CISCO *Live!*

ALL IN

#CiscoLive

Wireless, Wireless Everywhere . . .

How to Navigate the Choices for Your Industrial Use Cases

Bibin Raveendran,
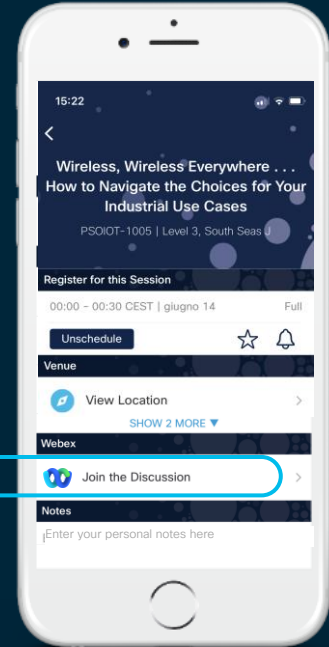Product Manager, IoT Wireless

PSOIOT-1005

Cisco Webex App

Questions?
Use Cisco Webex App to chat
with the speaker after the session

How

1. Find this session in the Cisco Live Mobile App
2. Click "Join the Discussion"
3. Install the Webex App or go directly to the Webex space
4. Enter messages/questions in the Webex space

Webex spaces will be moderated
by the speaker until June 17, 2022.

https://ciscolive.ciscoevents.com/ciscolivebot/#PSOIOT-1005

Agenda

- Panelist Introduction

- IOT Wireless Portfolio

- Wireless, path to a decision

- Panel discussion

- Introducing Cisco IW9167EH

- Conclusion

Introduction

Tom Booth

Managing Consultant, **GTS Solutions, Inc. (GTSS)**

Email: rbooth@gogtss.com
Cell: +1 8034665000

Managing Consultant of GTS Solutions, Inc. GTSS is Cisco Premier Partner headquartered in Columbia, South Carolina. We are a technical services firm that specializes in IOT including Intelligent Transportation Systems, Ports/Logistics, and Smart City projects using the Cisco URWB solutions.

Keith Jones

President, **Prism Systems**

Email: keith.jones@prismsystems.com
Cell: +1 2514210733

President and CEO of Prism Systems, Inc. Prism is headquartered in Mobile, Alabama with offices in Los Angeles, Orlando, Shanghai, and Beijing. Prism is an engineering firm that focuses on software, controls, and networking in the OT space. We specialize in complex wireless applications and the implementation of Cisco URWB applications.

Bibin Raveendran

Product Manager – **Cisco Systems, Inc**

Email: bthoomba@cisco.com
Cell: +1 4083949643

Product Manager, Industrial Wireless Cisco System, Inc. I build incredible products at Cisco that can solve customer challenges in various OT environments. I have been with Cisco for 15+ years and the last 10 years I have spent on wireless technologies focusing mainly on IoT use cases and industrial automation. I hold dual CCIE certifications, one in Data Center and another in Wireless.

Wireless technology is the enabler of Digital Transformation Across IOT Industries

- Employee safety
- Increase reliability

- Efficiency gains
- Operational Equipment Effectiveness
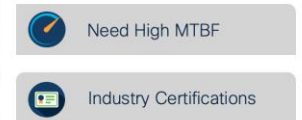- Enabling new services

- Reduced downtime
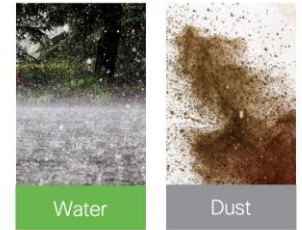- Secure Operations

Warehouses
Healthcare
Parking Lots
Grids
Retail
Manufacturing
Turbines
Streetlights
Transportation

