Metadata Input to NR Metrics

Discussion on July 24, 2023

# Definitely Appropriate for NR Metrics

**Video resolution** (always available)

**Frame rate** (always available)

**Angular resolution** or cycles per degree: ratio of distance to the viewport and the viewport resolution, where viewport is the fraction of screen covered by video, which is a fraction of height or width (whichever is less). This is more accurate than screen type. For example, for a typical 1080p experiment, video covers the full screen, at a 3× viewing distance, the angular resolution would be <<Cosmin to fill in later>>.

# Extra Information, Extract from Bitstream to Simplify NR Metric Development

These are Hybrid NR metrics, not NR metrics. We are interested in studying Hybrid NR metrics that are limited to a small handful (5 or 6) of bitstream summary statistics.

We would need code to extract this information, to help researchers look at these factors. A small handful of bitstream summary statistics might be useful in coming up with more accurate Hybrid NR model or insight into NR metrics. Easily extracted from a typical deployed video system.

**Codec type** (optional, may not be helpful, models would need to be retrained for each new codec.)

**QP** (available to industry but not NR metric researchers, but we could work together to solve this problem, If subjective test creation workflow includes transcoding, this information may not be available. Issue: QP could bias the metric because the training dataset is not balanced. Models would need to be retrained for each new codec. This would be a Hybrid model rather than NR.)

**Bitrate** (model can get confused, models would need to be retrained for each new codec, useful for debugging)

# Metadata from User or Application

**Context** (e.g., videoconferencing or broadcast or UGC) Could be used to change metric to be more suited given the context.