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| **Keywords:** | Virtual Reality, QoE |
| **Abstract:** | This contribution proposes to add a new subsection on VR content QoE metrics in G.QoE-VR. |

**Introduction**

This contribution proposes to add a new subsection, section 9.2 VR Content QoE Metrics, in G.QoE-VR (based on SG12-TD326-R1, September 2017)

**Proposal**

##  VR Content QoE Metrics

The quality of VR content is also crucial for user’s experience. It has more requirements compared with traditional multimedia content. Besides good quality of video and audio, VR content requires stitching, artefacts, stereoscopic 3D and composition. To ensure an immersive experience, it is important that VR content is generated in good quality and methods in each step, and then delivered as perfectly as possible. This section lists the metrics related to the quality of VR content which will help with assessing the quality of VR service.

## Bitrate

Bitrate is the number of audio or video bits that are conveyed or processed per unit of time. Bitrate serves as a more general indicator of quality. Higher resolution, higher frame rates and lower compression all lead to an increased bitrate.

## Video Resolution

Video resolution represents the number of distinct pixels, contained in the video content, which can be displayed in each dimension. Video resolution should be compatible with the resolution of the display device, otherwise the video resolution might have to be reduced.

## Frame Rate

Frame rate indicates the frequency at which consecutive images called frames are displayed. Frame rate of the VR content should be compatible with the frame rate attribute of the display device.

## Spatial Perceptual Information (SI)

SI generally indicates the amount of spatial detail of a picture. It is usually higher for more spatially complex scenes.

## Temporal Perceptual Information (TI)

TI indicates the amount of temporal changes of a video sequence. It is usually higher for high motion sequences.

## Stereoscopic Vision

Stereoscopic vision indicates the video content is sent slightly differently to different eyes of the human being. It simulates the way of the human ability to view with both eyes in similar, but slightly different ways. This allows humans to judge distance and have a depth perception.

## Audio Sample Rate

Sample rate is the number of samples of audio carried per second, measured in Hz or kHz.

## Spatial audio

Spatial audio indicates the 3D audio experience that a user has when listening. Spatial audio helps a lot to improve the immersive experience of VR services.

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