MCL-V: A streaming video quality assessment database
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Perceptual Quality

Both MSE = 42
Different Perceptual Quality

What is video quality database?

Source Videos
Distorted Videos
Processing

Subjective Test
Labeled with mean opinion scores (MOS)

Video Source Selection

Distortion Design

BigBuckBunny [BB]
BirdsInCage [BC]
BQTerrace [BQ]
CrowdRun [CR]
DanceKiss [DK]
ElFuenteA [EA]
ElFuenteB [EB]
FoxBird [FB]
Kimono [KM]
OldTownCross [OT]
Seeking [SK]
Tennis [TN]

Compression-Artifact
Quality varies with Bitrate

Compression and Scaling-Artifact
Quality varies with Bitrate and Size

Compression

Compression and Scaling

Pairwise Subjective Test

- Adopt pairwise comparison
- Issue of long test time
  - DCR = 24 minutes
  - Pairwise = 108 minutes
- Use preset quality level to reduce test time

Reduce 108 ➔ 30 minutes

Conclusion & Future Work

- Discussion
  - Diverse and general video sources
  - Representative distortion and consistent quality
  - Efficient pairwise subjective test
- Future Work
  - Extend current video database
  - Develop Video Quality Assessment Algorithm

Sponsor: Netflix / email: lin650@usc.edu / website: http://mcl.usc.edu