

MEDIA/ANALYST CONTACT:

Rafael Larin
Emissary Communications
818.541.9595
rafael@emissarypr.com

COMPANY CONTACT:

J M Brewster
QoSmetrics
805.445.8504, ext. 225
brew@qosmetrics.com



QoSmetrics Enables Set Top Box Makers to Integrate IPTV Performance Analysis of Video and Audio Quality Right in a User's Box at the Home

Video/Audio Performance Measurement Technology, Once Typically Reserved Only for Network Core, Now Deployable in User's Box for Complete End-to-End Service Quality Measurement and Resolution

CAMARILLO, Calif. – December 5, 2005 – QoSmetrics, a leading provider of network performance assurance solutions for triple play networks, today announced its V-Factor technology used in a core network to assure quality IPTV service delivery is now being made available for integration right in a customer's set top box (STB) for true end-to-end Quality of Experience (QoE) measurement. Allowing the integration of V-Factor in an STB places the capability to measure Internet Protocol TV (IPTV) performance right in a user's home, allowing for the best opportunity to ensure a customer is receiving the highest quality IPTV service delivery.

QoSmetrics is currently undergoing a beta trial with one undisclosed manufacturer. V-Factor technology, integrated into QoSmetrics' hardware probes for deployment in a service provider's network allows the capability to assure IPTV video and audio are performing as expected across a network with the insight – from the core – as to how a user perceives video and audio quality at their end. But now, integrating V-Factor into an STB gives manufacturers the opportunity to empower service providers with an advanced STB solution that can assure them of end-to-end performance of their IPTV services, right down to a user's home.

"Enabling V-Factor to be embedded in an STB is a great complement to having V-Factor-enabled performance analysis in the core network," commented Yves Cagnet, Chairman of QoSmetrics. "In order to solve last mile issues related to assuring performance of IPTV between the DSLAM, for example, and an STB it is ideal to have an agent that can perform right from a user's home. Our new solution will give service providers this capability for true end-to-end QoE."

The solution also involves QoSmetrics providing an Application Programming Interface (API) to set top box manufacturers to hook QoSmetrics' software into the driver level of a network. V-Factor for STB is agnostic to decoder type and buffer size, allowing seamless and quick integration into all leading STB products. It requires no additional hardware integration into an STB.

STB manufacturers and service providers also benefit from other recent upgrades to V-Factor. Last month, QoSmetrics announced a market first, the ability to also measure audio performance alongside video performance. Naturally, assuring audio performance alongside video is desirable, as both are dependent on each other for a good user experience. Other enhancements now allow service providers to segment IPTV video and audio performance assurance by channel, geographic region and various other segmentations for greater isolation of service impairments. QoSmetrics was first to market with a video performance – V-Factor – technology for service providers, by delivering a V-Factor enabled product in April 2005, before adding the first audio capability on the market in October 2005. Now, QoSmetrics is first to enable both measurement capabilities right in a user's STB.

Availability

Price varies by quantities and configuration and is barely noticeable to overall costs in just about any quantity. QoSmetrics will also offer a pay-per-use model that helps STB manufacturer embed V-Factor in their STB at no cost and instead resell the technology as part of a service to those that want to deploy it. This allows STB manufacturers simple entry into the technology and greater flexibility for service providers. This new product provides, as with previous products, Internet Protocol (IP) Service Level Agreement (SLA) metrics such as delay, loss and jitter based on the International Telecommunications Union (ITU) standard Y1540/1. Metrics for Voice-over-IP (VoIP) such as Mean Opinion Score (MOS) capabilities based on ITU G107 are included alongside Video-over-IP metrics based on QoSmetrics' V-Factor and European Telecommunications Standards Institute (ETSI) TR101290 metrics, as well as other Key Performance Indicators (KPI).

(more)

Engineering teams at STB manufacturers and network engineering management and quality assurance management at carriers \ service providers that are deploying video applications such as IPTV and triple play (data, voice and video) applications are prime customers for QoSmetrics' new V-Factor for STB product.

V-Factor products consisting of hardware probes and software agents are capable of pinpointing a deteriorating device or application at fault on a network for fast root-cause analysis. This allows for quick troubleshooting and repair, leading to dramatically shortened service disruptions. This integrated solution is easy to deploy and seamlessly integrates at the back end with existing Operations Support Systems (OSS) such as BMCRemedy's ARS (Trouble Ticket) or Hewlett Packard's SQM.

How V-Factor Works

V-Factor involves both a QoSmetrics developed algorithm that is part of QoSmetrics products and a methodology for implementing metrics-based measurement of streaming digitized video and audio. Previously, users had to rely on network transport indicators and other methods that inferred video quality. Video MOS was often evaluated by simple fidelity metrics such as Mean Square Error (MSE) or Peak-Signal-Noise-Ratio (PSNR). Unfortunately, this class of metrics does not correlate well with the human perception of video quality. V-Factor takes into account network impairments such as delay variation and packet loss episodes that impact the video buffer used to reconstitute a video image. The buffer's characteristics are also taken into account as well as image complexity and the type of codec. V-Factor is based on the Video Quality Expert Group (VQEG) Motion Picture Quality Metrics (MPQM) model. MPQM-based V-Factor maximizes video and audio quality as perceived by an end-user through the whole chain and lets its implementer see how traditional network metrics impact this perceived quality. V-Factor evaluates the perceptual impact of video quality artifacts introduced by video transmission over a network. The video stream is analyzed using the V-Factor models and algorithms. The audio stream is analyzed using MOS and R-Factor models. A data stream is analyzed using the metrics described in the standard ETSI TR101290.

About QoSmetrics

QoSmetrics is a leading provider of integrated network performance assurance solutions for carriers, service providers and enterprises who seek network performance assurance for high availability mission-critical service offerings tied to their revenues and/or productivity. Products sold and deployed worldwide through a network of channel partners, are ideal for a variety of applications including, triple play, voice, video, data and other converged network applications and services, such as IPTV. QoSmetrics' software agents, web-based agents and hardware probes combine to provide comprehensive real time multi-protocol, end-to-end and scalable testing, monitoring and diagnostics to troubleshoot network problems prohibiting or hindering access to applications or the delivery of promised levels of services. QoSmetrics products feature advanced patented capabilities that go beyond traditional ping-based solutions to fully pinpoint, dissect, and resolve any network problems during planning or deployment, such as jitter, packet loss, latency or equipment failures and inabilities. Founded in 1999, QoSmetrics maintains corporate and R&D facilities in Camarillo, Calif., just west of Los Angeles, and in Massy, France, near Paris. A privately held company, QoSmetrics has secured funding from leading investors and has been generating revenues since 2003 with four generations of products. More information about the company can be found online at www.qosmetrics.com.

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