The Video Quality Experts Group (VQEG)

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ABSTRACT

In France, the telecommunication industrial and the telecommunication regulatory bodies, and TV broadcasters need to qualify the video quality by unify manners. Today, the video on demand and the live program should be controlled in order to provide the best services. The measurements strategy depends on directly the architecture. The audiovisual quality monitoring should be evaluated for long term (exceed 10s) and the access point. The QOE metrics could applied for VOD and live IPTV and DTT services without any reference (NR model). This proposal provides some suggestion to evaluate properly the audiovisual by using the MOAVI approach and MOAVI.

1. Proposal use case.

1.1 Live applications

In operational world, we have no interest to test the encoding chain with specific video contents. We are in passive mode and without video source reference. The audiovisual content should be analyzed as well as the customers watch the channel services. As possible the encryption (DRM: *Digital Rights Management*) is disabled, or if not possible the decryption part doesn't have an impact on the measurement process or the impact should be taken into account without big gap on luminance chrominance levels. The probes or monitoring can take place at the content provider, service provider, network provider and at end users.

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Orange Labs contribution

1.2 VOD applications

Before encoding phase, the audiovisual masters provided by the laboratories have to check on bitstream and audiovisual content. Usually, the bitstream is analyzed during Content Check (CC) and the audiovisual quality is verified during Quality check (QC). In Quality check, is really important to spend more time to analyze the whole of the movies and not some randomize part.

After transcoding phase, the encoded files (such as MPEG2, H.264, progressive download, adaptive streaming,) could be analyzed. The indicators have to alarm the supervisor when major artifacts could appear during playout on customer's terminals. The false positives ratio with the algorithms can be allowed according the MOAVI Project-Plan. The analysis could be done in real-time or in faster in real time.

2. References.

http://www.videoclarity.com/PDF/WPBroadcastTesting.pdf

http://www.dialogic.com/~/media/products/docs/whitepapers/11681-qoe-mobile-video-wp.pdf

Recommendation ITU-T Y.1901, Requirements for the support of IPTV services

Recommendation ITU-T Y.1910, IPTV functional architecture

Recommendation ITU-T P.930, principles of reference impairment system for video