

# OV Spectrum Analyzer: Upstream

## The Best Headend/Hub Site Spectrum Analyzer is the One You Already Have – Your CMTS. Why?

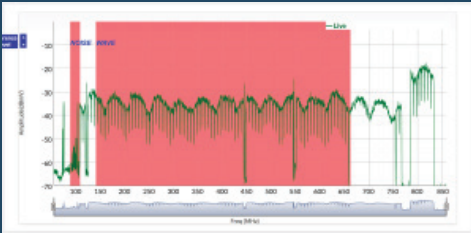
Your CMTS is already installed – requiring no additional cabling – displaying the RF spectrum you need to see. Currently, most CMTSs have the ability to act as a return path spectrum analyzer since they're built around a Broadcom chipset for return path demodulation. OpenVault has harnessed this to make a very powerful, useful tool for identifying impairments.

In addition to giving visibility to the return path spectrum, the CMTS knows when cable modems are transmitting – and even more importantly – when they're not transmitting. This enables the ability to see any noise located under the cable modem channels. As a result, the CMTS can prove truly valuable as a spectrum analyzer since you already have it installed in every headend and/or hub site.

Ultimately, the OpenVault Spectrum Analyzer: Upstream has visibility to the noise under the upstream DOCSIS® carrier and other RF ingress carriers, which can then be acted upon in the field to improve plant performance.



### OV Spectrum Analyzer: Upstream Identifies Such Impairments as:



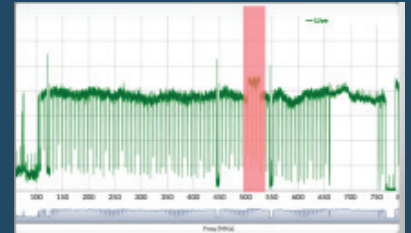
#### Standing Waves

Standing waves are a type of downstream impairment that can occur in a cable network, and are often caused by issues like micro-reflections and unterminated drops. When standing waves occur, they can cause significant signal loss and interference, which can result in lost or impaired channels for the subscriber.



#### FM Noise and Suck Outs

These are two common downstream impairments that can affect the performance of a cable network. FM noise, also known as frequency modulation noise, can cause interference with downstream channels, while suckouts can cause channels to be missing or unavailable to the subscriber.



#### Adjacency

Adjacency impacts the performance of cable set top boxes causing poor QoE. It occurs when two channels in the cable network are too close together in frequency, causing interference and signal degradation. This can result in a range of issues for set top boxes such as pixelation and audio drops.

### 10+ YEARS OF INDUSTRY LEADERSHIP

OpenVault serves 150+ broadband operators in the North America, Europe, Asia Pacific, Latin America and Caribbean markets. We've helped them improve annual revenue by 100s of millions of dollars and we do so for more operators than any other broadband-focused software vendor in the world. No other company knows more about broadband subscriber usage behavior and how to use network data to drive revenue, reduce costs, better manage networks and improve customer satisfaction and retention than OpenVault. Contact us at [sales@openvault.com](mailto:sales@openvault.com)