The network is extending to challenging environments

- 40C
+75C
Shock / Vibration
Water
Dust

Need High MTBF
Industry Certifications

Cisco's Evolving Wireless Portfolio for Multi-access Needs

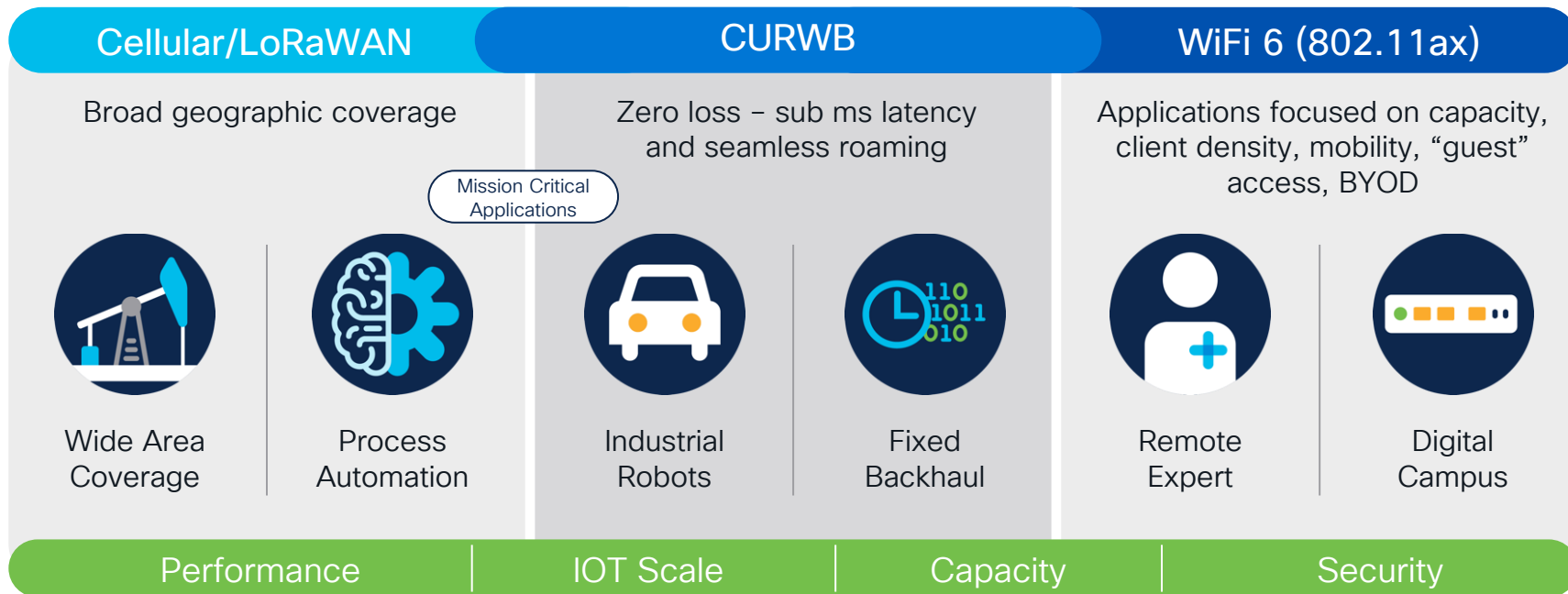| LTE and 5G	Wi-Fi 5 and 6	Sub-GHz ISM
Wide Mobility and High Throughput	**Local Mobility and High Throughput**	**Massive Scale and Broad Coverage**
Industrial Routers and Gateways	**Industrial Wi-Fi and CURWB**	**Resilient Mesh** — **LoRaWAN**
R1101, IR1800, IR8100, IR8300, CGR1120, CGR1240, CGR2010, IoT Gateways (IG21, IG21R, IG31R)	IW9167, IW6300, ESW6300, FM5400, FM3500	IR500 — Gateway and Partner's NS

SP Public Network and Enterprise Private Network

Multi wireless access – better together!

