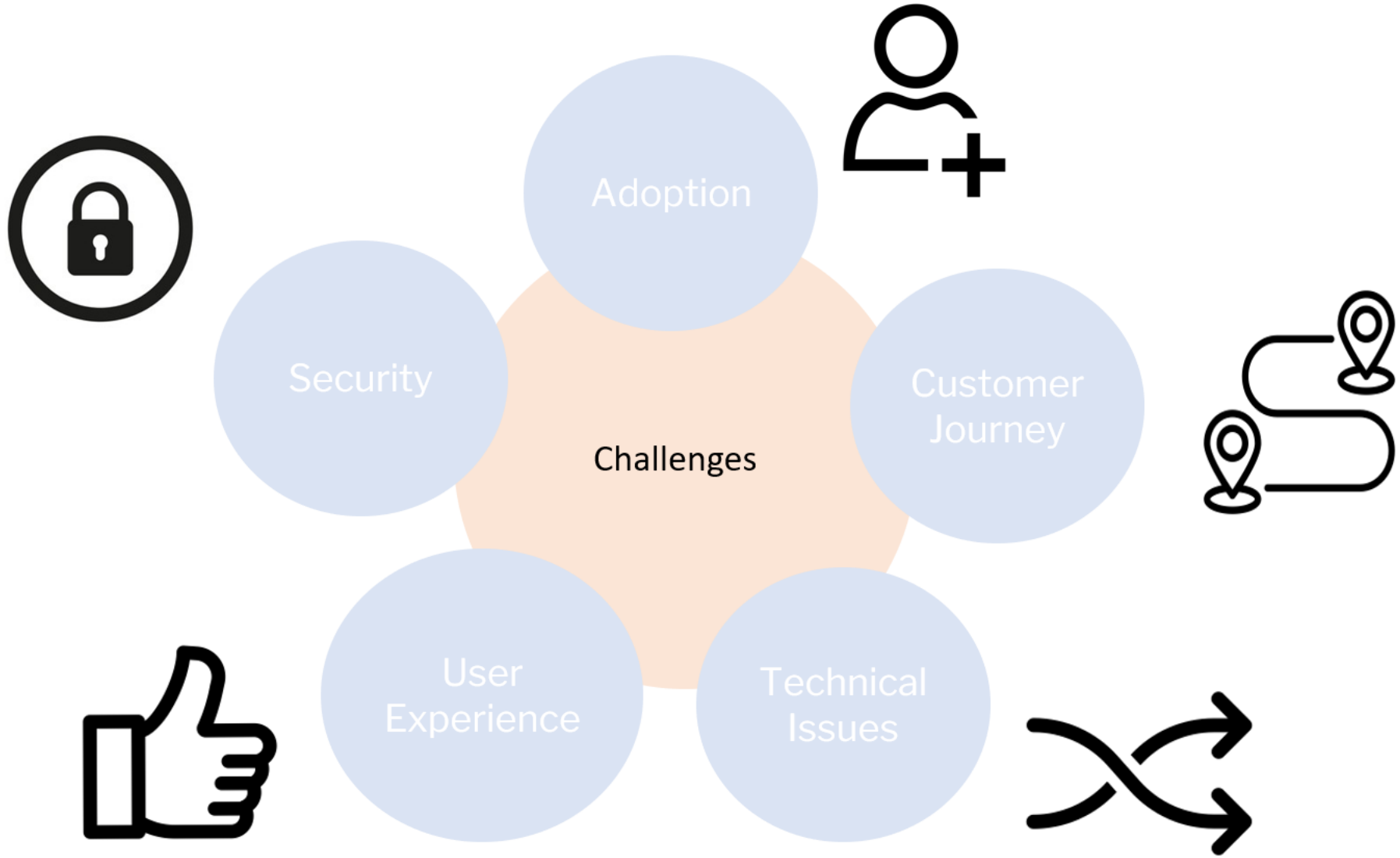
cisco DNA Spaces

inforemost

O2 Telefónica

LONDON STADIUM

Challenges



LONDON STADIUM

JOIN OUR FREE STADIUM WIFI

LONDON
STADIUM

JOIN OUR FREE STADIUM WIFI

LONDON
STADIUM

SEARCH FOR LS FREE WIFI AND CONNECT NOW

LONDON
STADIUM

Opportunities

Integration

App SDK

Carrier-offload

User experience

Location based portals

Seamless connectivity across the venue

Operational

Domain access

Live streaming bodycams

Versatile control

ROI

Captive portal platform advertising

Granular insights

London Stadium

Thank you

LONDON STADIUM

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Changing Customer Relationships with Enterprise-Grade Connectivity

SIMON VAUGHAN

CHIEF COMMERCIAL OFFICER

GlobalReach Technology

globalreach

Changing Customer Relationships with Enterprise-Grade Connectivity

Simon Vaughan, Chief Commercial Officer

19 October 2021

CHANGING CUSTOMER USE CASES: HOME Wi-Fi

“Every day is Christmas Day”

CHANGING CUSTOMER USE CASES: ENTERPRISE

DISTANCE LEARNING

TELECOMMUTING

TELEPRESENCE

Source: Telecom Advisory Services, Dec 2020

globalreach

DISTANCE LEARNING

- Often only link between student & teacher
- Local community use of public Wi-Fi where no home access
- Ability to support remote learning on the move
- Provision of an environment to study
- Bandwidth to support uninterrupted streaming, video calls, learning apps

TELECOMMUTING

- Wi-Fi is still the key technology enabling telecommuting
- Wi-Fi an expected part of digital infrastructure
- Demand for connectivity in more places
- Demand for parity with home performance

TELEPRESENCE

- Complete infrastructure of:
  - Mobile devices
  - Wireless networks
  - Mobile video conferencing
- High-performance services
- Capability to support high volume streaming, media & real-time collaboration

USE CASE: RAIL

"It's revolutionised the way people interact with station environments"

- Enhanced station experience
- Community & student support
- 'Station-as-destination'
- Longer dwell time
- Appreciation of station environments
- Enjoyment of architectural heritage

USE CASE: RETAIL MALLS

- Customer understanding, store planning & wayfinding to combat shopping fatigue
- Wi-Fi provides route back to engage with the customer
- Stores-as-showrooms
- Bridge between bricks & mortar & experiential shopping, VR experiences etc.

USE CASE: CONNECTED PLACES

- Digital inclusion & enfranchisement
- Support for local communities
- Digital business enablement for outdoor traders
- Digitisation of historic & important amenities like street markets
- Stimulate economic growth & ‘reopen’ city centres

FAST & SECURE

UP/DOWNLOAD SPEEDS

PASSPOINT

ENCRYPTED PUBLIC WI-FI

WI-Fi 6

HIGH RELIABILITY

IDENTITY VERIFICATION

globalreach

globalreach

simon.vaughan@globalreachtech.com | + 44 20 7831 5630

Unfailing Wi-Fi6 Connects America's Cup Italian team on Land, Sea and Air – Luna Rossa Prada Pirelli

MASSIMO MAZZEO OCELLO

VP, GLOBAL SYSTEMS ENGINEERING

CommScope RUCKUS

COMMSCOPE®
RUCKUS®

Lunarossa Challenge

Massimo Mazzeo, VP Global Systems Engineering

October 2021

"Is Wi-Fi

GOOD ENOUGH

for mission critical applications?"

COMMSCOPE®
RUCKUS®

What Makes A Deployment *"CHALLENGING"*?

- Complex RF Conditions
- High Number Of Client Devices And Their Variety
- Requirement For Very Low Latency And Delay As Well As High Bandwidth
- Mission-critical Application Not Tolerating The Minimum Downtime
- Connecting (Smart) People To (Less-smart) Things
- Complex Nature Of The Site And The Available Infrastructure
- Mixing Up Untrusted Users With Trusted Ones In A Very IP-sensitive Environment

Deploy everything in one place, *and then…*

COMMSCOPE® RUCKUS®

Put it on a
HUGE
Antonov…

and rebuild it on the
other side of the world!!!

COMMSCOPE®
RUCKUS®

We wanted it challenging so
WE LOOKED FOR THE MOST CHALLENGING ONE!

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RUCKUS®

Luna Rossa Prada Pirelli's ***NEEDS***

ON THE WATER

- Connecting sensors and mobile devices on the boat to support telemetry, navigation, racing software and boat's control systems
- Connecting the racing boat to the chase boat to exchange big data for monitoring and simulator validation
- Offload data from the boats to the ground

ON THE GROUND

- Corporate network for employees and guests
- Indoor and Outdoor deployments
- Deployment of AP even where no infrastructure was present
- Relocation from Italy to New Zealand at race time
- Highest security standards
- Bulletproof isolation between trusted employee access and guest one to protect IP

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But ***WHY*** Was It Challenging?

