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| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  11th Meeting: Shanghai, CN, 10–19 Oct. 2012 | Document: JCTVC-K0290\_r1 |

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| *Title:* | **Cross-check of intra angular prediction blending (JCTVC-K0155)** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Information | | |
| *Author(s) or Contact(s):* | Kei Kawamura Tomonobu Yoshino Sei Naito  2-1-15, Ohara, Fujimino-shi, Saitama, JAPAN | Tel: Email: | +81 49 278 7411 ki-kawamura@kddi.com |
| *Source:* | KDDI Corp. (KDDI R&D Laboratories, Inc.) | | |

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# Abstract

This contribution reports the cross-check results of intra angular prediction blending proposed in JCTVC-K0155.

# Introduction

Intra angular prediction blending is presented in document JCTVC-K0155. The proposed method blends regular-angle prediction and inverse-angle prediction when reference pixels are available. This contribution reports the cross-check results of this proposal.

The software version was HM8.0. The reference was generated by using the common test condition [1]. We complied provided software on 64-bit Windows XP environment and the experiments were performed on the cluster PCs.

Table Results of intra angular prediction blending for all intra conditions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **All Intra Main** | | | **All Intra HE10** | | |
|  | Y | U | V | Y | U | V |
| Class A | -0.19% | -0.26% | -0.25% | -0.27% | -0.35% | -0.32% |
| Class B | -0.09% | -0.10% | -0.12% | -0.16% | -0.14% | -0.15% |
| Class C | -0.13% | -0.09% | -0.10% | -0.16% | -0.13% | -0.19% |
| Class D | -0.14% | -0.10% | -0.12% | -0.16% | -0.11% | -0.12% |
| Class E | 0.06% | 0.08% | 0.00% | -0.04% | 0.03% | -0.07% |
| **Overall** | -0.10% | -0.10% | -0.13% | -0.16% | -0.15% | -0.17% |
|  | -0.10% | -0.10% | -0.13% | -0.16% | -0.14% | -0.17% |
| Class F | 1.57% | 1.15% | 1.16% | 1.51% | 1.05% | 1.07% |
| Enc Time[%] | 102.6% | | | 102.6% | | |
| Dec Time[%] | 102.0% | | | 102.1% | | |

Table 2 Results of intra angular prediction blending without 4x4PU for all intra conditions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **All Intra Main** | | | **All Intra HE10** | | |
|  | Y | U | V | Y | U | V |
| Class A | -0.19% | -0.26% | -0.25% | -0.27% | -0.34% | -0.36% |
| Class B | -0.11% | -0.13% | -0.15% | -0.17% | -0.17% | -0.18% |
| Class C | -0.12% | -0.12% | -0.13% | -0.14% | -0.15% | -0.16% |
| Class D | -0.11% | -0.07% | -0.13% | -0.13% | -0.12% | -0.08% |
| Class E | -0.04% | -0.07% | -0.13% | -0.12% | -0.10% | -0.20% |
| **Overall** | -0.12% | -0.14% | -0.16% | -0.17% | -0.18% | -0.20% |
|  | -0.12% | -0.14% | -0.15% | -0.17% | -0.17% | -0.20% |
| Class F | 0.17% | 0.12% | 0.09% | 0.16% | 0.03% | 0.00% |
| Enc Time[%] | 101.8% | | | 101.7% | | |
| Dec Time[%] | 101.3% | | | 101.3% | | |

# Conclusions

We have verified results reported in JCTVC-K0155. The results of the cross-check matched with NTT’s report. The encoding/decoding time also matched closely to those reported by the proponent.

# References

1. F. Bossen, “Common test conditions and software reference configurations,” JCTVC-J1100, Stockholm, SE, July 2012.