Cellular, CURWB and Wi-Fi 6 are complementary technologies – always be searching for better together

Cellular/LoRaWAN	CURWB	WiFi 6 (802.11ax)
Broad geographic coverage	Zero loss – sub ms latency and seamless roaming	Applications focused on capacity, client density, mobility, "guest" access, BYOD

Mission Critical Applications

Wide Area Coverage	Process Automation	Industrial Robots	Fixed Backhaul	Remote Expert	Digital Campus

Performance	IOT Scale	Capacity	Security

Path to a decision

Manufacturing   Transportation   Mining   Utilities   Roadways

Customer Use Case:
AGV/AMR, Train to Trackside, Autonomous mining, Remote Crane operations, Entertainment, Logistics

1
What are the devices to connect?

Devices

Local and global Eco-system

Handhelds, AGV/AMR, Dozer, Cranes, Rail

2
What are the applications requirements?

Resiliency

Latency, Reliability, Scalability, Ease of operations, device and system throughput...

3
Deployment Scenarios?

Deployment

Regional regulations: spectrum ?
Specify Environment: Indoor / Outdoor
Access / backhaul
Cyber-security

4
What are the potential technology options?

Technology

Wired: Ethernet, serial, DSL
Wireless: Wi-Fi & Ultra-Reliable Wireless Backhaul, 5G Cellular, Wi-SUN, LoRaWAN,...
Spectrum:
Unlicensed, Licensed: Private, Public, Shared

5
What are the CapEx and OpEx Implication?
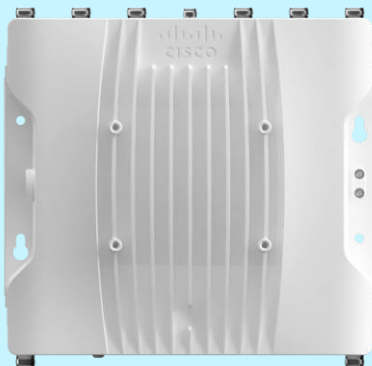
TCO

Product costs?
Operational costs?
Complexity?
Training?
Backward compatibility?

Introducing Cisco Catalyst IW9167 Series
One hardware, two wireless technologies
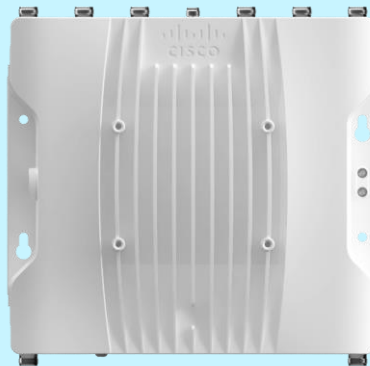
NEW
Industrial and outdoor
access point (Wi-Fi 6/6E*)

OR

ENHANCED
Cisco Ultra-Reliable Wireless
Backhaul (Cisco URWB)

Pair with Cisco DNA Center for
analytics and efficiency

Deploy and manage with
Cisco IoT Operations Dashboard

What's new?

Tri-radio
2.4 GHz, 5GHz, 5/6GHz

4x4
4 spatial streams

Multigigabit
RJ45, or SFP+, M12 adapters

GNSS, BLE,
Scanning Radio

Orderable: 2nd Half 2022
Shipping: Early 2023

*6E-ready, subject to regulatory domain approving the use of the 6GHz spectrum outdoor

Cisco Live – June 12-16, Las Vegas
Cisco Ultra-Reliable Wireless Backhaul related sessions

