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WHITEPAPER

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RTP Monitoring

Just "nice to have" or essential to excel?
Improving voice quality and
network performance on IP networks

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Fixed mobile convergence, IMS, NGN and triple play have become synonyms for telecommunication drivers and all-IP network architectures.

All of these architectures rely on the Real-time Transport Protocol (RTP) as the core technology for real-time communication services.

RTP is used for the media transport of services such as voice and video. Once a voice call is established, the flow of speech is continuously chopped up into RTP packets and sent across the line until the end of the call.

Poor voice quality with broken-up speech or dropped words is a typical result of disruptions to the RTP packet flow. High quality connections demand a constant and steady RTP packet stream.

In practice this flow of packets is frequently exposed to distortions with a negative impact on voice quality.

The network, equipment, configurations and changing traffic load are highly dynamic sources of such impairments. In addition, RTP packets share the line with all other communication and data services.

That's exactly the objective of moving to an all-IP network, isn't it?

And all the mechanisms for handling your competing IP traffic are in place, right?

The challenge of voice quality in all-IP networks is well understood. A variety of technologies to provide Quality of Service (QoS) have been developed. However, even when QoS mechanisms are deployed on your network, are they really effective?

Your network is not the only potential source of impairments – your supplier and customer environments might be responsible as well.

The need for monitoring is evident.

Yet voice quality monitoring is annoying when it simply confirms a known fact. When you feel sick you don't need the doctor to tell you so. You want to know what is wrong and what to do about it.

Voipfuture's innovative RTP monitoring solution provides the diagnostics to assess quality, to localize the root causes of impairments and consequently to improve voice quality and overall network performance.

The RTP media flow is continuously analyzed in real-time to diagnose issues such as limited bandwidth or improperly functioning network components. In such cases voice quality is affected by drop-outs.

Equally hard to identify are typical impairments from underperforming or misconfigured end devices. For instance, poor firmware releases may be eating up your available delay budgets. When needed, such safety margins are no longer available to your network.

Voipfuture's technology is in place literally to visualize the conformancewith QoS policies. In many cases our customers have found inconsistent QoS settings that previously went unnoticed.

For this reason the intended prioritization was not performed by routers, causing sporadic poor voice quality. Whatever the reason for bad voice quality, the service provider's network is considered to be responsible. Precise measurements to evaluate your suppliers' and interconnection partners' performance are essential to guarantee agreed service levels to your customers.

Metrics, designed for online monitoring and network-wide analysis, are available for historic comparison over weeks and months. Observing quality over time makes it easy to track changes to the network such as new network components, system upgrades or fixes.

To sum up:

In contrast to circuit switched networks, voice connection quality in IP networks varies and requires continuous monitoring;

Responsibility for voice quality is distributed across different departmentsand business partners;

Monitoring without root cause analysis is of little value;

A dedicated metric providing root causes, diagnostics and performance parameters is essential to improve network performance and voice quality.

Voipfuture's RTP Monitoring solution is key to successful voice service operation.

Dr. Michael Wallbaum
Director Product Marketing,
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About

Founded in 2007, Voipfuture is the leading provider of RTP Monitoring as a standard network solution.

Live traffic RTP Monitoring provides insight into customer experience and network performance of voice services in IP networks.

Voipfuture delivers leading edge technology to monitor and evaluate voice quality in Next Generation Networks. The products are characterized by performance, precision and vendor independence.

Our solutions offered to carriers, enterprises and system integrators open up a new dimension in the efficient operation of VoIP networks. Secure your VoIP future with Voipfuture.