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Press Release

New Voipfuture White Paper "The Codec Challenge: EVS Forces VoLTE Operators to Act"

Hamburg, April 25th 2019
- New Voipfuture white paper: The codec challenge
- Why multi-rate codecs ask for a different kind of VoIP monitoring

Today, Voipfuture released a new whitepaper titled "The Codec Challenge: EVS forces VoLTE operators to act". The paper discusses the move of VoLTE service providers to HD Audio codecs and its impact on user expectations and quality assurance.

Voice over IP (VoIP) services may encode voice and other audio signals in different ways, yet conventional narrowband codecs still account for the majority of fixed and mobile telephone calls. However, the codec landscape is quickly changing and, in both domains, new modern codecs are becoming the reference. This development creates pressure on service providers to speed up the transition as customers quickly get used to the superior HD Codec experience.

In addition, providers also need to consider the impact on service quality monitoring, because new codecs, such as AMR-WB and EVS, make it much more difficult to estimate the real user experience. Modern codecs offer several modes and bit rates, which allow to adapt voice transmission to the available channel conditions and bandwidths. Such codec mode changes can occur on a packet-by-packet basis without any indication in the SIP signaling. VoIP monitoring thus needs to be aware of such mode changes, because the user experience strongly depends on the bit rate.

Dr. Michael Wallbaum, Voipfuture Director of Product Marketing, explains: "The bitrates of AMR-WB, used in many mobile networks, range from 23.05 kbit/sec down to 6.6 kbit/sec. The high end will leave most users very satisfied, while the low end leaves nearly all users dissatisfied. This example shows why the bitrate plays such an important role for the user experience and why service providers need to know about different codec modes. Simply saying, 'oh, we use a wideband codec' is not enough."

To provide such information requires a new approach to VoIP monitoring for Voice over LTE. As mentioned above, SIP monitoring must be supplemented by a close look at the media plane and RTP. SIP monitoring without RTP and payload inspection is useless for MOS determination in HD voice services.

This approach is followed by Voipfuture's unique Qrystal solution. It provides not only real-time information which codec is used but also what bitrate of this codec. As a passive monitoring tool it delivers quality for fixed five second units. Quality data is aggregated to different levels, providing accurate information to evaluate overall traffic quality as well as single calls.

Voipfuture is a premium voice quality analytics vendor providing tools for assessing, aggregating, analyzing, and visualizing voice quality information. Voipfuture products offer a precise view on media and control plane to communication service providers, VoLTE carriers, wholesalers and enterprises.

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