

Tech Tip

Use PNM Tools to Quickly Find and Fix Service Issues

Proactive network maintenance (PNM) has become more mainstream in the past several years and provides a remote inspection of the network. PNM uses customer premise equipment (CPE) upstream pre-equalization to remotely detect and localize impedance mismatches.

Existing PNM systems simplify the identification of plant sections needing maintenance by capturing the pre-equalization responses, grouping modems that have statistically similar responses, and correlating grouped modems to a plant map to find the least common denominator plant component. This makes PNM ideal for maintenance prioritization.

New Systems Locate Top QoE Issues

Current PNM systems are great at detecting issues throughout the plant, but many of the issues don't have an impact on subscriber performance. This leads to increased truck rolls – and, therefore, expense – without a measurable increase in subscriber quality of experience (QoE). New systems are now available that make the link between plant issues and customer QoE. This keeps subscribers happy and provides a way for technicians to prove their work is making a real difference.

The correlation between plant issues and customer QoE is becoming automated, allowing PNM solutions to effectively mine data into actionable information in near real-time for technicians. For example, leakage data is overlaid with PNM and QoE data on a single plant map. This greatly simplifies the localization of issues before technicians are dispatched and shows which issues will have the greatest impact on customer QoE.



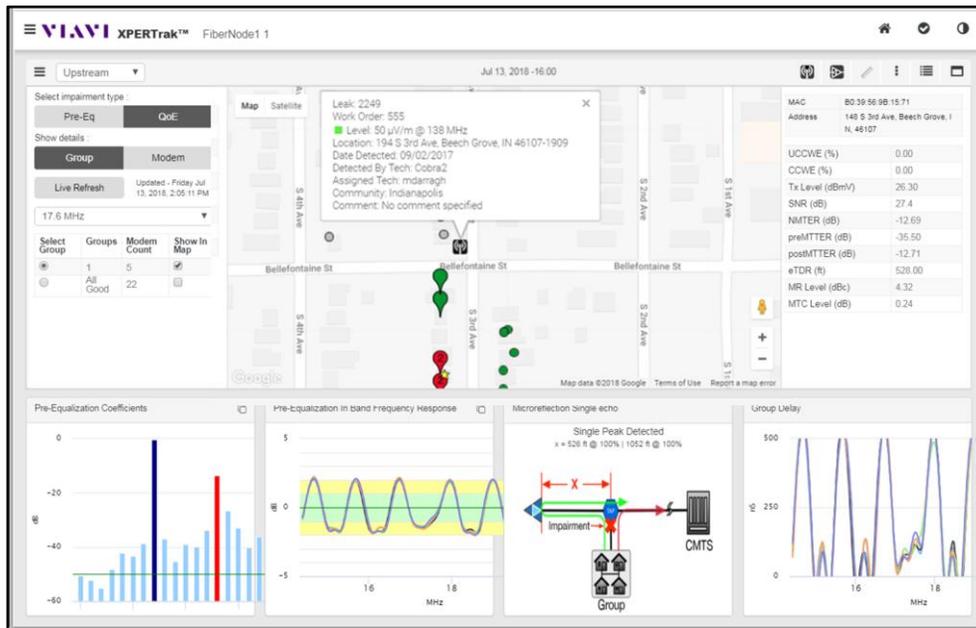
In addition, these new solutions handle all common use cases including ingress remediation, sweep and leakage tagging while interacting in real-time with field testing units. This allows technicians see the results of their efforts in real-time to get the problem fixed as quickly as possible.

Below is a quick look at the best way to use newer field instruments and PNM tools to find and fix the most pressing problems.

Step 1: Ensure problem you are chasing is impacting subscriber QoE. If not, flag the issue for remediation next time a truck is in the area.

Step 2: Identify last common isolation point among grouped homes using overlaid plant maps.

Step 3: Look for identified plant leaks near where the distance-to-fault indicates as a likely root cause point. Leaks are often indicative of impedance mismatch issues. Leakage data that is overlaid on PNM and plant maps simplifies the process.



Leakage data Overlaid on PNM/QoE/Plant Map

Step 4: Fix issue in the field using PNM tool and field meter.

Step 5: While still onsite, check that PNM-identified issue is gone and QoE is green. This confirms you fixed the correct issue that is affecting subscribers instead of a non-critical issue.

Want to learn how this solution can speedup troubleshooting for technicians? Read more about [XPERTrak](#) and the ways in which it interacts with field test instruments.

Products Used for Testing:

[XPERTrak](#)

[Seeker D Leakage System](#)

[Seeker LAW Leakage Management System](#)

[OneExpert CATV](#)