ON THE WATER

- Marine environment is not the best for RF
- Amount of metal and carbon parts
- Connecting two boats sailing at 50 knots in rough waters with ultra-stable data flow
- Switching from racing to training mode
- Seamless and quick connection to ground once docked
- Ad-hoc onboard protocols with strict latency requirements

ON THE GROUND

- Employees exchanging high volumes of traffic for complex tasks
- High density during public events
- Outdoor locations with no infrastructure
- Relocation from Italy to New Zealand
- IT security and protection of IP
- Guest access, secure but easy

The Solution In *4 Points*

Capacity & Performance

RUCKUS® WiFi 6 Technology (with Mesh and PtMP)

RUCKUS® Analytics

Performance & Service Level Monitoring

Flexible Management

RUCKUS®Cloud & RUCKUS®SmartZone (on-prem)

RUCKUS® CloudPath®

Secure Guest & Staff Onboarding

COMMSCOPE® RUCKUS®

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RUCKUS® WiFi 6 Technology

- Network access at the base for employees & guest
- Dockyard coverage for R&D, and boat operations
- Mesh Technology for locations with no infrastructure (docks) and to connect the boat network to the ground
- PtMP solution to connect the racing boat with the chase boat during training sessions on sea

 |

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RUCKUS® SZ & CLOUD

Unified Wired And Wireless Management

- Single-pane management from anywhere
- Unlimited scalability for 10 sites or 10,000

High Performance Networking

- Industry-best Wi-Fi and multigigabit edge-to-core switching

RESTful APIs

- Easy automation via scripting languages

Seamless migration of architecture

- From on-premise to private cloud to public cloud seamlessly

AI-ENABLED NETWORK MANAGEMENT ON-PREMISE OR AS-A-SERVICE PLATFORM

 |

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RUCKUS® ANALYTICS

Incident Analytics

- ML-driven root cause analysis & remediation
- AI-driven severity classification

Network Health Monitoring

- Create & monitor SLA categories and thresholds

Client Troubleshooting

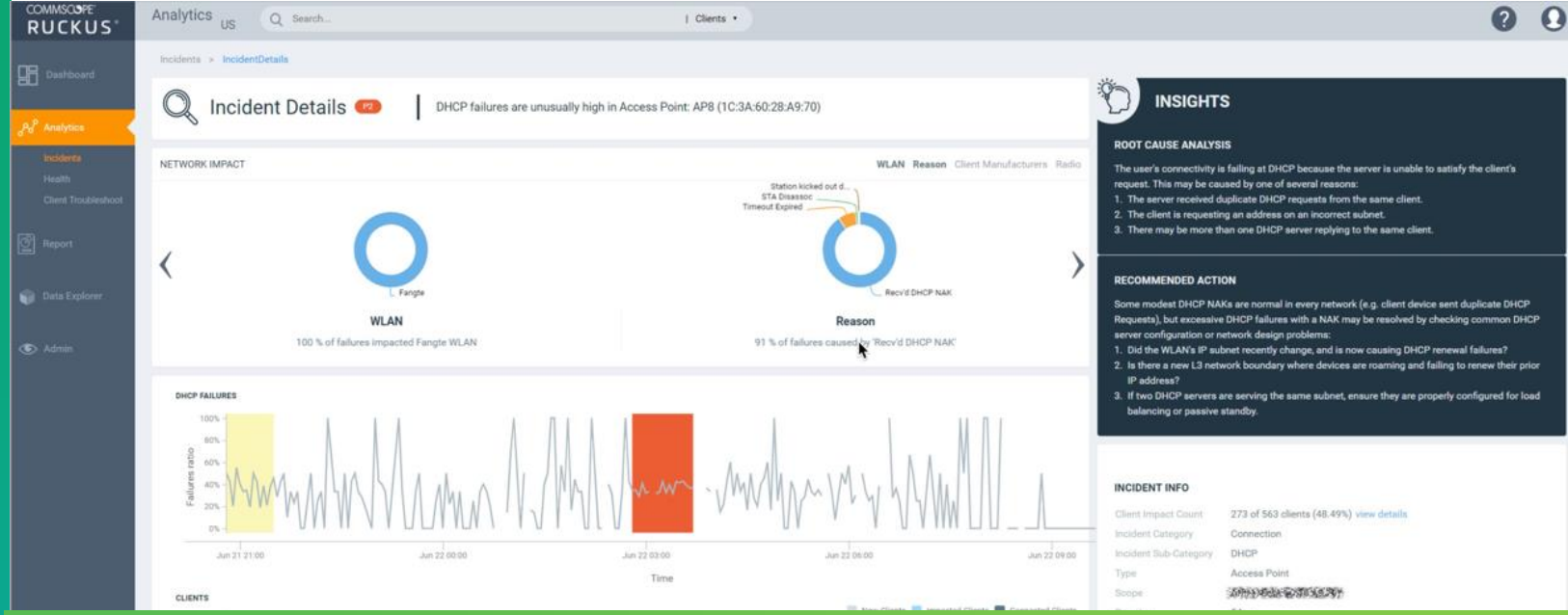
- Granular client connection diagnostics and event correlation

Data Explorer

- Customizable visualization for 12 months of historical data

Reporting

- Curated reports for 12 months of historical data



RUCKUS® NETWORK-WIDE VISIBILITY & INTELLIGENCE | ASSURANCE

 |

COMMSCOPE®
RUCKUS®

RUCKUS® CLOUDPATH® ENROLLMENT SYSTEM

Secure Connectivity

- Encryption for wireless data, security posture check and more

Self-service network onboarding

- Intuitive self-service workflows streamlines network access for BYOD and guest users

Policy-based network access

- Users get only the level of access appropriate to their role

Certificate management

- Support for authentication, authorization and accounting (AAA) via digital certificates

Integration via APIs

- Integration with 3rd-party and homegrown applications via API

SECURE NETWORK ACCESS FOR BYOD, GUEST USERS AND IT-OWNED DEVICES

 |

COMMSCOPE®

now meets next

Thank you

Massimo Mazzeo
massimo.mazzeo@commscope.com

Wi-Fi 6 Advanced, Powering Speedy, Stable, and Smart Wireless Production Networks

YANG JIE

VICE PRESIDENT, CAMPUS NETWORK DOMAIN

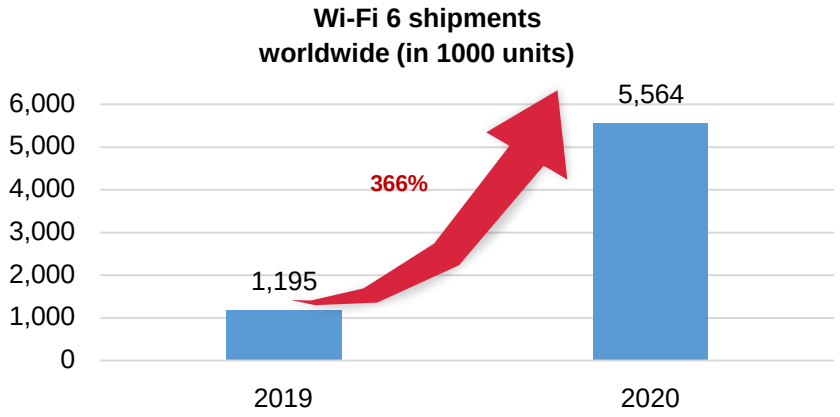
Huawei Technologies

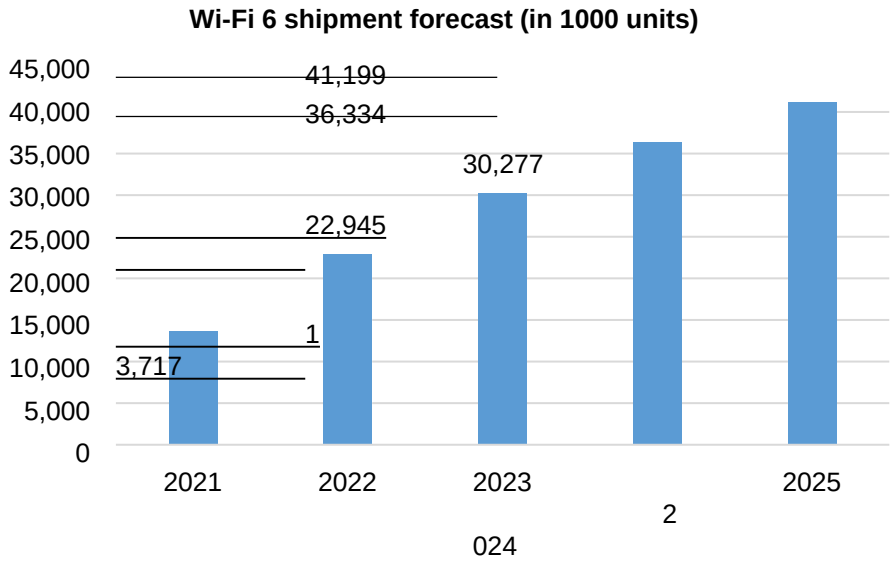
Wi-Fi 6 Advanced, Powering Speedy, Stable, and Smart Wireless Production _____ Networks

Yang Jie
Vice President
Campus Network Domain, Huawei

HUAWEI

In Commercial Use for Three Years, Wi-Fi 6 Is Developing at an Unprecedented Speed and Redefining Numerous Industries





