

RDPCM intra mode mapping, maximum RDPCM block size (JVET-00200)

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Proposal (Part 1)

- Change intra prediction mode assigned to BDPCM coded blocks according to BDPCM direction instead of currently assigned to INTRA_PLANAR, similar to HEVC RDPCM mode

intra_bdpcm_dir_flag	intra prediction mode
0 (Horizontal)	INTRA_ANGULAR18 (Horizontal)
1 (Vertical)	INTRA_ANGULAR50 (Vertical)

- Results (CTC)

		Y	U	V	EncT	DecT
AI	Class F	-0.12%	0.04%	-0.08%	100%	92%
	Class SCC	-0.18%	-0.06%	-0.07%	101%	101%
RA	Class F	-0.09%	0.08%	0.10%	101%	101%
	Class SCC	-0.18%	-0.02%	-0.13%	100%	100%
LB	Class F	0.02%	-0.21%	-0.44%	100%	98%
	Class SCC	-0.04%	0.01%	0.04%	100%	101%

-If BdpcmFlag[xCb][yCb] is equal to 1 IntraPredModeY[xCb][yCb] is set equal to ~~INTRA_PLANAR~~intra_bdpcm_dir_flag == 1 ?
INTRA_ANGULAR50 : INTRA_ANGULAR18

Proposal (Part 2)

- Align maximum allowed BDPCM size to maximum transform skip (TS) size signalled instead of fixed 32 size.

....	
if(treeType == SINGLE_TREE treeType == DUAL_TREE_LUMA) {	
if(cbWidth <= 32 MaxTsSize && cbHeight <= 32 MaxTsSize)	
intra_bdpcm_flag [x0][y0]	ae(v)
if(intra_bdpcm_flag[x0][y0])	
intra_bdpcm_dir_flag [x0][y0]	ae(v)
else {	

- Does not affect CTC results.

Conclusion

- Propose to adopt.