



R&JANT



Landfill & Quarry Webinar

Brad Viernow
2026



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Rajant Corp
Sales Director - USA

 **HOST**



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SITECH Pacific
Wireless Solutions Lead

 **SPECIAL GUEST**

1



Operational Reality in Quarries

- Challenges
- Safety & Visibility
- Downtime Impact



2



Operational Reality in Landfills

- Terrain & Coverage Issues
- Asset Tracking
- Environmental Factors



3



Why Traditional WiFi / LTE Fall Short

- Coverage Gaps
- Infrastructure Limits
- Risk & Costs



4



How Kinetic Mesh Works in Motion

- Seamless Mobility
- Real-Time Data
- Self-Healing Network



5



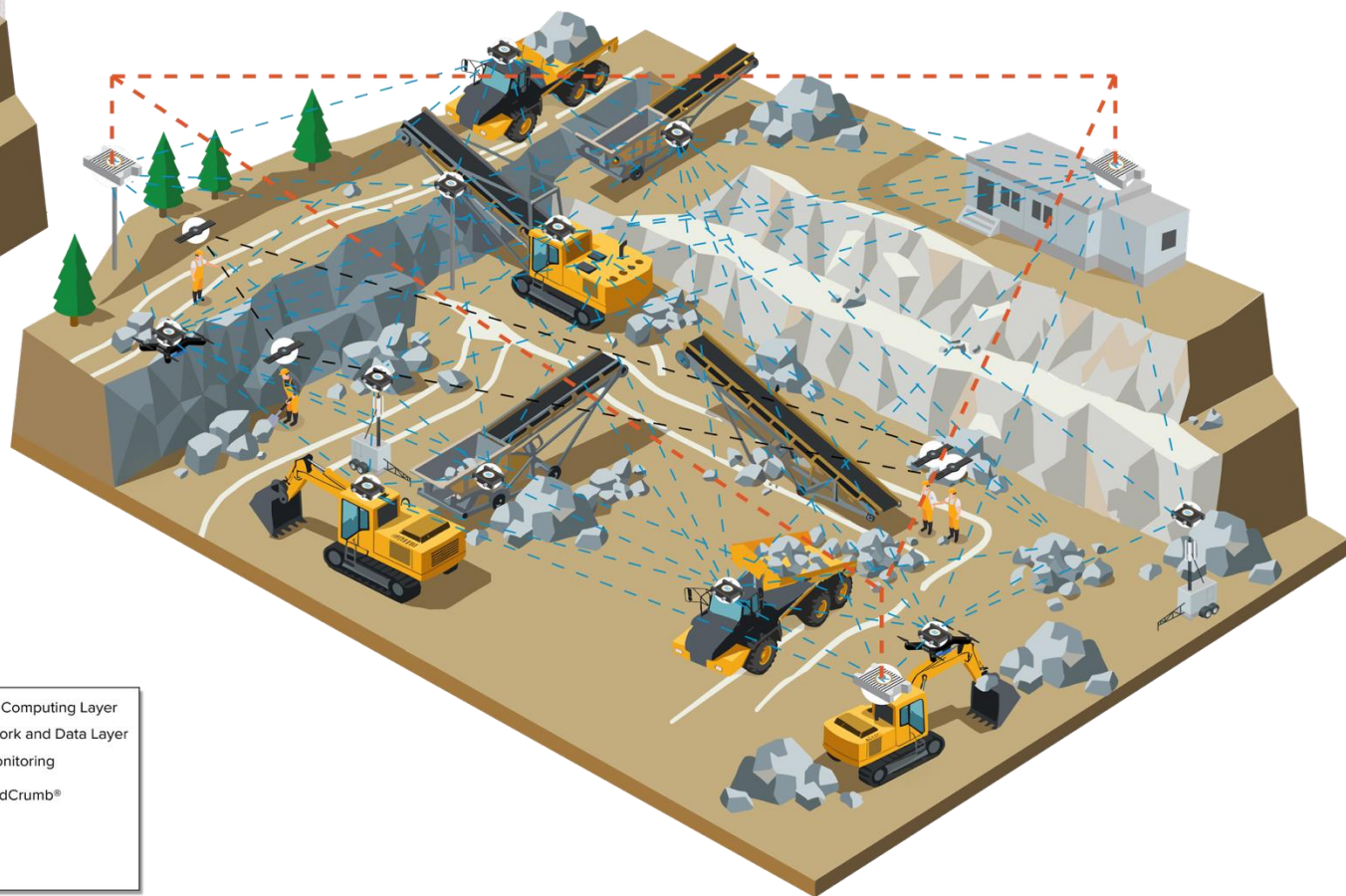
Deployment & Network Management

- Site Installation
- Commissioning
- Monitoring & Control





- Distributed Computing Layer
- Mesh Network and Data Layer
- RHI License Plate Recognition
- RHI PPE Monitoring
- Rajant BreadCrumb®
- Cowbell
- QStat



