

**INTERNATIONAL ORGANISATION FOR STANDARDISATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
ISO/IEC JTC1/SC29/WG11  
CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11 MPEG2012/M25244  
May 2012, Geneva, Switzerland**

**Title**        **Results of subjective evaluation in 3DV-CE2.**  
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## **1 Introduction**

The evaluation was performed as a part of 3DV-CE2 described in [1].

The subjects has been presented a couple of tests in DSIS method.

Firsts went reference (stereo pair synthesized from uncompressed original).

Then went a test for subjective evaluation - this may randomly be either one of:

- 3D-ATM anchor, or
- 3D-ATM with Nonlinear Depth Representation,

both at constant bit-rate, R4 (the highest) to R1 (the lowest), reflecting CTC [2].

The presented stereo pair was composed from two synthetic views, around the base view.

After each test, subjects gave their scores reflecting quality.

The sessions were performed on:

- Tuesday, 19:00,
- Wednesday, continuously from about 9:00 to 11:15,
- Wednesday, 14:00.

There was a total number of 32 subjects, from which 2 were discarded due to “everywhere 5” scores.

Scores of typical subject ranged from 2 to 10.

The subjects were encouraged to sign their sheets, so that they could verify their scores after the subjective displaying order is revealed public.

## 2 Display order

The display order was selected randomly as follows:

00001 ndr\balloons\_R4.avi  
00002 ndr\GT\_Fly\_R4.avi  
00003 ndr\balloons\_R2.avi  
00004 anchor\kendo\_R4.avi  
00005 ndr\balloons\_R3.avi  
00006 anchor\kendo\_R1.avi  
00007 ndr\kendo\_R3.avi  
00008 anchor\GT\_Fly\_R4.avi  
00009 ndr\balloons\_R1.avi  
00010 anchor - balloons\_R4.avi  
00011 anchor -kendo\_R2.avi  
00012 ndr - kendo\_R2.avi  
00013 anchor - GT\_Fly\_R3.avi  
00014 ndr - kendo\_R4.avi  
00015 ndr - kendo\_R1.avi  
00016 anchor - GT\_Fly\_R1.avi  
00017 ndr - GT\_Fly\_R3.avi  
00018 anchor - balloons\_R2.avi  
00019 anchor - balloons\_R1.avi  
00020 anchor - kendo\_R3.avi  
00021 anchor - GT\_Fly\_R2.avi  
00022 ndr - GT\_Fly\_R2.avi  
00023 ndr - GT\_Fly\_R1.avi  
00024 anchor - balloons\_R3.avi

Please note, that only 3 sequences were presented, due to the fact, that Nonlinear Depth Representation is automatically tuned on/off/

### 3 Results

Basing on the subjective evaluation results, average scores and 95% confidence intervals were calculated.

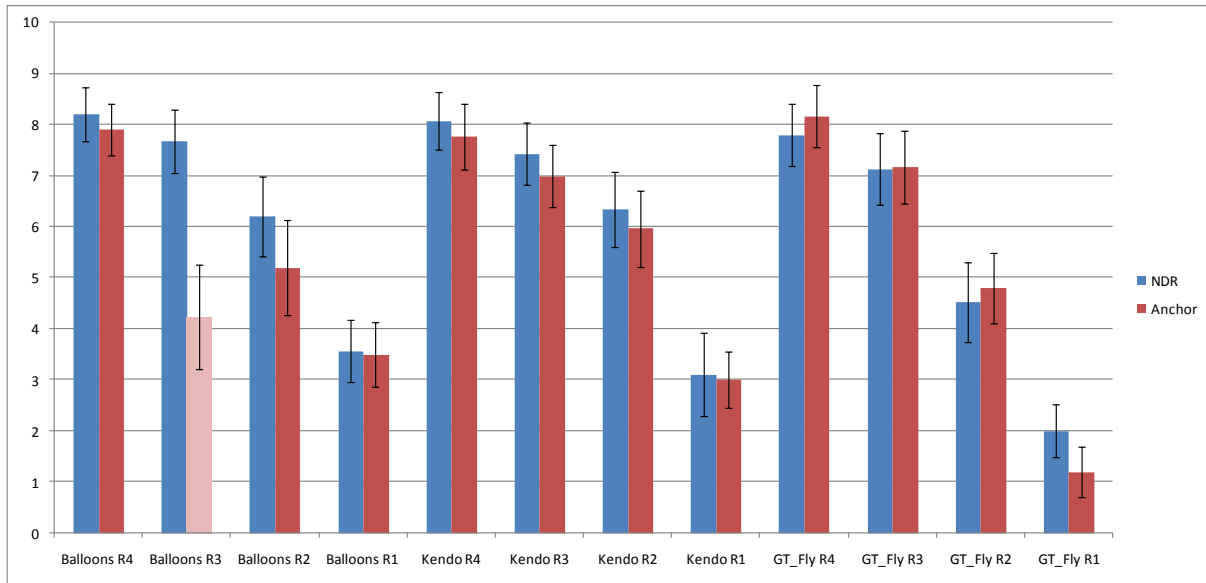


Fig 1. Results of subjective evaluation

Although in most cases, the confidence intervals overlap, there can be noticed the following tendencies:

- In case of GT\_Fly sequence, the subjective quality of NDR is slightly worse but very comparable,
- A special case is GT\_Fly R1 point, where subjects noticed some improvement, probably on the edges of objects, because QP values were not changed in that case,
- In case of Kendo sequence, there is an improvement of about  $\frac{1}{4}$  MOS point, except for R1, where there is no improvement,
- In case of Balloons sequence, there is improvement of  $\frac{1}{4}$  to 1 MOS point.
- Data point Balloons R3 is not reliable, due to errors in synthesis of the anchor (Sequence 0024)

### 4 References

- [1] "Description of Core Experiments in 3DVideo Coding", ISO/IEC JTC1/SC29/WG11 N12561, February 2012, San Jose, USA.
- [2] "Common Test Conditions for AVC and HEVC-based 3DV" ISO/IEC JTC1/SC29/WG11 MPEG2011/N12560, February 2012, San Jose, USA.