Large enterprise

Fully-wireless office Wireless campus

Education

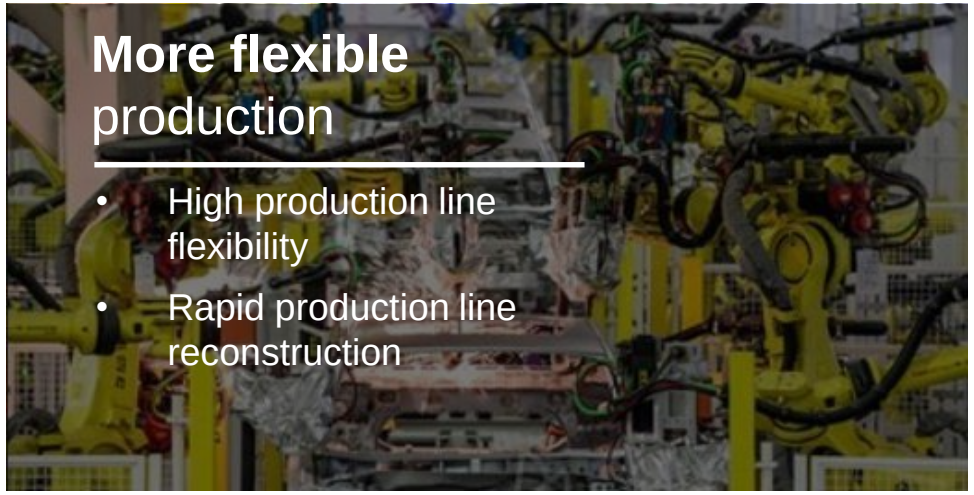
AR/VR teaching
Wireless multimedia teaching

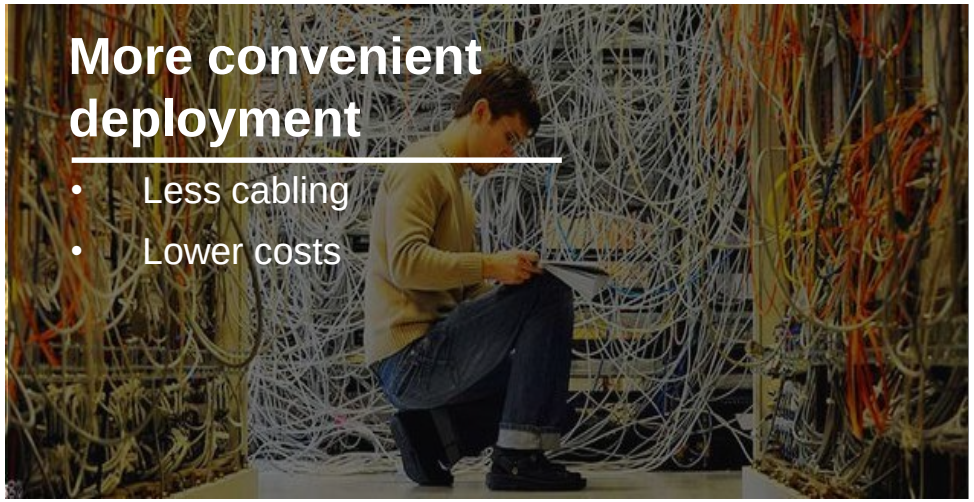
Retailers

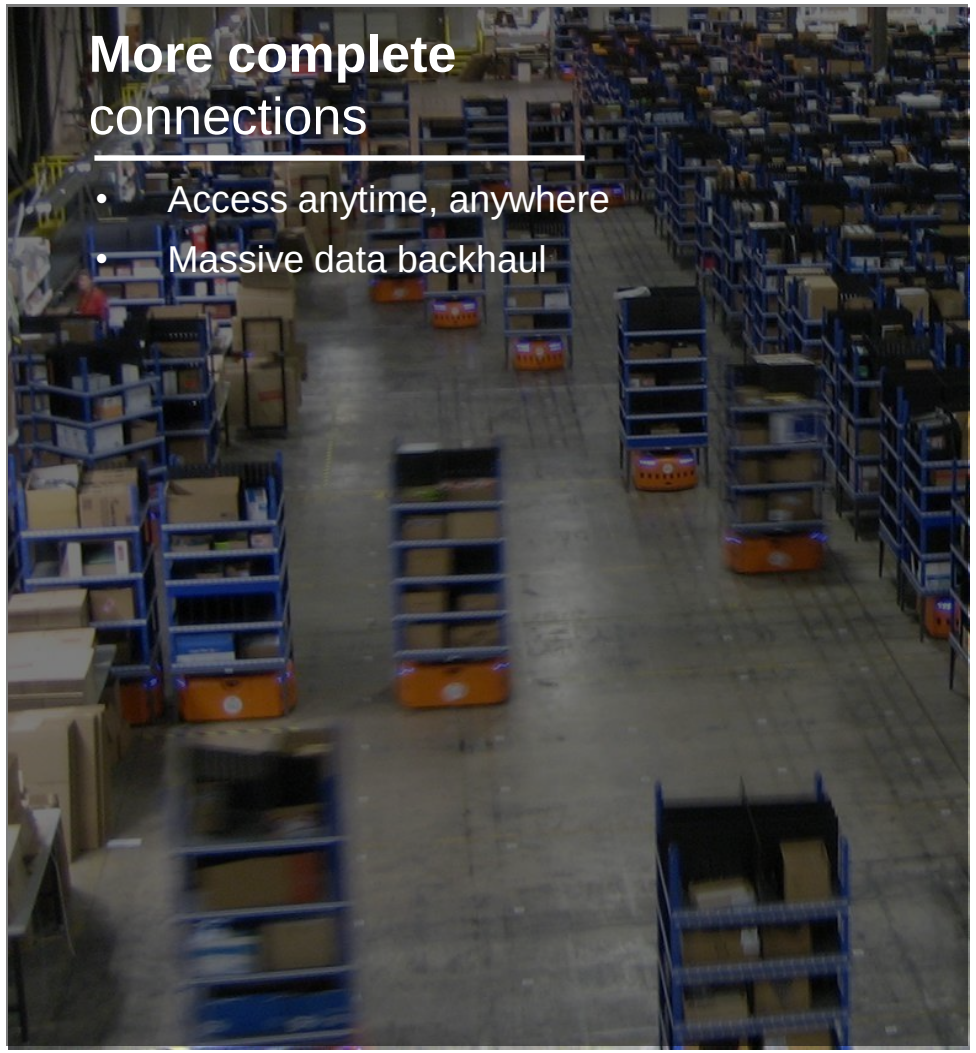
Electronic shelf label
Mobile payment
Self-service checkout

Source: IDC

Wireless Communications Enables "Game Changers" for Smart Manufacturing





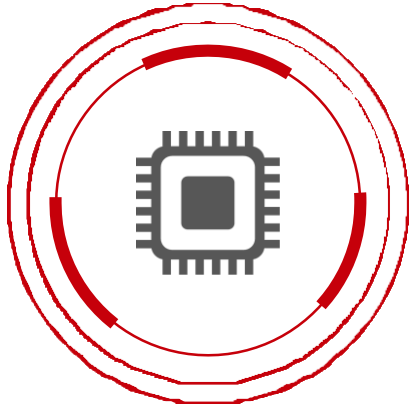


HUAWEI

Smart Manufacturing Has Diversified Requirements, and Wi-Fi 6 Should Constantly Evolve to Keep Up

Unstaffed operations

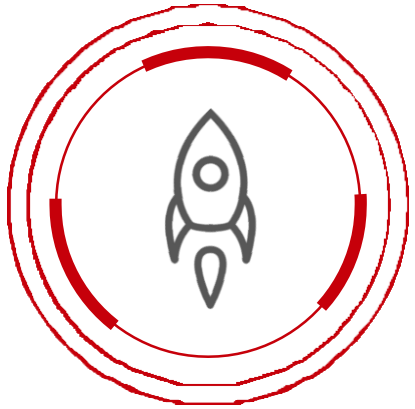
- PLC cloud-based control
- Remote mechanical control



Latency: 10 ms
Reliability: 99.999%

Unstaffed plants

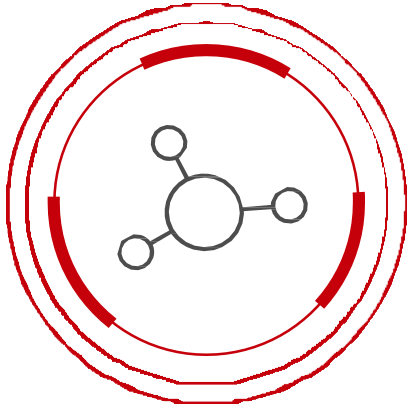
- Intelligent vehicle training: TB-level data backhaul
- Machine vision: GB-level data backhaul