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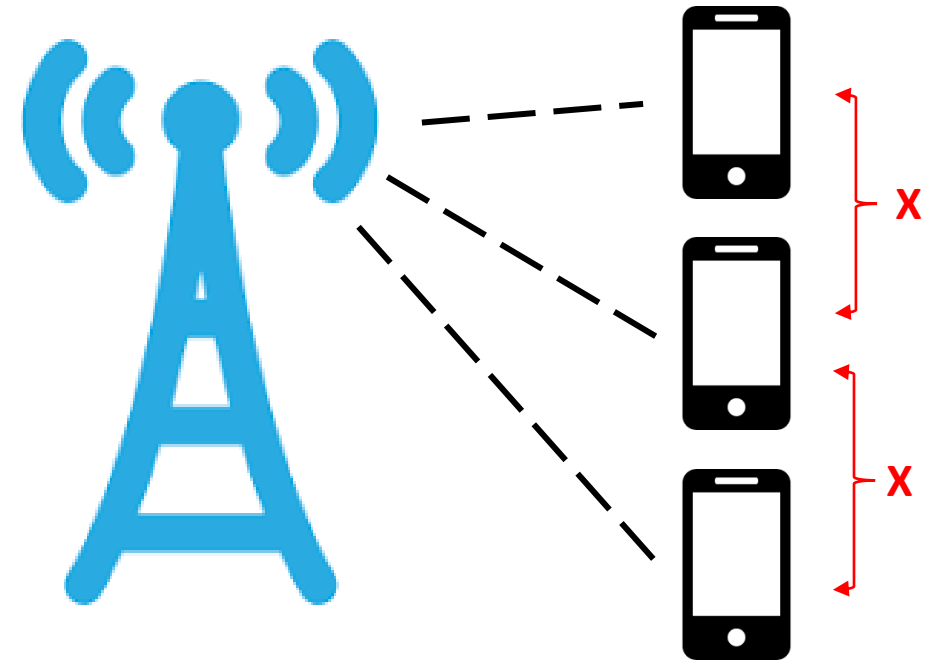
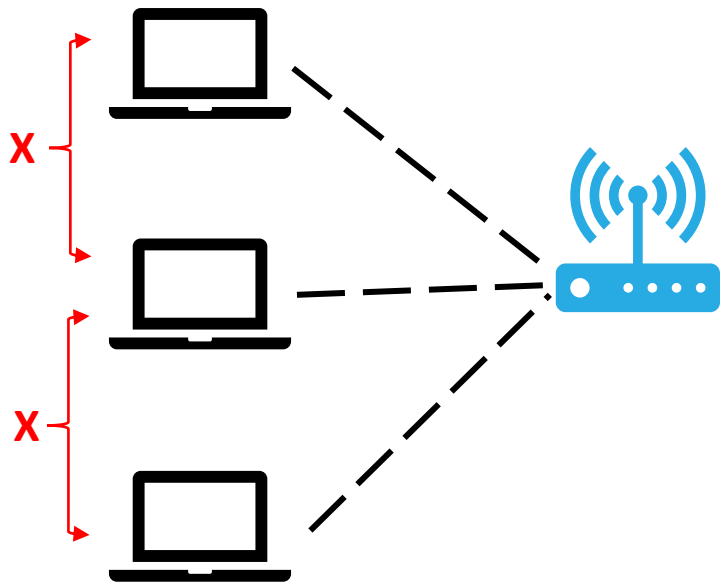
How Kinetic Mesh Works in Motion

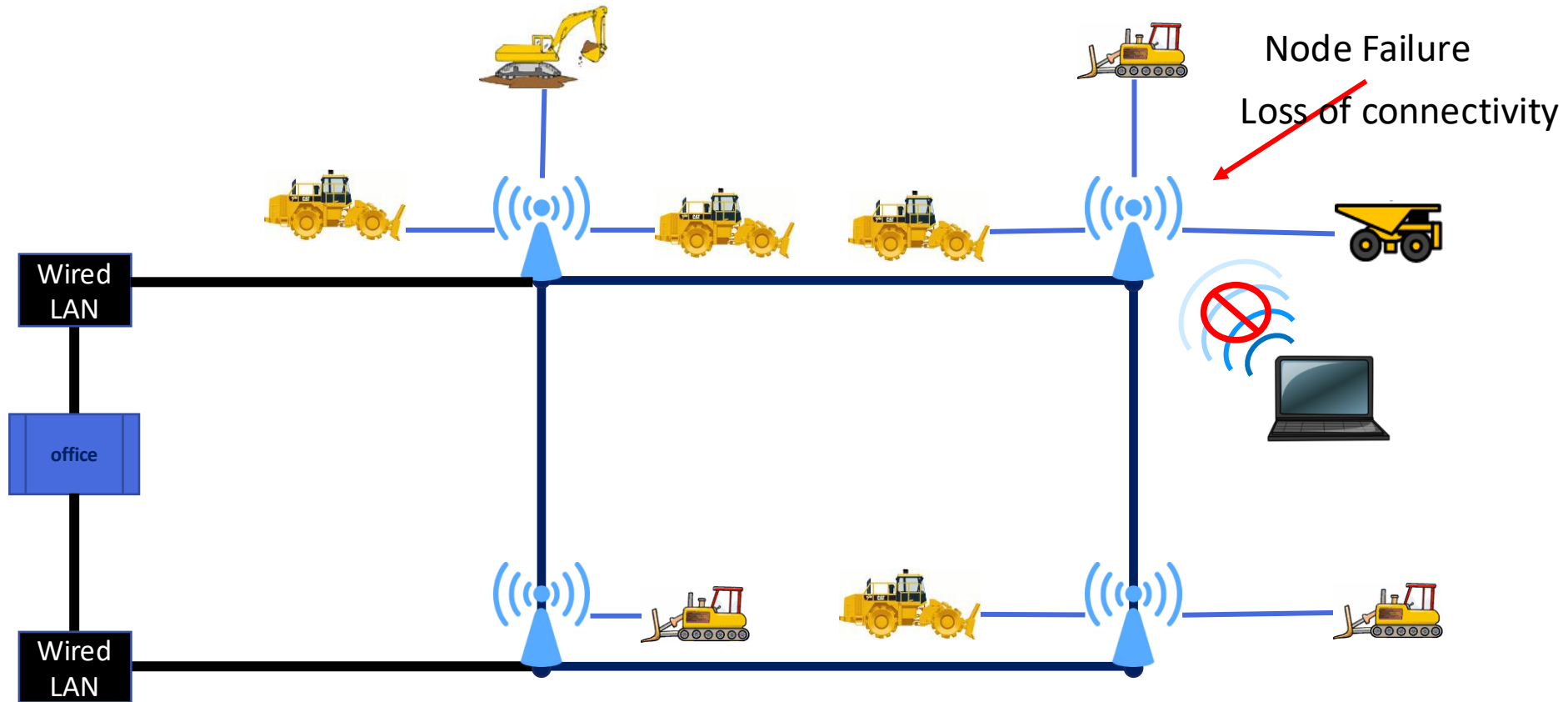
Lacks seamless machine-to-machine integration

