



REDEFINING MOBILITY



JCT3V-D0192: CE5.a related: Direct/skip mode simplification for 3D-AVC

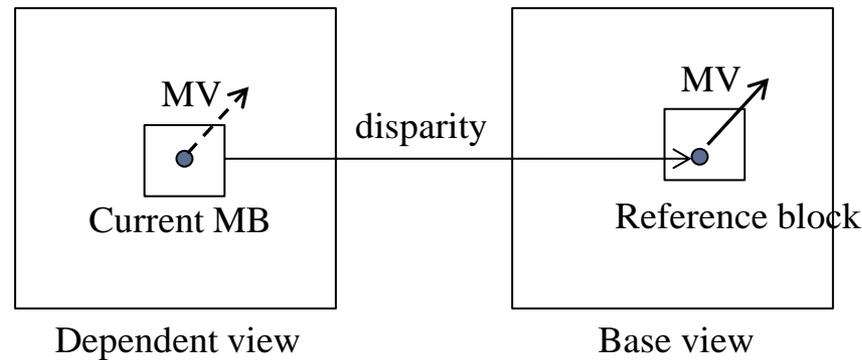
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Summary

- In current ATM, for skip/direct MBs, median value of MVs of the neighboring blocks is used for MVP when inter-view MV is unavailable.
- Propose to simplify the MVP in this scenario
 - Derive the MVP for the skip/direct modes to be MV of first available neighbor, including the reference index
- Proposed scheme offers an overall coding gain of 0.08% for synthesized views

Introduction

- Inter-view MVP for coding of MBs in skip/direct modes
 - Check the motion information of neighbouring blocks to derive a DV
 - MVP is set to be the MV of the reference block located by DV in base view, if available
 - Otherwise (when inter-view MV is unavailable) MVP is set to be the median value of the MVs of the neighboring blocks.



Proposed method

- If inter-view MV is unavailable,
 - MVP is set to be the motion vector of the first available spatial neighbour, including the reference index
 - If such a spatial neighbour is unavailable, the motion vector is set to zero MV and the reference picture index is set to zero.

Experimental Results

- Simulation results
 - Platform: : ATM 7.0
 - Test conditions: CTC

Proposed method vs. CTC

	Texture Coding		Depth Coding		Total (Coded PSNR)		Total (Synthesed PSNR)		Complexity estimate (ratio to anchor)		
	dBR, %	dPSNR,dB	dBR, %	dPSNR,dB	dBR, %	dPSNR,dB	dBR, %	dPSNR,dB	Encoder Time, %	Decoder Time, %	Rendering Time, %
S01	0.30	-0.01	0.00	0.00	0.28	-0.01	0.10	0.00	0.99	0.98	1.00
S02	-0.30	0.01	0.00	0.00	-0.27	0.01	-0.24	0.01	0.96	0.96	0.97
S03	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	1.08	1.06	1.04
S04	0.15	-0.01	0.00	0.00	0.14	-0.01	0.13	0.00	1.01	0.97	0.99
S05	-0.18	0.01	0.00	0.00	-0.15	0.01	-0.11	0.00	0.97	0.97	0.96
S06	-0.16	0.01	0.00	0.00	-0.14	0.01	-0.15	0.01	1.01	0.99	1.00
S08	-0.36	0.02	0.00	0.00	-0.31	0.01	-0.30	0.01	0.97	0.97	0.97
Average	-0.08	0.00	0.00	0.00	-0.06	0.00	-0.08	0.00	1.00	0.98	0.99

- Thanks MediaTek for the cross-check (JCT3V-D0262)

Thank you!