Continuous networking bandwidth:
1-2 Gbps

Intelligent equipment

- Personnel and equipment positioning
- IoT edge control

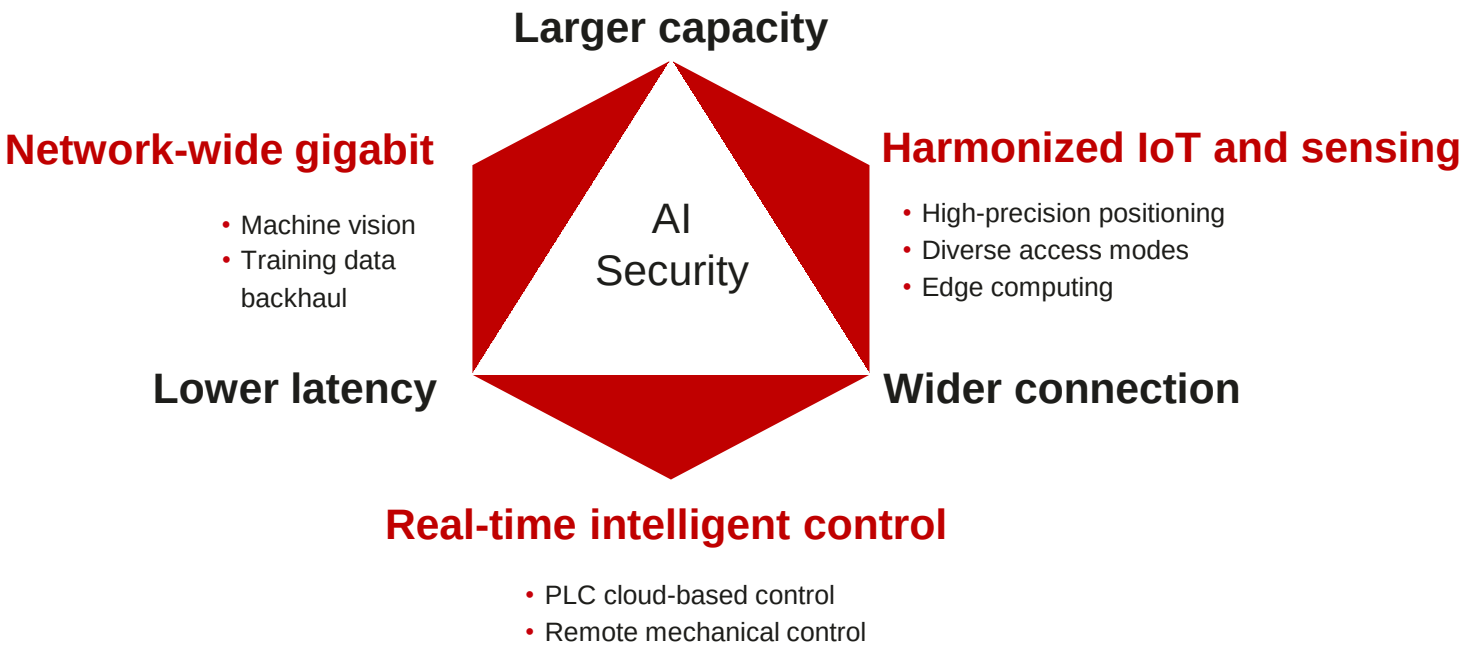


Flexible IoT applications
Diverse connection modes
Edge computing

Looking Ahead, It's the Time to Take Wi-Fi 6 to the Next Level

Wi-Fi 6 **Advanced**

Powering speedy, stable, and smart wireless production networks



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Network-wide gigabit, Accelerating Wireless Upgrade Across Industries

Continuous networking

Network-wide gigabit

2x link rate

Wi-Fi 6E AP

160 MHz

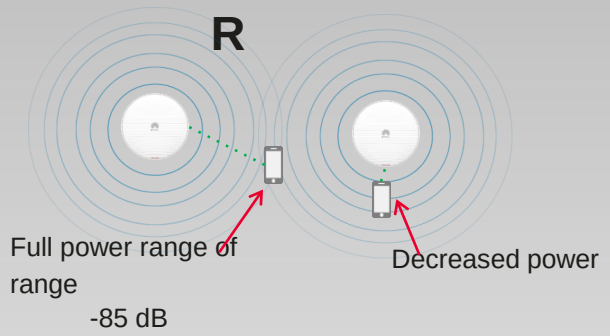
continuous networking

Dynamic-zoom smart antenna

20% ↑

Flexibly adapting to omnidirectional and high-density environments

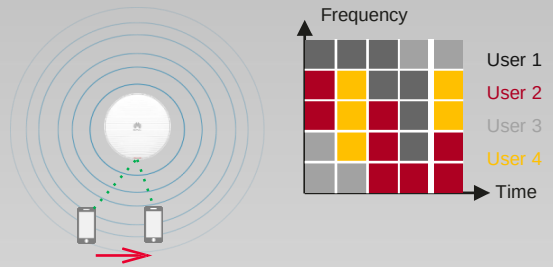
CoS R



15% ↑

downlink rate

Fluent-MIMO



20% ↑

concurrency rate

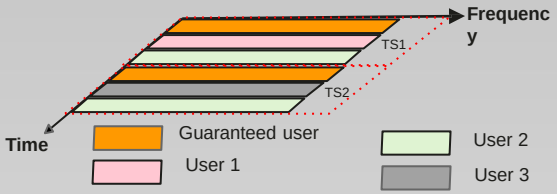
HUAWEI

Real-Time Intelligent Control, Making Unmanned Operations Possible

Continuous networking

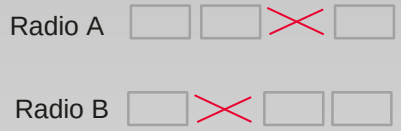
99.999% @
10 ms

Air interface slicing



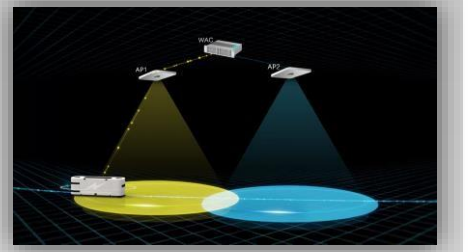
Reliability @ Latency
99.999% @ 10 ms

Dual-fed and selective receiving



Reliability
99.999%

Lossless roaming



Zero service packet loss
10 ms handover time

HUAWEI

Harmonized IoT and Sensing, Makes work more efficient, simpler, and safer

Wi-Fi and IoT convergence

Online 0 waiting
0 access risk

SD-IoT

Diverse access modes

PCIe slot
External USB
Built-in IoT chip

Secure and insensitive

Huawei iConnect

Wi-Fi 6 CPE	Wi-Fi 6 Module	Smart terminal

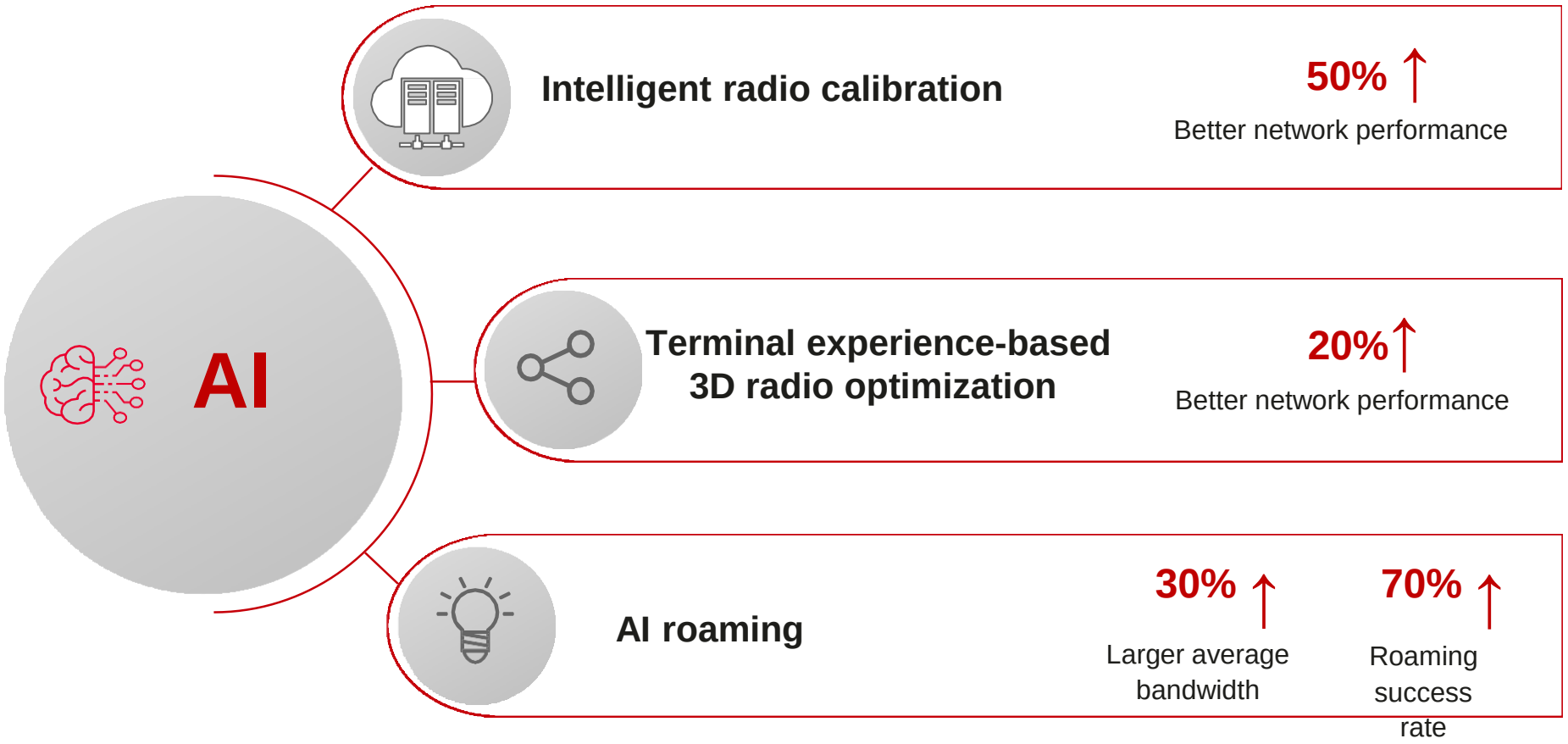
- ✔UWB positioning
- ✔Asset management
- ✔ESL