Requires significantly more infrastructure nodes

Elevated operational risk

Cost of Private LTE



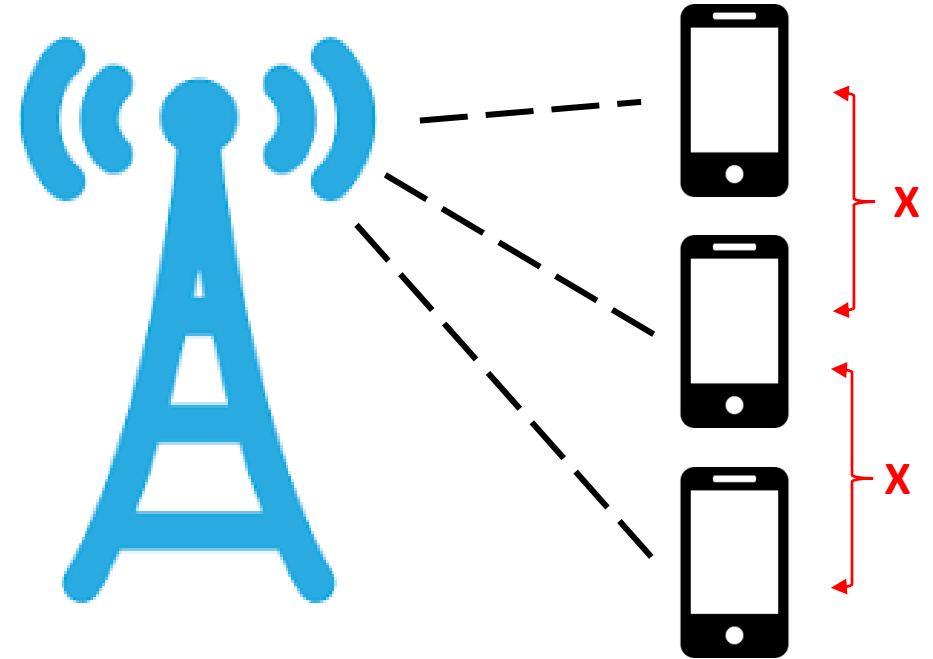
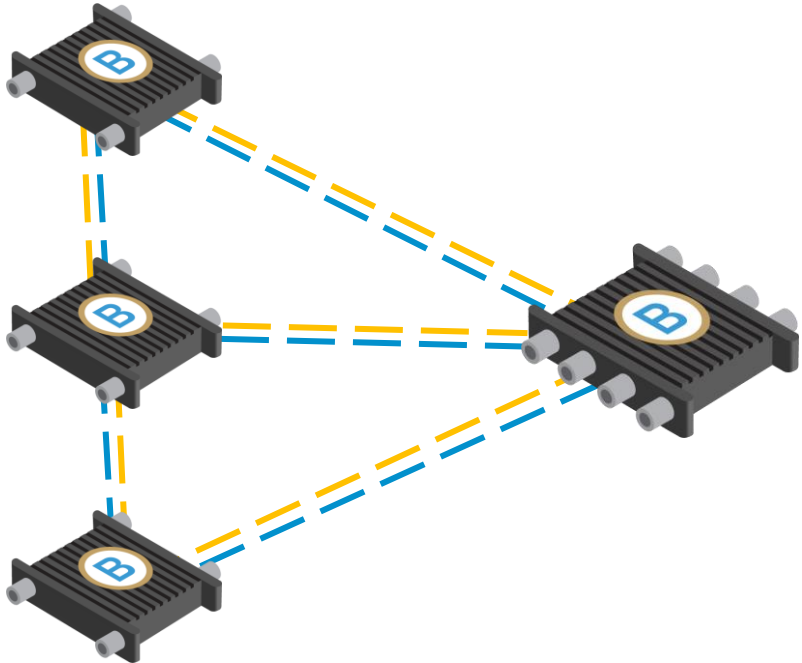


