



VQEG HTDV Project: Subjective Experiment #5

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Methodology and Rating Scale

- ACR with hidden reference
- Rating scale: 5-point discrete scale

5	Excellent
4	Good
3	Fair
2	Poor
1	Bad

Test Design

- Video format: HD1080p (1920x1080) @ 25 fps (no audio)
- Codecs: H.264, MPEG-2
- Bit rates: 2 – 16 Mbps
- PLR: 0.125 – 2% (bursty distribution)
- 9 SRCs
- 16 HRCs (15 HRCs + hidden reference condition):
 - 4 HRCs with H.264 coding (incl. 1 HRC with coding at 720p)
 - 3 HRCs with MPEG-2 coding (incl. 1 HRC with coding at 720p)
 - 8 HRCs with H.264 coding and packet loss:
 - 4 HRCs with slicing degradations (incl. 1 HRC with coding at 720p)
 - 4 HRCs with frame freezing degradations (incl. 1 HRC with coding at 720p)
- 144 PVSs (9 x 16) + 24 common PVSs

Viewers

- 24 viewers per experiment (after post-hoc screening as per VQEG HDTV test plan)
- All naive viewers recruited from the public using local agencies
- Age: 17-46 (mean=26.17; median=22)
- Gender: Female=17; Male=7
- All viewers assessed all PVSs

Experimental environment and set-up

- Test conducted in Psytechnics subjective testing facilities



- Background room environment (lighting levels) as per HDTV test plan
- Test room contained only desk, chair, display and mouse

Experimental set-up

- Test conducted using dedicated in-house system:
 - Playback using high-spec workstation guaranteeing enough throughput and disk access speed (RAID configuration)
 - Uncompressed files read directly from local disk
 - Subjective test presentation and voting pattern controlled by in-house software (DirectShow-based):
 - Presentation of on-screen instructions
 - Playback of videos
 - Presentation of rating scale
 - Electronic recording of vote (subjects must press OK to confirm their vote)
 - Insertion of break and on-screen messages
 - Log file containing subjects' votes and playback statistics

Experimental set-up

- Test duration was about 1h in total:
 - Reading of written test instructions
 - 6 practice trials
 - Start of test with rating of 84 PVSs
 - Short break
 - 6 practice trials
 - Continuation of test with rating of 84 PVSs
 - End of test