- ✔Personnel positioning
- ✔Barcode scanner

- ✔Environmental monitoring sensor

HUAWEI

AI Empowers Fully Wireless Networks with Always-On Best State



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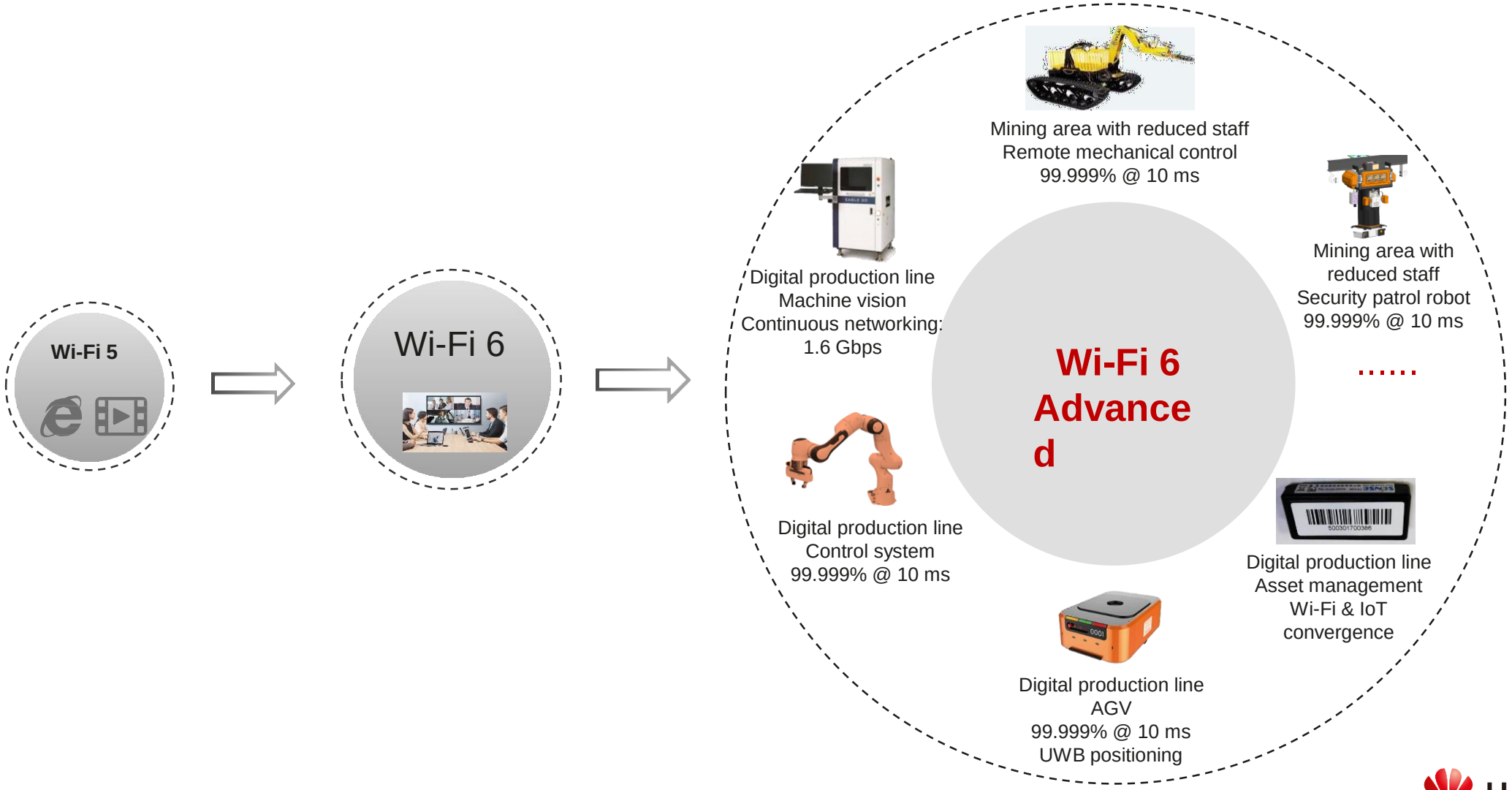
Wi-Fi 6 Advanced, Powering Speedy, Stable, and Smart Wireless Production Networks



HUAWEI

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home and organization for a fully connected, intelligent world.

HUAWEI

Wireless Transformation for Smart Enterprises

SEEMAB KADRI

DIRECTOR, STRATEGIC PARTNERSHIPS AND MARKETING, WIRELESS SOLUTIONS

Intel Corporation

Wireless Global Congress (Oct 2021)

WIRELESS TRANSFORMATION FOR ~~SMART~~ EVERY ENTERPRISE

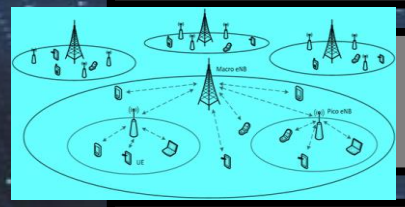
Seemab Kadri
Director of Strategic Partnerships, Wireless Solutions Group
Intel Corporation
(seemab.kadri@intel.com)

MEGATRENDS THAT IMPACT ENTERPRISES

Hybrid work model

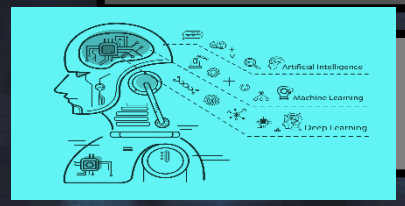
Modernized workplace

Cloudification of data, compute and services



Heterogenous public and private networks

IOT and Robotics



Artificial Intelligence and Machine Learning

Classic

Commercial

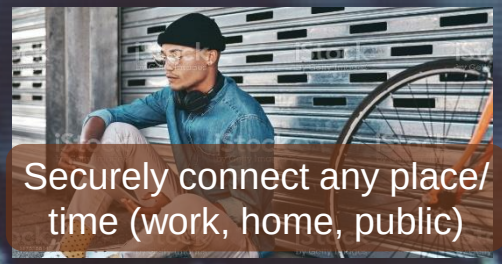
Institutional

Industrial

Advancements in technology and tools, revolution of work culture, and potential for cost savings are shifting the paradigm of how business gets conducted in every segment

WIRELESS RELATED USAGES

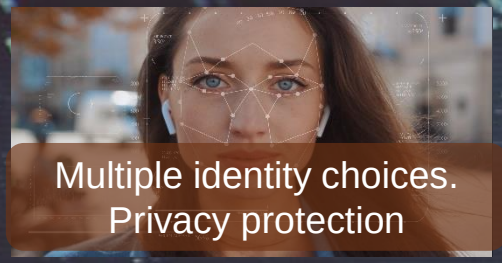
UX



Securely connect any place/ time (work, home, public)

Proximity sensing and gesturing

Realtime interaction



Multiple identity choices. Privacy protection

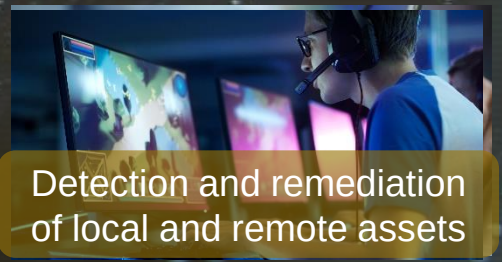
Voice and video anywhere with high QoS

Immersive AR/VR

Manageability

Remote Onboarding / Offboarding of workforce

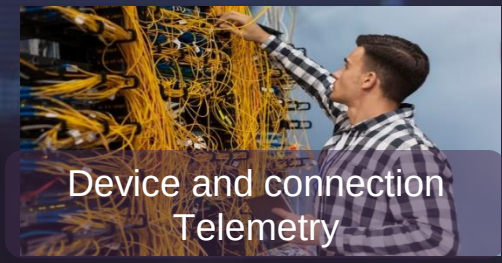
Deployment of interoperable platforms, tools and devices



Detection and remediation of local and remote assets

Data

Space optimization and Collaboration



Device and connection Telemetry

Location and tracking

Heavy dependency on wireless for key use cases that are critical for enterprises

LETS TAKE A LIVE POLL !