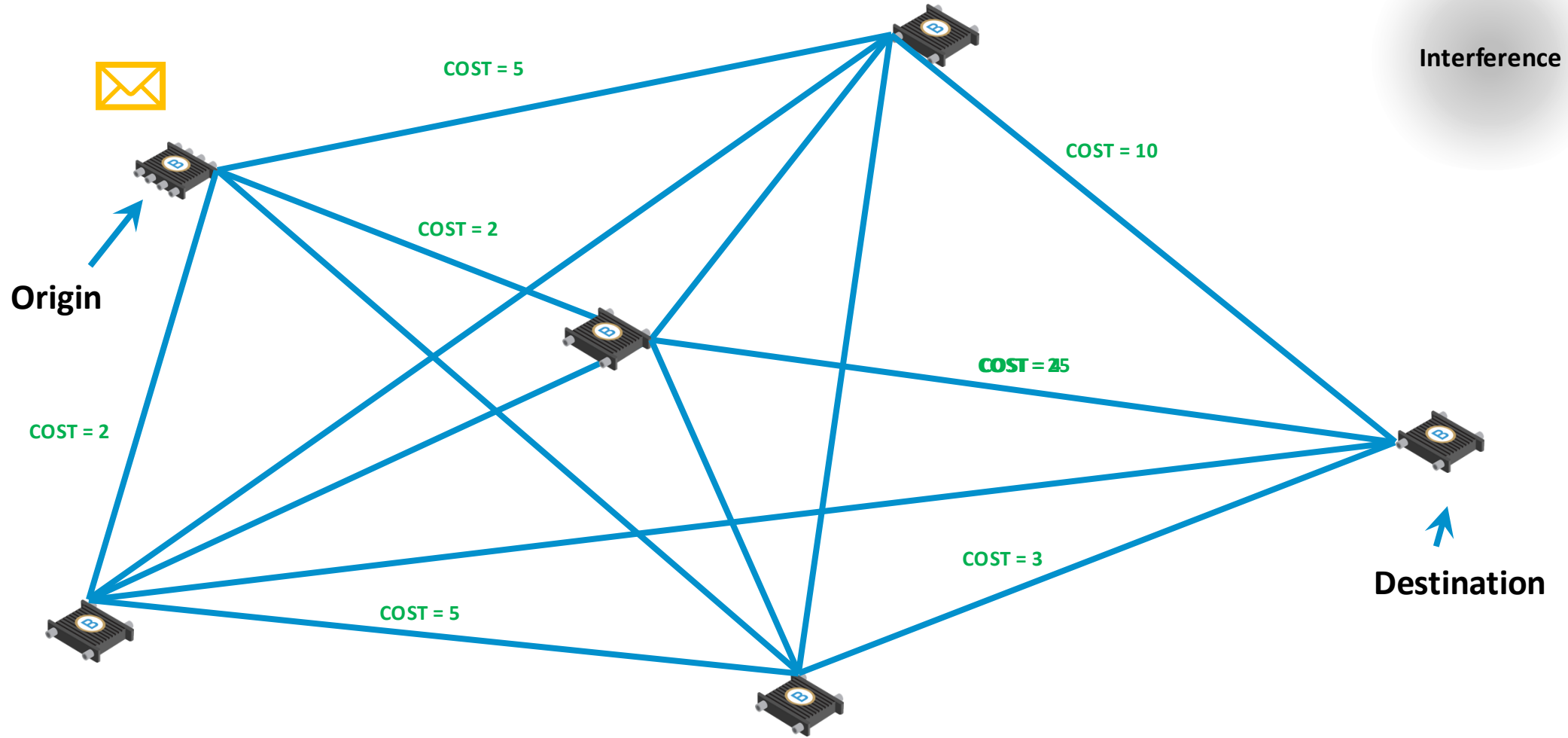
— 2.4 GHz
— 5.8 GHz

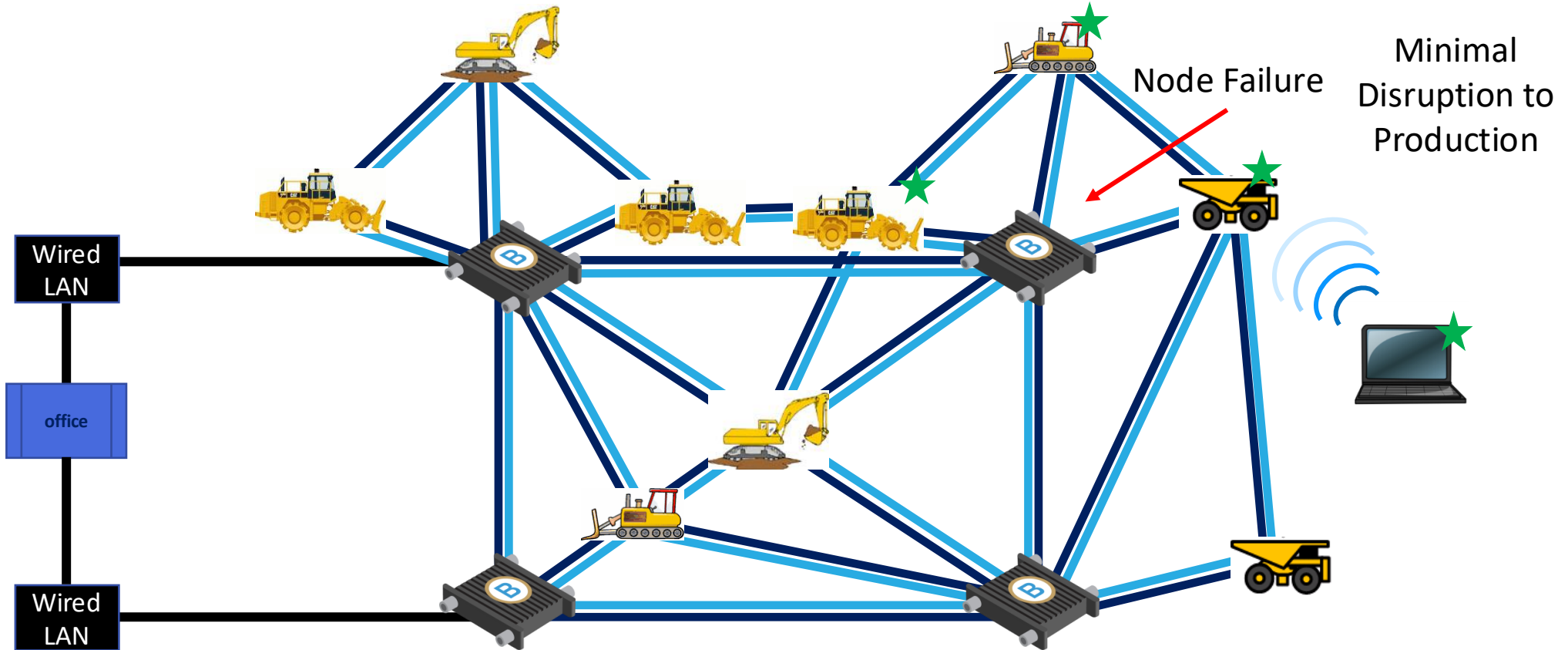
Seamless machine-to-machine communication

Enhanced availability with a leaner infrastructure footprint

Mitigates risk through built-in redundancy







— 2.4 GHz
— 5.8 GHz



Site Assessment

Site Design

Installation

Commissioning

Validation



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How to Manage Your Rajant Network

BC|C Enterprise
Home

ctrl+k

- Home
- Executive View
- NOC Overview
- RF Overview
- RF Details
- Equipment Details
- GPS
- BreadCrumb Table
- Starred
- Channel Activity
- Wireless Noise
- Dashboards
- Connections
- Data sources
- Administration
- Provisioning
- General
- Plugins and data
- Users and access
- Authentication
- Tools
- Client Nicknames
- Mesh-Wide Alerts
- KMSS Generator
- Settings

Site All x x v
 Group All x x v
 Product Family All x x v
 Model All x x v
 Firmware Version All x x v
 Rate Interval 10m v
 Last 6 hours v
 Refresh
1m v
 Export
Share

encap All x x v

Network Operations Center (NOC) View: Acts as a centralized "single pane of glass" to monitor the entire network in real time. It highlights critical alerts and actionable issues, helping operators prioritize responses and maint...

