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3D-CE1.a results on joint proposal of Samsung and NTT

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Joint Proposal of Samsung and NTT

- Samsung proposal (JCT2-A0036) improves the coding performance by applying dilation to low resolution depth data before using in warping process.

- NTT proposal(JCT2-A0023) improves the coding performance by simplifying the sub-pel VSP. In the proposed method, the processing direction of the pixel-wise warping is inverted. Besides, the hole-filling and inpainting is also simplified.

- These proposals are combined for the improvement of the view synthesis prediction in terms of the coding performance and the complexity.

Compression Performance

- Anchor: ATM_v0.4 with CTC

Sequences	Samsung (JCT2-A0036)		NTT(JCT2-A0023)		Joint proposal (JCT2-A0158)	
	Coded BD-rate (%)	Synthesized BD-rate(%)	Coded BD-rate (%)	Synthesized BD-rate(%)	Coded BD-rate (%)	Synthesized BD-rate(%)
Poznan Hall2	-0.30	-0.24	-0.54	-0.57	-0.61	-0.61
Poznan Street	-0.24	-0.29	-0.17	-0.14	-0.49	-0.49
Undo Dancer	0.12	-0.06	-1.04	-0.84	-0.97	-1.00
GT Fly	-0.43	-0.46	-0.30	-0.27	-0.74	-0.77
Kendo	-0.15	-0.16	-0.36	-0.38	-0.53	-0.60
Balloons	-0.19	-0.24	-0.56	-0.56	-0.74	-0.80
Newspaper	-0.05	-0.06	-0.30	-0.29	-0.29	-0.31
Average	-0.18	-0.22	-0.47	-0.43	-0.62	-0.66
Encoding Time (%)	100.6		100.6		104.2	
Decoding Time (%)	101.3		100.4		99.79	

Conclusion

- Joint proposal of Samsung and NTT was tested

- Samsung proposes a dilation based view synthesis prediction method without upsampling and NTT proposes sub-pel VSP simplification method.

- -0.62% BD-rate for coded views, and -0.66% BD-rate for synthesized views

- Decoding complexity is 99.79%