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| *Title:* | **TE11: Cross-verification result of Orange Labs motion vector competition proposal (3.1a) by SKKU** | | |
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# Abstract

This document contains a cross-verification result of motion vector coding (3.1a) proposed by Orange Labs [1].

Cross-verification

The software for the cross-verification was provided on Sep. 19, 2010 by Orange Labs to SKKU. SKKU reviewed the provided source codes which was based on TMuC 0.7, and found out that there was no software problem. The cross-verification was started on Sep. 21, 2010 on 64-bit Windows OS.

Cross-verification was simulated with following conditions specified for 3.1a in [2]:

* For inter mode, MV Competition mode is switched off.
* For SKIP mode, MV Competition mode and merge mode are switched off.

Cross-verification

The cross-verification has finished on Oct. 1, 2010. There was no mismatch between encoder and decoder YUVs and the PSNR and rate results obtained by SKKU were identical to the results provided by Orange labs.

The result of cross-verification is compared to two different methods as follows:

1. TMuC 0.7 anchor result provided by NTT DOCOMO

* For inter mode, MV Competition mode is switched on.
* For SKIP mode, MV Competition mode is switched off, and merge mode is switched on.

1. 3.1.b test result provided by Orange labs

* For inter mode, MV Competition mode is switched on.
* For SKIP mode, MV Competition mode is switched on, and merge mode is switched off.

More detailed results for each test are included in *JCTVC-C132\_TE11-from-SKKU\_3.1.a-vs-anchor.xls* and *JCTVC-C132\_TE11-from-SKKU\_3.1.a-vs-3.1.b.xls*, respectively.

# Appendix

During the cross-verification, we observed differences in some cases between the anchor results provided by NTT DOCOMO and those run by SKKU. Although the differences between the two are generally small, overall coding gains of the cross-verification are slightly changed in some U and V BD-rate cases (see U BD-rate for LD\_HE Class C, V BD-rate for RA\_HE and LD\_HE Class B) due to the two non-identical anchors. Detailed results using the SKKU anchor are in *JCTVC-C132\_TE11-from-SKKU\_3.1.a-vs-SKKU.anchor.xls*.

# References

1. G. Laroche, J. Jung, Competition-Based Scheme for Motion Vector Selection and Coding, VCEG-AC06 contribution, 31th Meeting: Klagenfurt, Austria, 17-18 July 2006.
2. J. Jung, Tool Experiment 11: Motion Vector Coding, JCTVC-B311, 2nd Meeting: Geneva, Austria, 21-28 July 2010.