BreadCrumbs	Wired State Chang	Warnings	Reboot Required	Errors	Mesh-Wide Alerts
20	7	73	0	0	1

Connection State

Connected

APT Master Data Total

Best Cost Per Breadcrumb

Good (<5000)	26
Fair (<10000)	9
Bad (>10000)	7
Average	937

Recent Restarts

0	0	0	0	0
0 - 30 min	30 min - ...	1 hr - 6 hr	6 hr - 12...	12 hr - 2...

Uptimes

0	20	0	0	0	0	0
<= 2...	1 wk	1 mth	2 mths	3 mths	6 mths	> 6 ...

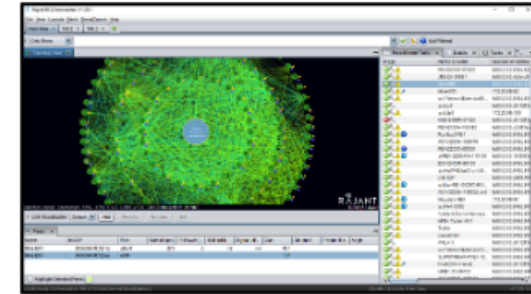
Noise Floor

Terrible (>= -80 dBm)	0
Bad (-90 to -80 dBm)	6
Fair (-95 to -90 dBm)	10
Good (-100 to -95 dBm)	9
Excellent (< -100 dBm)	13

Temperature

Hot (>70°C)	0
Warm (-20°C - 70°C)	20
Cold (<-20°C)	0

Merger of Two Great Software Packages



BC|Enterprise

- Web accessible application
- “Always on” monitoring and data gathering
- Historical network view
- Analysis at individual node or group level
- Customizable dashboards
- Remote or onsite monitoring and management

Standard Dashboards

- Mesh Overview
- Mesh Monitor
- Mesh Density
- All BreadCrumbs
- Groups
- Individual BreadCrumbs
- BreadCrumb Peers