Where is the perceived need?

For me to be more effective with my productivity tasks (office, business, school, etc), I need improved connectivity at :

- ❑ *Home*
- ❑ *Workplace*
- ❑ *Public places (malls, coffee shops, hotels, airports, etc)*
- ❑ *Nowhere …I have what I need to do my best*

(Select one or multiple applicable choice, and submit)

TRANSFORMING EXPECTATIONS FROM WIRELESS

Available

- Connect from anywhere anytime. Access resources not just from workplace.
- High coverage and resiliency. No gaps or weak spots.
- Mix of wireless tech that works cohesively with one another.

Secure

- Shield corp and user assets from sniffing / hacking everywhere.
- Guard privacy while supporting multiple identities per user per device
- Provide data protection from attacks and leaks.

Performant

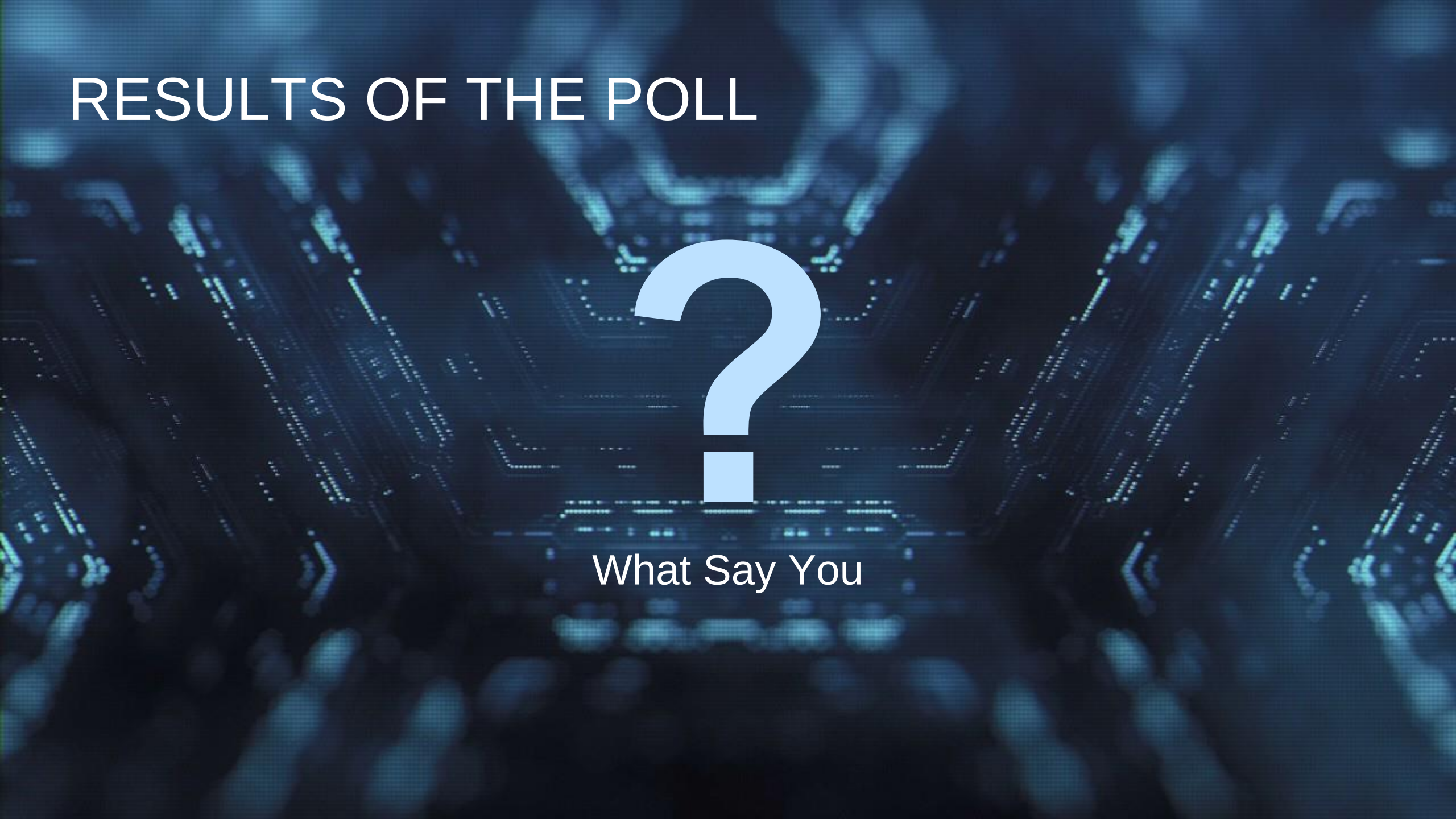
- High capacity to support concurrent devices running bw hungry apps
- End-to-end low latency for virtual collaboration, AR/VR and IOT
- Real-time tuned QoS SLA per connection

Extensive

- High accuracy location for indoor outdoor scenarios
- Enable gesture and proximity sensing for simple touch-free interactions
- Provide connection health insights and device telemetry

Wireless tech needs to deliver to next gen use-cases for connectivity and more. Rapid adoption and deployment of technology is as important as its creation and availability.

RESULTS OF THE POLL



What Say You

INTEL'S WIRELESS ECOSYSTEM

Standards and Industry

Wi-Fi Alliance · IEEE · Bluetooth Special Interest Group · Wireless Broadband Alliance · 3GPP A Global Initiative · OpenWiFi Telecom Infra Project · Wi-Fi 7 · OpenRoaming Wireless Broadband Alliance

Define

Products and Services

intel Wi-Fi 6 Gig+ · intel Wi-Fi 6E Gig+ · intel Killer DCT Wi-Fi 6E AX1675 · intel vPro Platform · Intel Endpoint Management Assistant · intel evo powered by Core i7 · Fibocom Intel 5G 5000

Create

Partners

- PC OEMs
- OSVs ISVs
- AP Si & OEMs
- xSPs

Cloud · System · Solution · Service

Deliver

Enterprise Segments

Ongoing innovation in tech and biz models is needed to deliver to the vision of smart enterprises.
Collaborate with us on shaping the future of wireless! - seemab.kadri@intel.com


intel
Thank You!

WBA Vision and Roadmap 2022+

BRUNO TOMÁS

DIRECTOR OF PROGRAMS

Wireless Broadband Alliance

WBA VISION AND ROADMAP FOR 2022+

Bruno Tomas, Director Programs/PMO

WBA TECHNICAL ROADMAP – IMPACT ON ENTERPRISE

Lead the development of ***"Seamless and interoperable services experience on Wi-Fi within the global wireless ecosystem"***

5G Work Group

Leading Wi-Fi and 5G RAN Convergence

IoT Work Group

Augmenting Wi-Fi role in IoT

NextGen Work Group

Fast-tracking Wi-Fi deployments for operators

Roaming Work Group

Incubating new business opportunities

Testing & Interop Work Group

Achieving interoperable Wi-Fi services

WBA WORK GROUPS

WBA OpenRoaming™ Task Group

Development of standards, federation governance and trials

Policy & Regulatory Affairs Work Group

Industry liaison and advocacy of WBA global programs

Market Work Group

Marketing activities and industry dissemination

Certification Task Group

Addressing interoperability to foster adoption

More Information about WBA projects - https://wballiance.com/what-we-do

WBA WI-FI 6 & 6E PROGRAM – TRIALS & GO TO MARKET

Fast-tracking Wi-Fi 6 (802.11ax) leveraging Carrier-Grade capabilities.
Deliver industry guidelines and end-to-end live trials with multiple ecosystem players.

*Not exhaustive

Latest Projects

I. Enhanced 802.11ax - Overview, Use Cases, Features, 5G Context

II. Wi-Fi 6 Deployment Guidelines & Scenarios

Current Work

Wi-Fi 6 Trials: Real-world end-to-end testing of key features and new services to raise confidence and adoption in the technology

Deployment Scenarios	Use Cases
Enterprise - Industrial 4.0	High-density connectivity / latency
Transportation hub	Improved roaming behavior
Residential/MDU	Multi stream live video monitoring (facilities / campus)
Smart Cities/Rural	Real time energy monitoring
Transportation hub	IoT sensor networks
Public Venues	Ultra-reliable low latency communications / critical sensors
University Campus	Augmented reality for trouble shooting
Stadium	Gaming / Health devices > improved latency for key target
Entertainment	Virtual classroom/venue - UHD video intercampus
Public Wi-Fi	

Next Steps

Wi-Fi 6E global trials: Leveraging most relevant use cases, the "Wi-Fi End-to-end Trials" will confirm this technology evolution is set to deliver systems that are ready to support key 5G requirements

Wi-Fi 6/6E & QoS: Deliver a framework for the technology to act as standalone solution for any service providers. QoS enhanced proofing, distributed QoS

