Profile Management Application (PMA)

Boost the Capacity and Resilience of your DOCSIS 3.1 Network with PMA

PreEqualization Analyzer
A PNM TOOL

Deploying DOCSIS 3.1 can significantly increase the capacity of your HFC network. But, impairments in your OFDM and OFDMA channels can reduce those gains by forcing cable modems to connect at lower modulation profiles.

Our PMA module analyzes RxMER for every cable modem on a node and determines the optimal modulation for each OFDM/A subcarrier, along with the optimal frequency for the PHY Link Channel (PLC). The application then automatically makes adjustments at the CMTS so 3.1 cable modems will connect at the optimum modulation profile. The profile sets are tailored to the unique real-world environment of each OFDM/OFDMA channel, immediately increasing the capacity of your DOCSIS 3.1 network.

PMA is a closed-loop, automated, and data-driven solution that creates bandwidth without human intervention. Once implemented, every node is regularly analyzed and optimized dynamically as RF impairments and conditions on your plant change, boosting the capacity and resilience of your network. And, as more modems connect on higher modulation profiles, you will free up capacity on your SC-QAM channels.

Benefits

CAPEX Savings

Automatically identify and deliver the optimal set of OFDM/OFDMA profiles for improving bandwidth without the expense of line drops or other network build-out costs. Increase capacity up to 40% over baseline configurations in both the upstream and downstream. Postpone investments in node-splits.

OPEX Savings

All configurations are determined and implemented automatically and remotely, which means less time needed for engineers to monitor, customer service to handle QoE issues, less time for technician installations, and overall fewer truck rolls. Reduce calls to your contact center.

Top Line Growth

Greater bandwidth allows for upgrading subscribers to higher speed plans on existing infrastructure generating greater ARPU.

PMA Functionality

- Works with DOCSIS 3.1 Networks
- Learns current state from CMTS/R-PHY & CMs
- Optimizes all OFDM/OFDMA channels
- Creates CMTS-specific configurations
- Measures and displays % gain in bandwidth each cycle on a per-channel, CMTS, and system-wide basis
- Gathers a wide variety of data including RxMER, FEC from CMs and CMTS topology data
- Creates a tailored set of per-subcarrier profiles for each OFDM/OFDMA channel – around 10^{57000} combinations per channel
- Solves this difficult problem in record time – milliseconds per channel
- Proactive alerts for LTE ingress, suck-outs, roll-offs and more

Contact Us

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