

The logo consists of the letters 'VI.AVI' in a bold, purple, sans-serif font. The 'V' and 'I' are connected, and the period is small. The background of the slide features a night cityscape with light trails from traffic and a large blue-to-purple gradient shape pointing downwards.

VI.AVI

Introducing PathTrak 4.5

PathTrak 4.5 Contents

- PathTrak Downstream Monitor (PathTrak PNM extension)
- Enhanced Data Content In MACTrak Alarming SNMP Trap
- Enterprise Server Support
- Automated CPE-CM MAC Mapping For MACTrak
- DAA Spectrum Analysis Support
- 3rd Party Security Updates
 - JRE(1.8u112), MySQL (5.7.16)

This slide is for informational purposes only and does not create an obligation for Viavi to deliver any of the features, functionality or products. Due to our rapidly changing technology environment, Viavi cannot commit to a specific item or date and reserves the right to make changes at any time.

PathTrak 4.5 Availability

- Targeting January 2017 For Release
- Available at no charge under PathTrak SW Maintenance & Support Contract
- Single release upgrade available for purchase
 - Must be at v4.3 or higher to purchase upgrade

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PathTrak Downstream Monitor

Automated Downstream Health Assessment



PathTrak Evolution

Your Complete Real-Time HFC Analytics and Assurance Solution

• Why PathTrak – Now More Than Ever?

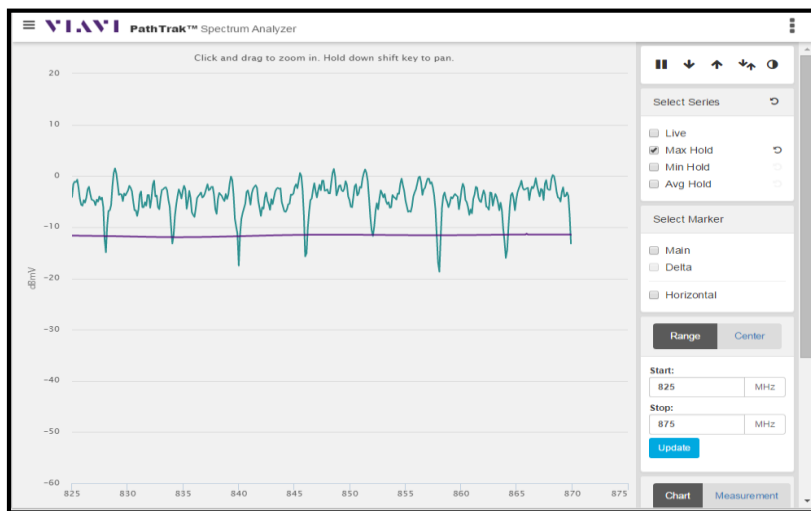
- Simply The Best Live Analyzers – Spectrum and QAM
- Customer QoE *and* Plant Health Visibility
- Extensive Monitoring, Alarming, and Performance History
- Universal Access - PC, Mobile
- Rich Virtualization Content and Roadmap
 - Upstream Pre-Eq, ***Downstream Monitor***
 - Remote Phy/DAA/CCAP Spectrum Analysis
 - Roadmap for additional virtual capabilities (Sweep, etc)