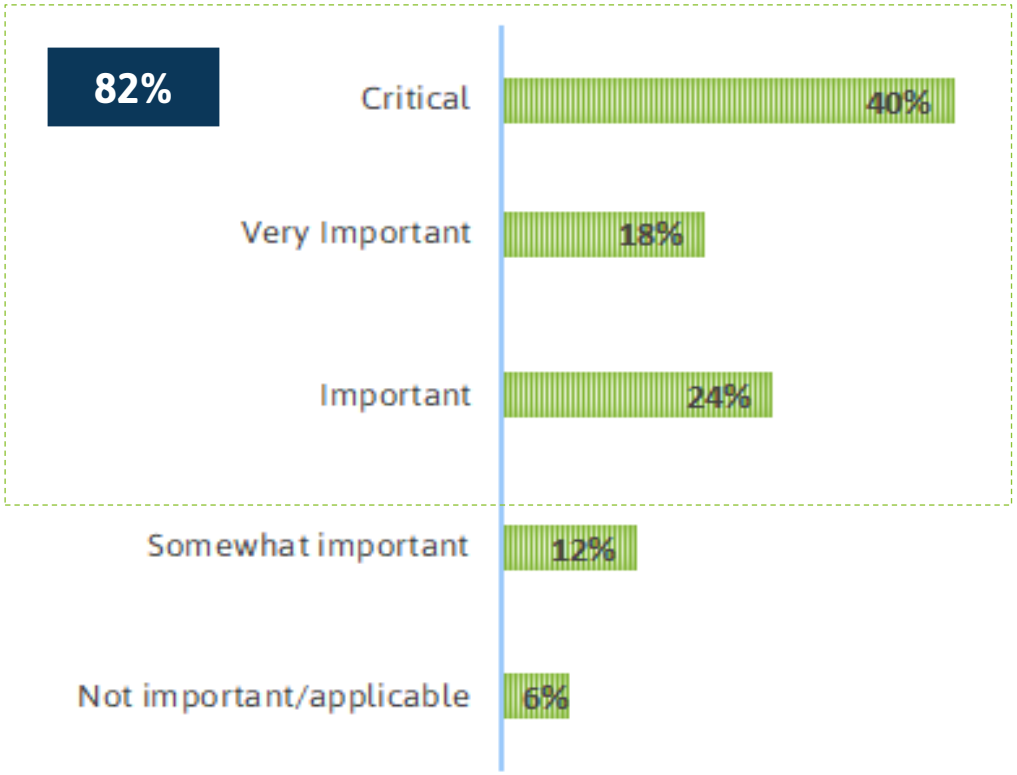
*Leading Members

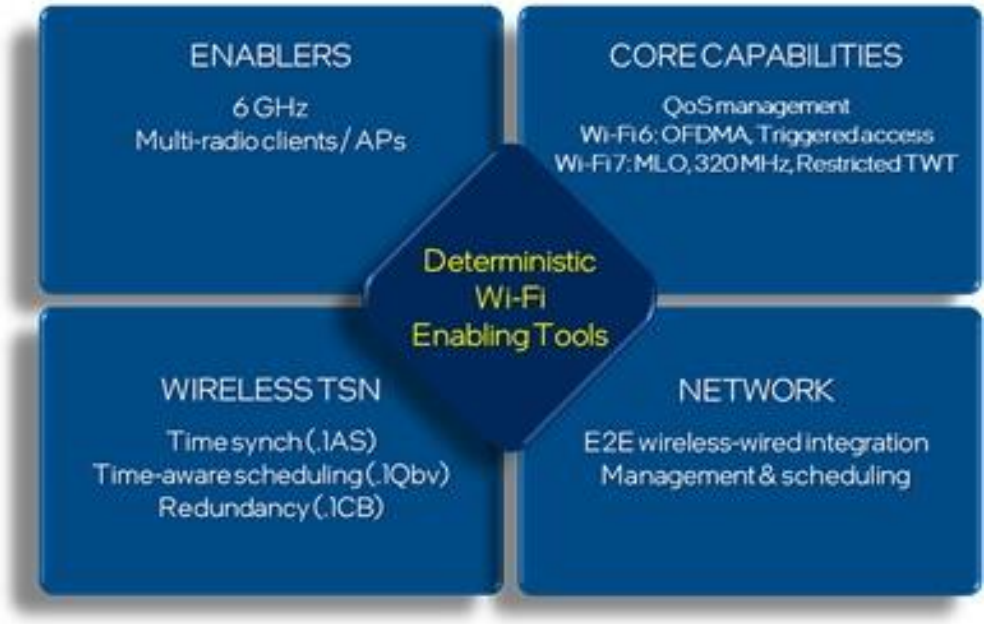
AT&T, intel, Cisco, C-DOT, boingo, BROADCOM, SK telecom, COMMSCOPE, CableLabs, aruba a Hewlett Packard Enterprise company, HUAWEI, SAMSUNG, Qualcomm

6 GHZ INDUSTRY FEEDBACK & Wi-Fi 7

2022

How important is the availability of additional spectrum on 6GHz to your Wi-Fi business and rollout?





72% indicate most important use case is "no legacy devices affecting airwaves"

Co-Existence mechanism is a must have for 81% of the respondents

77% of respondents want more spectrum for unlicensed

Source: WBA 6Ghz & Wi-Fi 6 Survey; Intel

WBA 5G PROGRAM

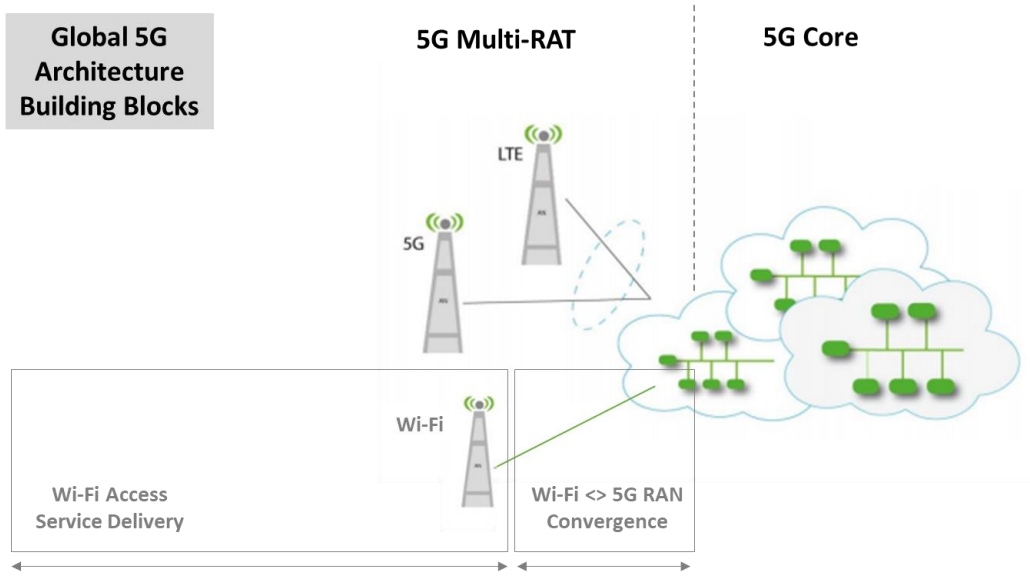
Identifying main convergence and coexistence use cases for 5G & Wi-Fi.
Developing white papers, guidelines, requirements and test plans.

***Not exhaustive**

Latest Projects

1. **5G Networks –** The Role of Wi-Fi and Unlicensed Technologies
2. **Network Slicing for 5G –** Wi-Fi Capabilities
3. **Unlicensed Integration with 5G Networks** – Assessing the approaches on how to integrate Wi-Fi and 5G

Current Work



End game: Standardize use cases and identify gaps which need to be addressed to realize convergence between 5G and Wi-Fi

Addressed Areas

- **Multi-Access Edge Computing**
  Define a set of services and use cases for Wi-Fi and ensure that the MEC APIs are suitable
- **Multi-path Technologies**
  Explore new technologies MP-TCP/QUIC and trial the aggregation schemes
- **Fixed Wireless Access**
  Address possibilities of providing services for specific use cases
- **ATSSS, ANDSP**
  Proof of concept for new policy mechanisms

*Leading Members

AT&T, orange, BT, intel, CISCO, BROADCOM, Google, tessares

5G & WI-FI CONVERGENCE IN PRIVATE 5G NETWORKS

2022

WIRELESS BROADBAND ALLIANCE

BACKGROUND & INDUSTRY CHALLENGES

- Evaluate potential optimization of 5G and Wi-Fi convergence architecture with collocated deployments of 5G access and Wi-Fi access networks
- Examine management/control for 5G and Wi-Fi access networks and devices from a single management entity for 1) operational benefits and 2) simplify device management
- Identify roaming use cases between 5G and Wi-Fi within and across private 5G networks
- Analyze how the enterprise Wi-Fi segmentation and 5G slicing come together in private network deployments
- Within a 5G context, analyze how managed QoS can be provided over Wi-Fi for Time Sensitive Networking applications

BUSINESS OPPORTUNITIES & BENEFITS

- Analyze business opportunities & challenges for Wi-Fi and 5G convergence in private 5G networks
- Provide deployment guidelines for converged Wi-Fi and 5G deployments in private 5G networks
- Collaborate and liaise with industry standards bodies (3GPP, IEEE, Wi-Fi Alliance, NGMN, GSMA, ETSI)
- Explore potential trials and compliance for Wi-Fi and 5G convergence in private 5G networks

EXPECTED DELIVERABLES

- Address co-existence of MEC (Multi-Access Edge Computing) traffic management and the traffic management (ATSSS) within the 5G Core
- Evaluate if any enhancements are needed to ETSI MEC WLAN APIs or ETSI MEC Location APIs to support Wi-Fi access in private 5G networks
- Address how IEEE 802.1 TSN standards (such as 802.1AS, 802.1Qbv) can be supported over the converged
- Industry guidelines and requirements for optimal deployments

2022 **Project Kick off** **Work Output**

Q1	Q2	Q3	Q4

LEADING PARTICIPANTS

AMERICAN TOWER
BROADCOM
BT
CISCO
Charter COMMUNICATIONS
Google
intel
NOKIA
orange
tessares

RELEVANT PROJECTS

Understand more about **RAN Convergence**

RAN Convergence 2020 Whitepaper

WBA & NGMN RAN Convergence 2019

Unlicensed Integration with 5G Networks

WHAT IS WBA OPENROAMING™?

