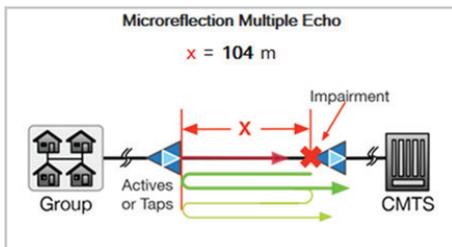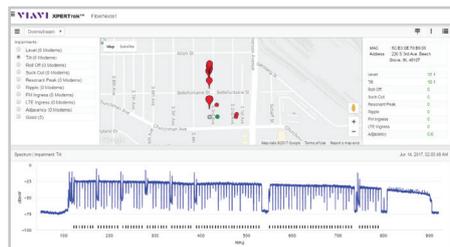# XPERTrak™ PNM

Fixing The Problems That Matter Most

Don't settle for PNM point solutions that just identify impedance mismatches. Only XPERTrak PNM is part of a complete HFC health solution that addresses all your HFC maintenance needs now and into the future. Know which issues need to be fixed now to retain customers at risk of churning, and leverage superior integrated find and fix tools including your deployed field instruments to efficiently minimize MTTR and keep your customers.

XPERTrak PNM provides maintenance teams with simple, actionable information to improve plant reliability and customer satisfaction by using PNM technology to collect and analyze insightful upstream pre-equalization (pre-eq) and downstream spectral data from cable modems, and combining with QoE data to show which impairments are impacting subscriber service quality.

Meaningful Analysis Panel

Downstream Analysis

Upstream pre-eq analysis enables remote identification and localization of plant weaknesses typically masked by DOCSIS (R-ball) pre-eq routines until they reach the point of failure and impact subscriber services. By proactively identifying these weaknesses MSOs can avoid rolling a truck to the address of an already-unsatisfied subscriber, when in many cases the address will not even be the actual fault location. Instead they can look at problem nodes to identify the most impactful problems to fix, avoiding trouble tickets in the first place.

Key Benefits

- Shorten time-to-fix and improve first-time fix rates
- Maximize OPEX ROI by focusing on subscriber-impacting issues first
- Reliable home/drop vs plant problem triage
- Avoid callbacks with on-the-spot repair validation
- Retain customers with truly proactive maintenance practices
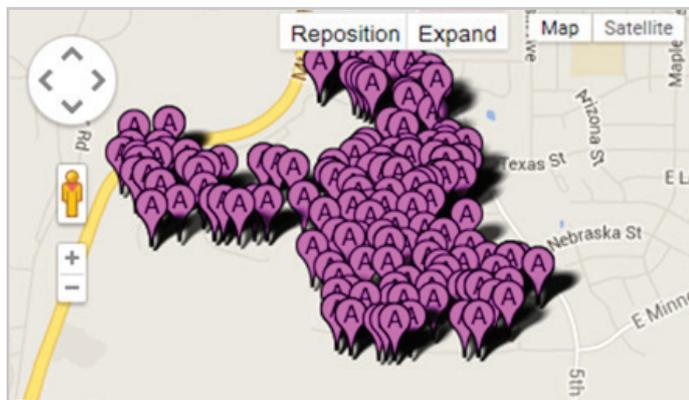
Key Features

- Pinpoints problem locations with maps
- Groups customers with common impairments to maximize tech's efforts with high-value service targets
- Linkage from customer impact to plant issues
- Looks at both upstream and downstream impairments
- Vendor-neutral, works equally well with data any network equipment vendor

Applications

- Proactive HFC plant maintenance
- Network prep and readiness for deploying DOCSIS 3.1
- Accurate upstream and downstream fault location
- Isolate in-home wiring vs. outside plant as problem source

XPERTrak PNM also complements upstream pre-eq analysis with automated downstream spectral analysis to give a complete picture of HFC health. By applying automated impairment identification algorithms 9 common impairment signatures are automatically detected. Using easy-to-understand maps even difficult-to-localize impairments like FM & LTE ingress can then be remotely pinpointed, ensuring a rapid fix.

Geo-location of impacted subscribers

XPERTrak PNM lets you regain full visibility of plant weaknesses so you can assess and prioritize those impacting the largest number of subscribers and address them quickly and efficiently. Whether based on upstream or downstream analysis, XPERTrak PNM provides results in an easy-to-understand format allowing widespread applicability rather than being just a science project for a select few Engineers.

Vendor-Neutral Solution

XPERTrak PNM works equally well with data from all network equipment vendors, it is not a proprietary system tied to any single CPE or CMTS provider. As networks evolve and new technologies such as DOCSIS 3.1 and remote phy are deployed in a phased fashion, likely from multiple vendors, having a system from a T&M vendor ensures consistency in physical and virtual test solutions. Deploying a PNM solution from a neutral T&M vendor also reduces risk in second-sourcing network equipment vs being locked into a PNM solution from a specific NEM.

Shorten Time-to-Fix, Improve First-Time Fix Rates

Eliminate guesswork with mapped-location and distance-to-fault information prior to truck rolls so your techs know exactly where they are going. Plant map overlay greatly simplifies identification of last common plant element. You'll know that when you dispatch a tech, they're going to the right place and an actual fault.

Validate Fixes on the Spot

Verifying/validating fixes on-the-spot reduces callbacks. XPERTrak PNM enables a single-click query of any one of a group of impacted modems to prove a fix.

Reliable Home/Drop vs. Plant Problem Triage

Incorrect problem triage has consequences. Dispatching a service tech to a home for what is ultimately an outside plant problem unnecessarily disrupts the customer's day and the resulting referral to maintenance further delays issue resolution. Combining upstream pre-eq and automated downstream spectral analysis greatly reduces incorrect dispatch decisions.

Prioritize Maintenance Efforts and Reduce Churn

XPERTrak PNM analysis provides a simple list of high-value service targets, a prioritized list of issues showing the most severe issues and the number of subscribers they impact. QoE View shows which impairments are impacting subscriber services and need fixed now vs which can be deferred until a truck is in the area at a later date. Tackling prioritized targets gives the biggest return on your maintenance efforts.

Monitor with Node-Level Views/Summaries

Those who monitor and maintain the HFC plant typically think in terms of fiber nodes, not CMTS ports. When is the last time you assigned a maintenance tech to sweep a CMTS port? To make life easy for your workgroups, XPERTrak PNM continues the practice of displaying everything in terms of nodes.

Retain Customers with Truly Proactive Maintenance Practices

Improving network reliability by detecting plant impairments before they impact customers or catastrophically fail increases satisfaction and reduces churn. Add PNM to XPERTrak and see all impairment types
with the industry's most-comprehensive, most-trusted go-to tool for HFC issues.

For more information about XPERTrak PNM and related products, visit http://www.viavisolutions.com/en-us/products/xpertrak or contact your Viavi representative.