1 Subjective Comparison

1.1 Overview

Subjective comparison of modern video codecs was done as a part of H.264 Video Codecs Comparison. The main tasks of this subjective comparison were

- psychovisual enhancement in codecs analysis
- fade processing analysis
- animation movie compression analysis

Brief description of the subjective comparison:

- SAMVIQ methodology
- 42 experts
- 5 video sequences
- 7 codec-preset pairs including non-compressed video

1.2 Example of results

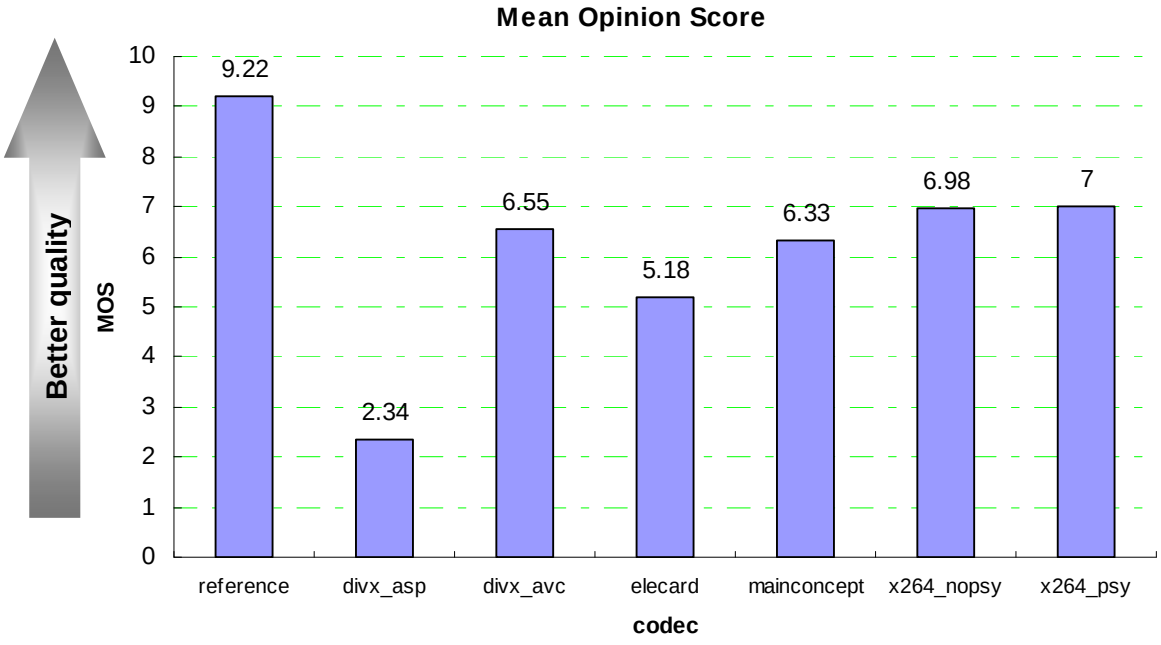

Figure 1. Mean Opinion Score, sequence "italy"

The first results for this sequence show that DivX ASP (MPEG-4 ASP) shows the lowest results and x.264 shows the best and x.264 with psychovisual enhancement show better results than x.264 without psychovisual enhancement.

Student's t-test value shows the probability for two sequences to be distinguished. The values in the Table 1 show the probability that null hypothesis is false (sequences could be distinguished), the shown value in the table is $1-t$, where t – is results of t-test.

Table 1. Summary of video sequences.

t-test	reference	divx_asp	divx_avc	elecard	mainconcept	x264_nopsy	x264_psy
reference		1.00	1.00	1.00	1.00	1.00	1.00
divx_asp	1.00		1.00	1.00	1.00	1.00	1.00
divx_avc	1.00	1.00		1.00	0.61	0.88	0.87
elecard	1.00	1.00	1.00		1.00	1.00	1.00
mainconcept	1.00	1.00	0.61	1.00		0.96	0.98
x264_nopsy	1.00	1.00	0.88	1.00	0.96		0.07
x264_psy	1.00	1.00	0.87	1.00	0.98	0.07	

x.264 with and without psychovisual enhancement are almost undistinguishable.

This is only a small part of the subjective comparison that is a part of MPEG-4 AVC/H.264 video codec comparison.