



Capture



Encode



Network



Decode
& Deliver



User
Interface

Point cloud objective quality metrics

developed by

CWI

Objective quality metrics are used to automatically predict the visual quality of a content, without asking users. They are widely used by video streaming operators to measure the quality of service. New metrics for volumetric video, like ours, are sought after, as they can be used to drive compression optimization engines, or to optimize distortions applied at the receiver side, or at MCU level.

Key features

1. First metric for volumetric video that can be used at the transmitter or receiver side
2. Lightweight features which can be computed in real time
3. No reference needed: suitable for video conferencing and streaming
4. Accurate and reliable
5. Turnkey solution that can be plugged in any existing system for volumetric video delivery

Point cloud objective quality metrics

Objective quality metrics are used to predict the quality of experience of media objects. They can be divided in three categories:

- Full reference: if the original, undistorted content is available
- Reduced reference: if some information from the original content is available
- No reference: if no information from the original content is available

Our objective quality metrics include:

- A full reference metric for volumetric video that can be used to optimize compression engines at the transmitter side
- First-ever reduced and no reference metrics for volumetric video, that can predict the visual quality at the receiver side



Technical description

- Independent component, implemented in Python, that measures the visual quality of volumetric video contents
- Cloud-based solution that can operate in real time
- Flexible interface for integration in an existing system




VRTogether

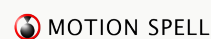
About VRTogether

VRTogether is an end-to-end system for the production and delivery of **photorealistic and Social Virtual Reality (Social VR) experiences**.

VRTogether enables Social VR experiences that allow a **natural interaction between remote users** immersed in a shared virtual environment in an affordable way and with photorealistic quality. The project's key exploitable components cover the whole Social VR pipeline:

-  Volumetric Capturing System
Simple Point Cloud Capture System
-  Point Cloud Encoding & Decoding
-  Scalable Ultra-Low Latency
Volumetric Data Transmission
- Media/Session Orchestrator
-  Live Presenter (MS)
Point Cloud - Multipoint Control Unit
Objective Metrics
-  Unity Player
- Web-based Social VR Platform

Consortium



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