Session ID	Title	Date and time
TECIOT-2584	[Designing an Ultra-Reliable IoT Wireless Network](#)	Sunday, Jun 12 2:00 PM - 6:00 PM PDT
BRKIOT-1150	[How Autonomous Vehicles will Change your World](#)	Monday, Jun 13 8:00 AM - 8:45 AM PDT
IBOIOT-2757	[Terminal Operations Digitization with Cisco Connected Port and Terminal Solution](#)	Monday, Jun 13 11:00 AM - 12:00 PM PDT
PSOIOT-1005	[Wireless, Wireless Everywhere . . . How to Navigate the Choices for Your Industrial Use Cases](#)	Monday, Jun 13 3:00 PM - 3:30 PM PDT
BRKEWN-2832	[Outdoor Wireless, a Prospective from the Field on Design, Build and Maintenance](#)	Monday, Jun 13 4:00 PM - 4:45 PM PDT
BRKIOT-2014	[Mining Made Safer and More Efficient with Autonomy](#)	Thursday, Jun 16 9:30 AM - 10:15 AM PDT
LABIOT-2152	[Cisco Ultra-Reliable Wireless Backhaul Lab](#)	Walk-in Lab

Don't miss our Indy Autonomous Challenge car in the DevNet area!

Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!

- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.

- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.

Cisco Learning and Certifications

From technology training and team development to Cisco certifications and learning plans, let us help you empower your business and career. www.cisco.com/go/certs

Pay for Learning with Cisco Learning Credits

(CLCs) are prepaid training vouchers redeemed directly with Cisco.

Learn

Cisco U.
IT learning hub that guides teams and learners toward their goals

Cisco Digital Learning
Subscription-based product, technology, and certification training

Cisco Modeling Labs
Network simulation platform for design, testing, and troubleshooting

Cisco Learning Network
Resource community portal for certifications and learning

Train

Cisco Training Bootcamps
Intensive team & individual automation and technology training programs

Cisco Learning Partner Program
Authorized training partners supporting Cisco technology and career certifications

Cisco Instructor-led and Virtual Instructor-led training
Accelerated curriculum of product, technology, and certification courses

Certify

Cisco Certifications and Specialist Certifications
Award-winning certification program empowers students and IT Professionals to advance their technical careers
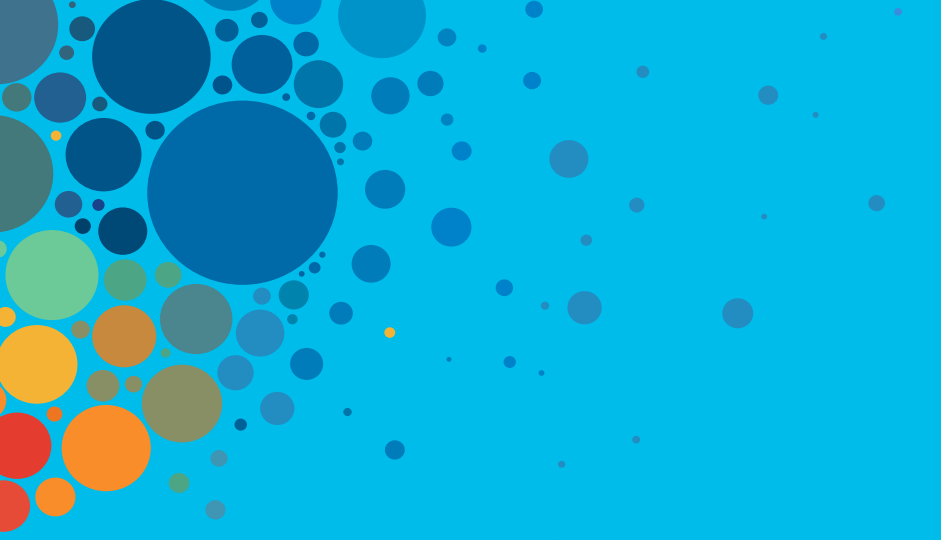
Cisco Guided Study Groups
180-day certification prep program with learning and support

Cisco Continuing Education Program
Recertification training options for Cisco certified individuals

Here at the event? Visit us at **The Learning and Certifications lounge at the World of Solutions**

Continue your education

- Visit the Cisco Showcase for related demos

- Book your one-on-one Meet the Engineer meeting

- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs

- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

"*In the new era, thought itself will be transmitted by radio.*"

Guglielmo Marconi – 1931

Thank you

CISCO *Live!*

ALL IN

#CiscoLive