A Three-Component Video Quality Assessment Method for Real-Time HD Video Transmission*

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Abstract

With the emergence of interactive HD video applications, and by getting their traffic more and more significant in the global Internet traffic mix, correlating user satisfaction with measured service quality is a constant challenge. While Quality of Service (QoS) summarizes objective metrics measured at certain points of the infrastructure, they do not correlate to the Quality of Experience (QoE) in practice. Therefore, many subjective and objective methods were developed to estimate QoE. However, the performance of the objective methods depends on the type and extent of the visual artifact. In our paper, a three-component evaluation method is presented. The correlation of objective QoS metrics, objective video quality metrics and subjective assessments is investigated in a H.264 video transmission scenario under real-life network conditions. We are on finding the minimal set of metrics being sufficient to universally describe the correlation of objective metrics with subjective assessments.

Keywords: video QoE, QoS-QoE correlation, QoS metrics, subjective assessment, network measurement