Standard Reports

- BreadCrumb Table
- Daily / Weekly / Monthly
 - BreadCrumb
 - Radio
 - Wireless
 - Wired

BC|Commander Desktop

- Desktop application
- Breadcrumb configuration (Network setup, RF channel, power, VLAN, ESSID, groups, DFS, security etc.)
- Remote firmware updates
- Real-time topology view (network and GPS views)
- Live network analysis
- Loading previous network Snapshots
- Wireless client information
- Live InstaMesh trace
- Per-BreadCrumb alerts

Key Features

BC|C - Advanced

NOC Dashboard (Advanced & Enterprise)

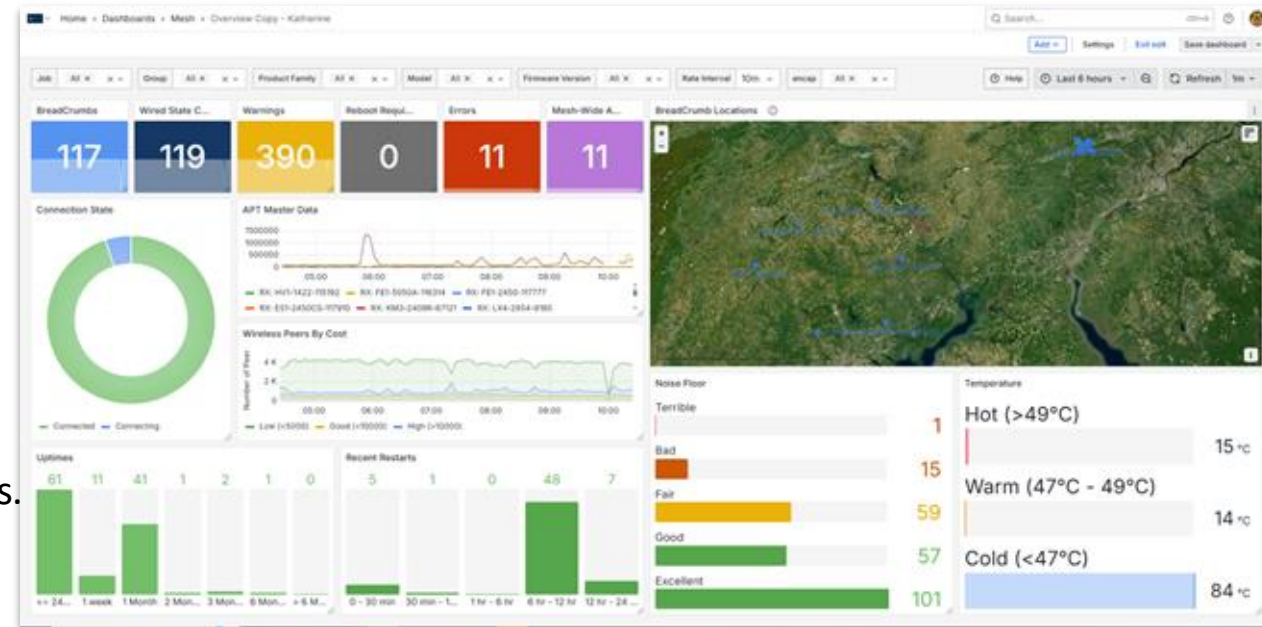
- High-visibility monitoring interface including a Kiosk Mode for full-screen, persistent displays.
- Aggregates metrics for centralized control rooms or IT teams.

Client Device Naming (Advanced & Enterprise)

- Central MAC nickname database allows for simplified device identification in reports and dashboards.

Network-Based Configuration (Advanced & Enterprise)

- Easily configure BreadCrums[®] using network-wide settings for VLANs, security credentials, and InstaMesh[®] parameters.



Client Nicknames

View and edit nicknames give to client devices found on the mesh network

MAC Address	Nickname			BreadCrumb	Last Update
2c:c1:87:c7:30:1c	<input type="text"/>	Save	Reset	FE1-22550-85556	6/25/2025, 4:23:24 PM
84:8d:84:7e:30:5b	<input type="text"/>	Save	Reset	M64-24508-29856	6/25/2025, 4:23:30 PM
32:c1:2c:81:5e:4a	<input type="text"/>	Save	Reset	FE1-22558-96976	6/25/2025, 3:20:28 PM
9c:2f:9d:5a:63:9b	<input type="text"/>	Save	Reset	M64-24508-29858	6/25/2025, 2:26:29 PM
0b:14:99:02:84:53	<input type="text"/>	Save	Reset	MES-6050C5-108855	6/25/2025, 4:24:16 PM
a0:03:65:31:4b:c9	<input type="text"/>	Save	Reset	A07-5250A-123555	6/24/2025, 5:48:07 PM
16:09:58:8b:bd:4f	<input type="text"/>	Save	Reset	FE1-22558-96976	6/25/2025, 12:15:40 PM
48:27:e2:55:94:e8	<input type="text"/>	Save	Reset	M64-24508-29858	6/25/2025, 4:23:30 PM
66:e0:a5:b5:4x:48	<input type="text"/>	Save	Reset	FE1-22558-96976	6/25/2025, 12:44:44 PM
04:c2:9b:99:68:7d	<input type="text"/>	Save	Reset	GM68-22556-104316	6/25/2025, 4:24:05 PM
30:7d:67:d8:b0:89	<input type="text"/>	Save	Reset	FE1-22558-96976	6/24/2025, 8:31:01 PM
7c:7d:a5:65:53:a1	<input type="text"/>	Save	Reset	FE1-22558-96976	6/25/2025, 2:44:12 PM

