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Video Quality Assessment Methods : A Bird's-eye view

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Abstract : The proliferation of multimedia technology and services in today's world provide ample research scope in the frontiers of visual signal processing. Wide spread usage of video based applications in heterogeneous environment needs viable methods of Video Quality Assessment (VQA). The evaluation of video quality not only depends on high QoS requirements but also emphasis the need of novel term 'QoE' (Quality of Experience) that perceive video quality as user centric. This paper discusses two vital video quality assessment methods namely, subjective and objective assessment methods. The evolution of various video quality metrics, their classification models and applications are reviewed in this work. The Mean Opinion Score (MOS) based subjective measurements and algorithm based objective metrics are discussed and their challenges are outlined. Further, this paper explores the recent progress of VQA in emerging technologies such as mobile video and 3D video.

Keywords : 3D-Video, no reference metric, quality of experience, video quality assessment, video quality metrics.
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