



Non-CE9: Simplified AMVP Derivation for Inter Mode

Jian-Liang Lin, Yi-Wen Chen, Yu-Wen Huang, and Shawmin Lei



Presented by Shawmin Lei
7th JCT-VC Meeting in Geneva
21-30 November, 2011

Overall Summary

- In HM-4.0, the AMVP has to derive two top MVPs, one non-scaled MVP and one scaled MVP, when the left MVP is not available.
- Propose to use at most one top MVP when the left MVP is not available.
- The derivation of the scaled top MVP is not required when the non-scaled top MVP is available.
- The simulation results reportedly show no bit rate increase caused by this simplification.

Experiments

- Anchor: HM-4.0

	Random Access HE			Random Access LC		
	Y	U	V	Y	U	V
Class A	0.0%	0.0%	-0.1%	0.0%	0.2%	0.1%
Class B	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Class C	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Class D	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Class E						
Overall	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Enc Time[%]	100%			100%		
Dec Time[%]	100%			100%		

	Low delay B HE			Low delay B LC		
	Y	U	V	Y	U	V
Class A						
Class B	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%
Class C	0.0%	-0.1%	-0.1%	0.0%	0.1%	-0.1%
Class D	0.0%	0.5%	0.4%	0.0%	0.1%	-0.1%
Class E	0.0%	0.1%	0.2%	0.0%	0.3%	0.3%
Overall	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%
	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
Enc Time[%]	100%			100%		
Dec Time[%]	100%			99%		

	Low delay P HE			Low delay P LC		
	Y	U	V	Y	U	V
Class A						
Class B	0.0%	0.1%	0.2%	0.0%	0.1%	0.1%
Class C	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%
Class D	0.0%	-0.2%	-0.1%	0.0%	-0.4%	0.0%
Class E	0.0%	-0.4%	-0.1%	0.0%	-0.4%	0.1%
Overall	0.0%	-0.1%	0.0%	0.0%	-0.2%	0.0%
	0.0%	-0.1%	-0.1%	0.0%	-0.2%	0.0%
Enc Time[%]	100%			100%		
Dec Time[%]	99%			100%		

Conclusions

- Propose to use at most one top MVP for Inter mode to simplify the AMVP derivation as at most one left MVP is allowed in current HM.
- The derivation of the scaled top MVP is not required when the non-scaled top MVP is available.
- Experimental results reportedly show no bit rate increase.

MEDIATEK

Thank you