OPENROAMING™
WIRELESS BROADBAND ALLIANCE

- **Cybersecurity Service**
- **Cloud Federation**
- **Network Automation**

Seamless and Secure onboarding

- No More SSID-password guessing games, insecure login credentials or reconnecting to public Wi-Fi
- Creating an automatic and secure connected experience on Wi-Fi
- Automatic and secure connection of billions of devices to millions of Wi-Fi networks globally

Improves consumers satisfaction

- No more bill shock with overseas cellular roaming data
- Wi-Fi Roaming/ cellular combined for best coverage and costs options with guest & public Wi-Fi access across the world
- Seamless user experience anytime, anywhere

Industry Impact

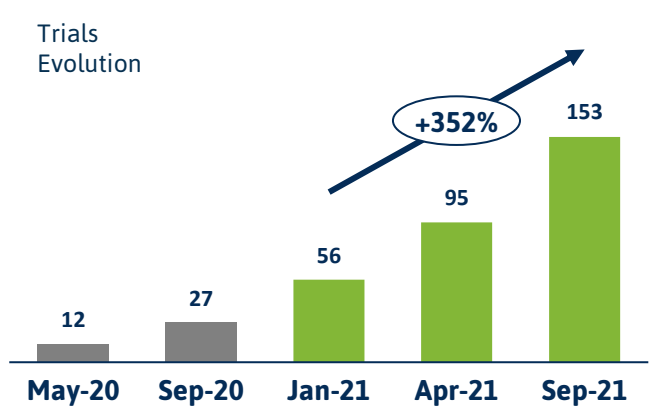
- Defines industry policy & standards for all players in the Wi-Fi ecosystem to join and develop their Wi-Fi services
- Grow your business opportunities with Wi-Fi roaming & offload
- Prepare your Wi-Fi network for convergence with 5G

OPENROAMING PROGRESS STATUS

Achievements

1. Impactful OpenRoaming deployments

2. Momentum around global trials and deployments



Global coverage

In Progress

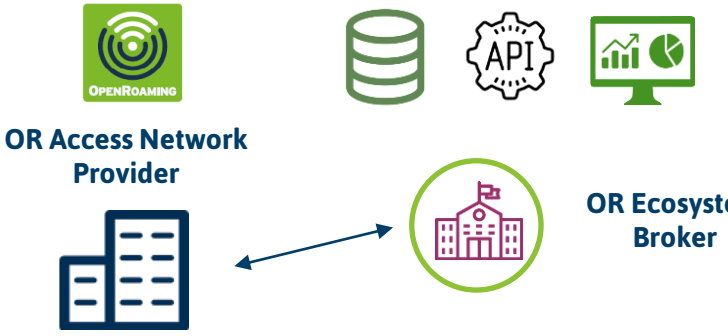
1. Truly holistic OpenRoaming standard, key industry players engaging

11 Vendor OEM Implementing

Identity Provider massification with key players virtually covering all the market (smartphones, tablets)

2. Accelerating adoption of Federation assets (e.g. API, DB)

Fostering standards compliance acting the Policy Authority to make sure the foundational components of the federation are used globally



OpenRoaming leading the Public-Guest Wi-Fi > Focusing on evolving horizontally and vertically

OPENROAMING EVOLUTION

2022

WIRELESS BROADBAND ALLIANCE

1. OpenRoaming™ Onboarding
2. Ecosystem Broker
3. Network & Identity Provisioning
4. Identity Discovery Automation
5. Testing & Interop QA, CD/CI

Cybersecurity Service - E2E RadSec/TLS with WBA Public Keying Infrastructure

Roaming policies broadcasted

RCOI Based Policies

Network Providers & Identity Providers select policies to enable intended **business cases**

- Settled automation
- QoS level, baseline, gold, silver
- Enhanced Identity Proofing
- Private Cellular & IoT
- Federated onboarding service

Exemplificative

WIRELESS BROADBAND ALLIANCE

DRIVING NEXT WIRELESS EXPERIENCE

JOIN NOW!

Bruno Tomas – pmo@wballiance.com

www.wballiance.com

THE VISION OF THE WIRELESS BROADBAND ALLIANCE

WBA's vision is to lead the development of

"Seamless and interoperable services experience on Wi-Fi within the global wireless ecosystem"

Objectives:

- Massify Wi-Fi Interoperability & Roaming with OpenRoaming
- Accelerate Next Gen Wi-Fi Networks with Wi-Fi 6, 6 GHz Multi-AP, QoS
- Lead the Convergence / Coexistence of Wi-Fi with the Wireless Ecosystem

1. **Guidelines & Standards**
   Setting the scene, requirements and creating specifications
2. **Testing & Interoperability**
   Creating test plans to showcase the technology capabilities
3. **End-to-End Trials**
   Running field trials / proof the concept on real world environment
4. **Certification**
   Addressing gaps and helping the industry maximizing business opportunities

Established **in 2003**

120+ MEMBERSHIP **COMMUNITY** | PROJECTS & **PROGRAMS** | ANNUAL **EVENTS** | PROMOTION AND **GO-TO-MARKET** | THOUGHT LEADERSHIP & **MARKET RESEARCH**

WIRELESS GLOBAL CONGRESS · CARRIER WIRELESS Services Certification · OPENROAMING WIRELESS BROADBAND ALLIANCE · WORLD Wi-Fi Day · CONNECTED COMMUNITIES Forum · WBA INDUSTRY AWARDS

WIRELESS GLOBAL CONGRESS
WIRELESS BROADBAND ALLIANCE

Closing

STEVE NAMASEEVAYUM

DIRECTOR, MEMBERSHIP & INDUSTRY ALLIANCES

Wireless Broadband Alliance

WIRELESS
BROADBAND ALLIANCE

Wi-Fi Powering Innovation Series

Tuesday October 5th

WBA Leadership Conference & WBA Industry Awards

This autumn's premier Wi-Fi event kicks off with a celebration of all things Wi-Fi and the exciting developments we can look forward to in 2022. The WBA Industry Awards will highlight the innovation and excellence from the best in the Wi-Fi Industry. We'll also be looking at strategic impacts of Wi-Fi on the global economy in 2022 and beyond; new innovations in technology and business models for Wi-Fi up to 2025; and featuring the highlights of the 2022 WBA Annual Industry Report, including trends and leading market trends and drivers on Wi-Fi

Thursday October 7th

Wi-Fi: Public and Private Networks and Convergence with 5G

What does the future hold for public and private networks, and what role will 5G convergence play? In this session, hear the latest on Wi-Fi 6, including ongoing use cases, case studies and a deep dive on operational benefits. We'll also be looking at the new opportunities and developing use cases for Wi-Fi 6E and taking a snapshot of the rollout of the 6 GHz spectrum, emerging technologies such as Wi-Fi 802.11bf and beyond; and much more!

Tuesday October 19th

Wi-Fi: Enabling the Smart Connected Enterprise

When it comes to enterprises looking to get 'smart' and offer outstanding connectivity for employees and consumers, the role of Wi-Fi can't be understated. Hear how companies can secure their IoT infrastructure with Wi-Fi; how smart Wi-Fi can support customer and operations for verticals such as retail, transportation, healthcare, and the distributed enterprise; the impact of the 'bring your own device'(BYOD) era can have on security, privacy, and data integrity; and how Wi-Fi is creating emerging opportunities for Industry 4.0 in the 5G era.

Thursday October 21st

Innovation for Service Providers, Cities and Venues with Public and Guest Wi-Fi

How can Wi-Fi address the emerging needs of enterprise to innovate and adapt in a post-COVID-19 world? This session will explore the latest on emerging opportunities for Industry 4.0 and IoT deployments in the discuss the game changers for the connected retailer and automotive industry; and examine how train operator are stepping up to offer outstanding Wi-Fi connectivity for passengers leading up to 2030.

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THANKS FOR ATTENDING

Next Time:

21 October 2021

Innovation for Service Providers, Cities and Venues with Public and Guest Wi-Fi

REGISTER NOW

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