



Non-CE8: Constrained ALF coefficients

Ching-Yeh Chen, Chia-Yang Tsai, Chih-Ming Fu, Yu-Wen Huang, Shawmin Lei



Presented by Yu-Wen Huang
7th JCT-VC Meeting in Geneva
21-30 November, 2011

Overall Summary

- The range of ALF coefficients is unconstrained
 - Only the fractional precision of coefficients is defined as 8 bits
 - However, the syntax supports any value in the integer part.
 - The bit depths of multipliers cannot be decided.
- Propose to clip ALF coefficients within ranges
 - Center coefficients: $[0, 2)$
 - Non-center coefficients: $[-1, 1)$
 - Offset: $[-2^D, 2^D)$, where D is pixel bit depth
- Corresponding multiplier
 - Center coefficients: 9-bit coefficient input, $(D+9)$ -bit output
 - Non-center coefficients: 9-bit coefficient input, $(D+8)$ -bit output
- Results
 - No impact on coding efficiency or run time