Key Features

BC|C - Enterprise

Mesh-Wide Alerts

- Detects inconsistencies in system-wide configurations like AP conflict, wired link issues, firmware mismatch, etc

Network Analysis with Recommendations

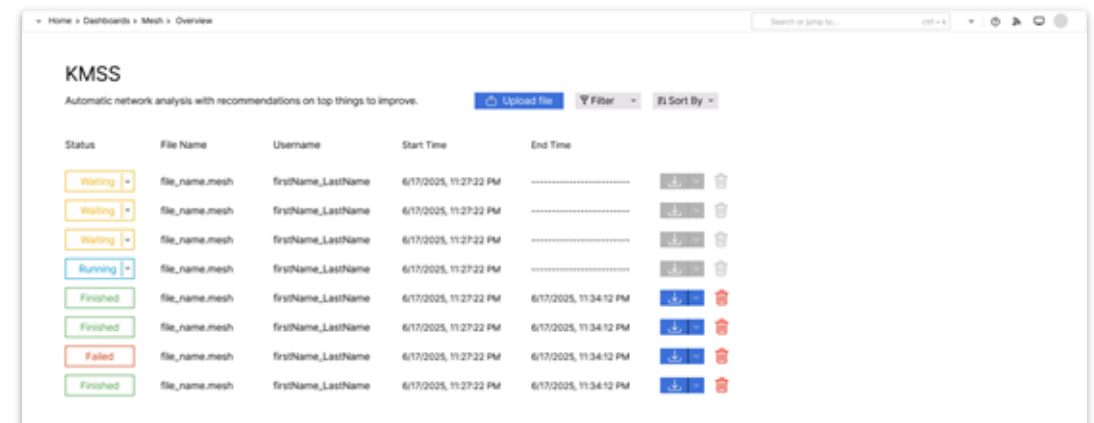
- Runs KMSS diagnostics directly on site
- Prioritized list of recommended actions—Hardware issues, config mismatch, wireless inconsistencies, security, VLAN, etc.

Notifications & Alerts

- Integrated with a Rajant-hosted service, enabling automated email alerts.
- Immediate awareness of critical events across the mesh network.

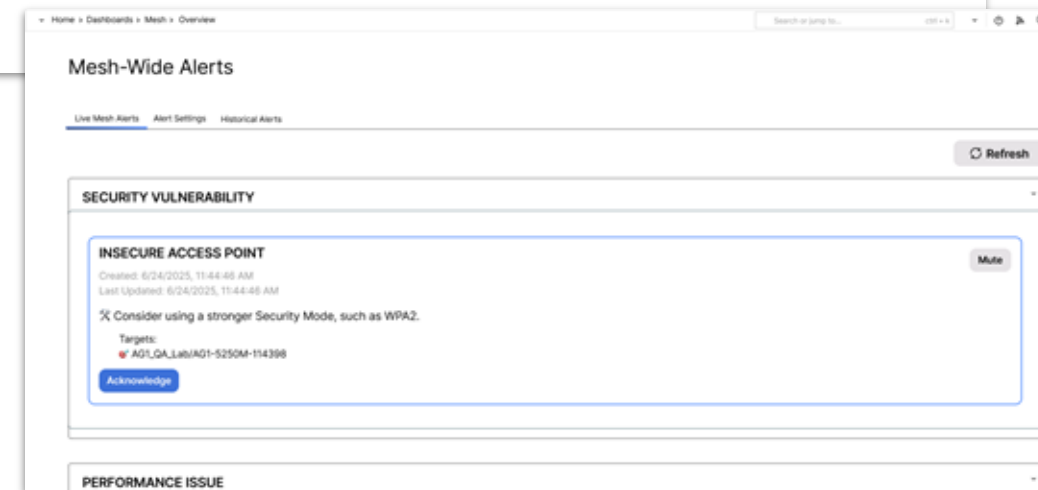
GPS Tracking

- Visualize the physical movement of BreadCrums® over time.
- View individual or grouped location history with heat mapping on cost, signal, noise, SNR.



KMSS
Automatic network analysis with recommendations on top things to improve.

Status	File Name	Username	Start Time	End Time	
Waiting	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	-----	Download Delete
Waiting	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	-----	Download Delete
Waiting	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	-----	Download Delete
Running	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	-----	Download Delete
Finished	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	6/17/2025, 11:34:12 PM	Download Delete
Finished	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	6/17/2025, 11:34:12 PM	Download Delete
Failed	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	6/17/2025, 11:34:12 PM	Download Delete
Finished	file_name.mesh	firstName_LastName	6/17/2025, 11:27:22 PM	6/17/2025, 11:34:12 PM	Download Delete



Mesh-Wide Alerts

Live Mesh Alerts | Alert Settings | Historical Alerts

SECURITY VULNERABILITY

INSECURE ACCESS POINT

Created: 6/24/2025, 11:44:46 AM
Last Updated: 6/24/2025, 11:44:46 AM

✖ Consider using a stronger Security Mode, such as WPA2.