Evolution of Downstream Spectral Analysis in PathTrak

Extending The Benefits Of Downstream Analysis Beyond Just Experienced Tech's

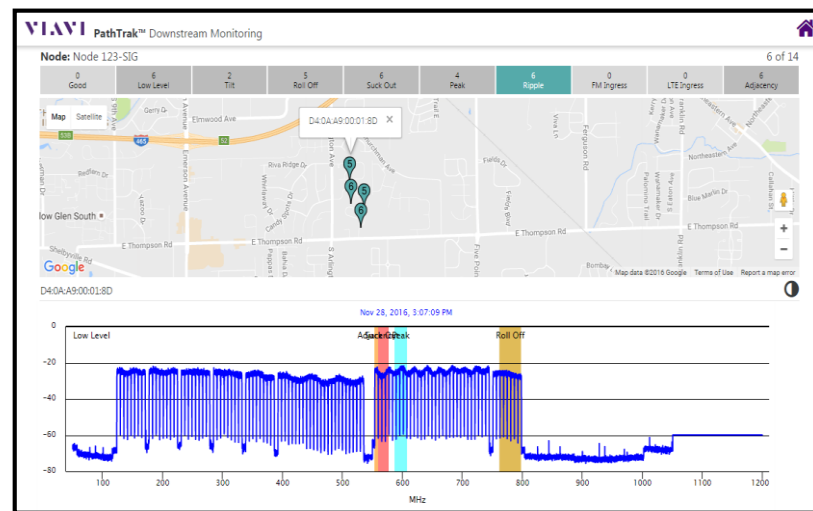
• PathTrak 4.4

- CPE-Based Spectral Display
 - On-Demand Polling Only
 - Must Know Which CPE To Poll
 - Manual Interpretation Of Results
 - Per CPE, No Geo-Awareness



• PathTrak 4.5

- Automated Downstream Analysis
 - Auto-Discover Capable CPE
 - Scheduled Automated Polling
 - Auto-Recognition of Common Symptoms
 - Mapping of Categorized Results



PathTrak Downstream Monitor Process

POLL



Auto-discover capable CPE

Poll on scheduled interval

Collect raw spectral data

ANALYZE

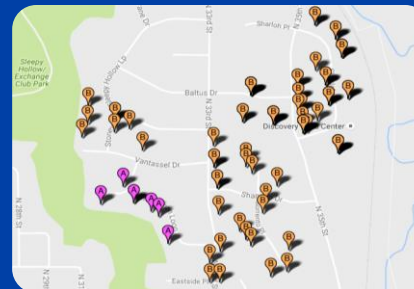


Process raw spectral data

Auto-identify common impairment signatures

Store results from analysis

DISPLAY



Display results on map

Show category groupings

Display per-CPE spectrum

PathTrak Downstream Monitoring



- 1 - Summary Bar – How Many CPE Impacted By Each Impairment Type
- 2 - Map – Color Coded To Match Selected Impairment Type
- 3 - Impairment Types Detected and Frequency For CPE Selected On Map
- 4 - Downstream Spectrum Display For Selected CPE

Impairment Signatures	
Low level	Ripple
Tilt	FM Ingress
Roll-Off	LTE Ingress
Suckout	Adjacency
Peaking	

PathTrak Downstream Monitor Benefits

- **With PathTrak Downstream Monitor You Can:**

- Accurately Determine Home/Drop vs Plant
- Remotely Localize FM/LTE Ingress
- Prioritize Sweep Based On Greatest Need
- Assess Vacant Spectrum Readiness for OFDM

PathTrak: Your Go-To Tool for Forward And Return Path

How To Add PathTrak Downstream Monitor Capabilities

No Additional Charge For Existing PNM Customers Under SW M&S Contract

- **Requirements:**

- **Server must be upgraded to v4.5**

- Upgrade covered under SW Maint & Support contract
- Per-release upgrades available*

- **PathTrak PNM licenses for all CPE to be polled**

- Downstream Monitor is **FREE OF CHARGE** for PathTrak PNM customers under SW Maintenance & Support contract

- **CPE Read/Write community string access** in addition to existing PathTrak PNM connectivity requirements

- **Full-Band Capture (FBC) Capable CPE**

- CPE with FBC-capable HW and FW versions

* - Servers Must Be Within 2 Minor Versions To Be Eligible For Upgrade

Discover The Power Of Full-Spectrum Visibility

- Add PathTrak PNM Capabilities To Your System Today
 - Downstream Monitor included at no charge
 - See what virtualized full spectrum coverage can do for you
- Just a Software Upgrade, No Additional HW Required
- Simple To Try It In Your Plant
 - Using your existing PathTrak Server or standalone machine
- Contact Your Viavi Sales Rep Today or Visit Viavisolutions.com