Targets:
AGL_GA_Lab/AG1-5250M-114398

Acknowledge

Mute

PERFORMANCE ISSUE

**PARTNER
SUMMIT
2026**

**SAVE
the
DATE!**

Rancho de los Caballeros
Wickenburg, AZ
May 4th - 7th

Join us for our Partner Summit at Rancho de los Caballeros in Wickenburg, AZ on **May 4th–7th**, as we celebrate **25 years of technology innovation**. Learn the latest on our ever-evolving technology and gain new insights to help maximize your business opportunities.



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Q&A



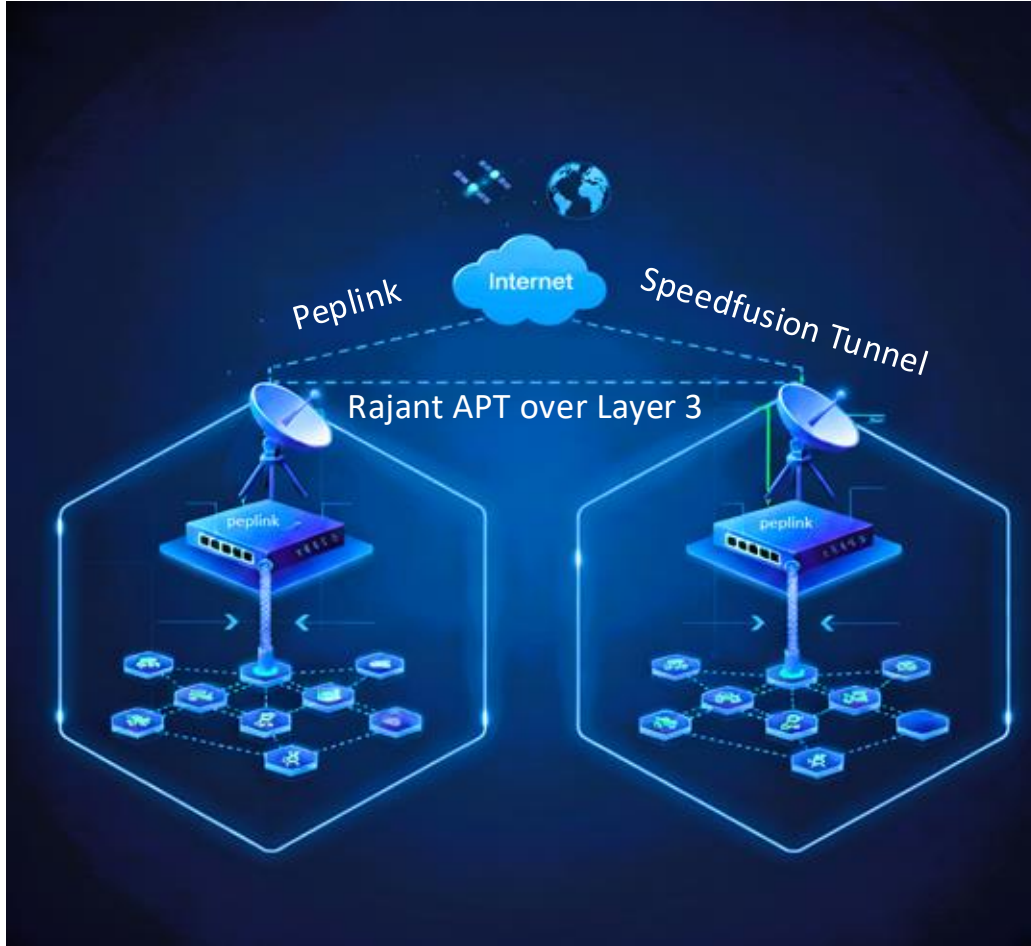
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Addendum

BC Commander Suite

	Features	BC Commander Core	BC Commander Advanced	BC Commander Enterprise
Desktop App	Breadcrumb configuration (Network, VLAN, ESSID, security, groups, RF channels, power, DFS, etc)	X	X	X
	Real-time topology view (multiple network and GPS views)	X	X	X
	Wired and Wireless client information	X	X	X
	Network analysis for troubleshooting	X	X	X
	Live InstaMesh trace	X	X	X
	Per-BreadCrumb alerts	X	X	X
	Network-based configuration*		X	X
Web App	Enhanced Mesh Analysis		X	X
	Analysis at individual node or group level		X	X
	Historical network view		X	X
	Remote or onsite monitoring and management		X	X
	BreadCrumb notifications		X	X
	Network operations center (NOC) dashboard		X	X
	Client device naming (Ethernet and AP clients)		X	X
	Enterprise wide management across all sites*			X
	Mesh wide alerts and email			X
	Automatic network analysis (remote snapshot* and KMSS creation)			X
Historic GPS mapping			X	

*Scheduled for upcoming release



- **Rapid RTK GPS Deployment**

- Rajant enables fast, scalable GPS corrections using Trimble systems with UDP.

- **Three Technologies Combined**

- **Starlink** – configured with its own public IP address.
- **Peplink** – SpeedFusion tunnel routes Layer 2 traffic using Starlink's public IP.
- **Rajant APT** – automatic tunnel protocol creates seamless connections without user intervention.