Additional 4.5 Content

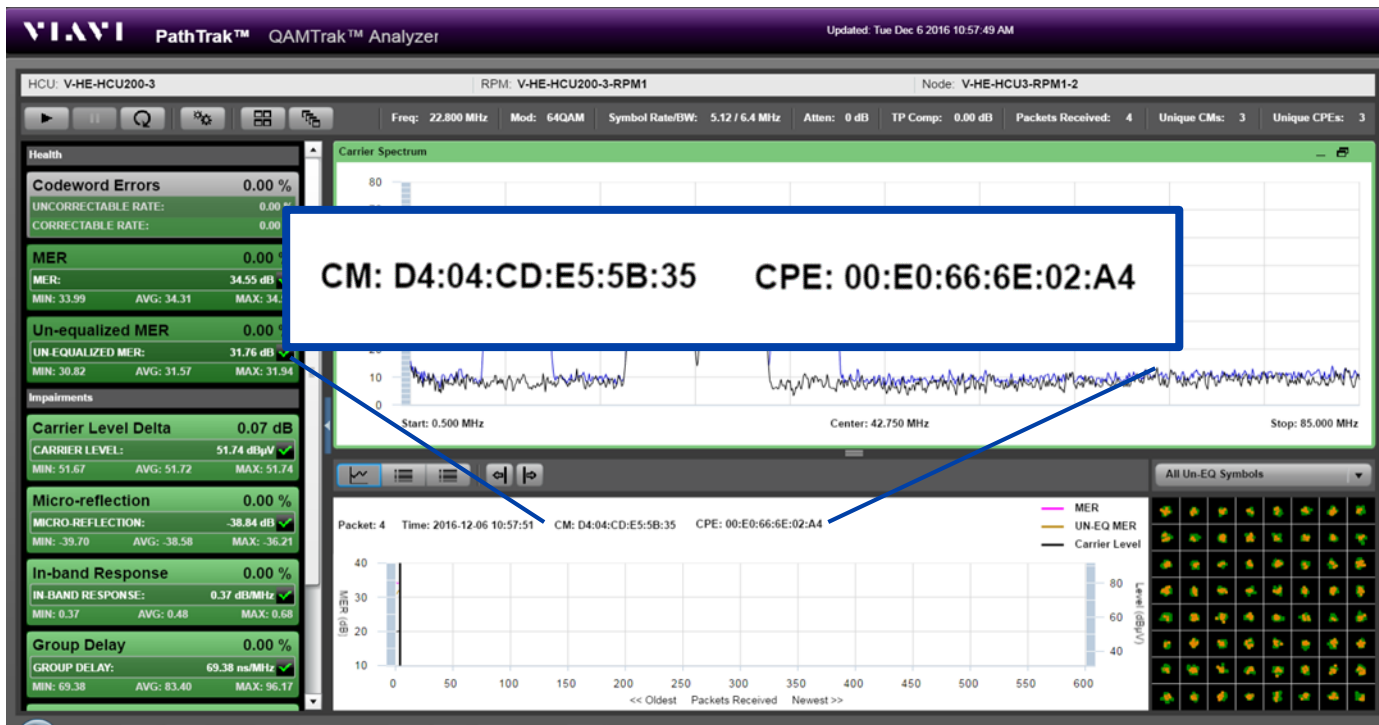
PathTrak 4.5 Contents

- **Enhanced Data Content In MACTrak Alarming SNMP Trap**
 - Carrier Performance Index (CPI) score now passed in SNMP trap
 - Simpler access to carrier health metric
- **Enterprise Server Support**
 - Simplify and reduce cost of server administration through consolidation
 - 7500, 10000, 12500, 15000, 20000 Port Server Licenses available
 - Associated SW Maint & Support contracts also now available
- **3rd Party SW Updates**
 - Latest security patches, etc
 - JRE(1.8u112), MySQL (5.7.16)

PathTrak 4.5 Contents

- **Automated CPE-CM MAC Translation For MACTrak**

- Auto-correlation of MACTrak's CPE MAC to CM MAC
- Simplify correlation/consolidation of MACTrak results with other systems
- CMTS read-only community string access required (same as PathTrak PNM)



- **Distributed Access Architecture Spectrum Analysis**

- High-performance, real-time spectral analysis from Gainspeed Access Node (R-MACPHY) in PathTrak
- Transparent to user whether spectrum source is Access Node or RPM Card
 - UI identical to traditional RPM-Based PathTrak spectrum analyzer
- Gainspeed Access Node support (Viavi license purchase required)





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