

Parabola Explorer 3.0 HEVC Bitstream Analysis



Bitstream filename: Sintel.bin



Sintel.bin

size (bits)	1,279,160
size (bytes)	159,895
number of access units	100
number of coded video sequences	1

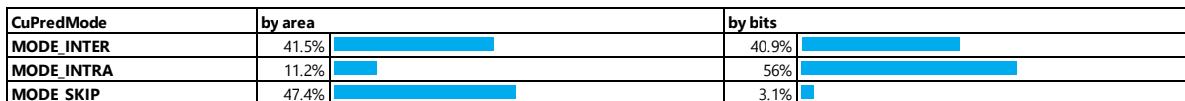
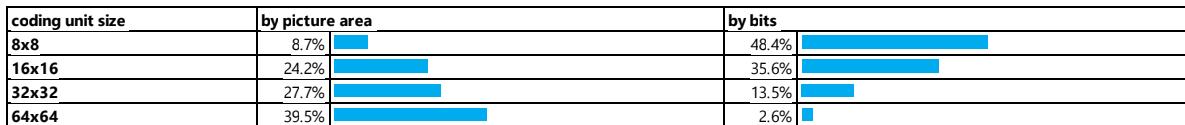
Bitstream Statistics

	minimum	mean	maximum	units
access unit (picture) size	2,688	12,791.6	78,744	bits
picture width	640	640	640	luma samples
picture height	272	272	272	luma samples
BitDepthY	8	8	8	bits
BitDepthC	8	8	8	bits
tile columns	2	2	2	
tile rows	2	2	2	
slice segments per picture	10	10	10	
absolute MVD x	0	2.902	97.25	luma samples
absolute MVD y	0	2.085	65.5	luma samples
absolute MV x	0	18.556	591	luma samples
absolute MV y	0	10.212	269	luma samples
SliceQpY (slice_type=B)	33	35.208	36	
SliceQpY (slice_type=P)	-	-	-	
SliceQpY (slice_type=I)	32	32	32	

Slice Statistics



Coding Unit Statistics



Intra Coding Unit



IntraPredModeY	by intra area
INTRA_PLANAR	29.2%
INTRA_DC	13.4%
INTRA_ANGULAR2	2.5%
INTRA_ANGULAR3	1.4%
INTRA_ANGULAR4	1.1%
INTRA_ANGULAR5	1.1%
INTRA_ANGULAR6	1.5%
INTRA_ANGULAR7	2.2%
INTRA_ANGULAR8	2.2%
INTRA_ANGULAR9	1.8%
INTRA_ANGULAR10	2.6%
INTRA_ANGULAR11	2.6%
INTRA_ANGULAR12	5.9%
INTRA_ANGULAR13	2.6%
INTRA_ANGULAR14	1.4%
INTRA_ANGULAR15	0.9%
INTRA_ANGULAR16	0.9%
INTRA_ANGULAR17	0.9%
INTRA_ANGULAR18	1.4%
INTRA_ANGULAR19	1%
INTRA_ANGULAR20	0.9%
INTRA_ANGULAR21	1.3%
INTRA_ANGULAR22	1.4%
INTRA_ANGULAR23	1.3%
INTRA_ANGULAR24	1.2%
INTRA_ANGULAR25	1.6%
INTRA_ANGULAR26	7.3%
INTRA_ANGULAR27	1.5%
INTRA_ANGULAR28	1.5%
INTRA_ANGULAR29	1.4%
INTRA_ANGULAR30	1.1%
INTRA_ANGULAR31	0.8%
INTRA_ANGULAR32	0.8%
INTRA_ANGULAR33	0.7%
INTRA_ANGULAR34	0.7%

IntraPredModeC	by intra area
IntraPredModeY	87.4%
INTRA_PLANAR	3.2%
INTRA_DC	2.5%
INTRA_ANGULAR10	2.6%
INTRA_ANGULAR26	2.6%
INTRA_ANGULAR24	1.7%

Inter Coding Unit

cu_skip_flag	by inter area	by inter bits
0	46.7%	93%
1	53.3%	7%

PartMode (INTER)	by inter area	by inter bits
PART_2Nx2N	77.1%	50.1%
PART_2NxN	6.8%	16.1%
PART_Nx2N	7.8%	15.5%
PART_NxN	0%	0%
PART_2NxN_U	2.1%	4.5%
PART_2NxN_D	2%	4.9%
PART_nLx2N	2.2%	5%
PART_nRx2N	2%	3.9%

Prediction Unit Statistics

merge_idx	by inter area
merge_flag = 0	32.6%
0	48.6%
1	13.3%
2	3.5%
3	1.3%
4	0.6%

PredMode	by inter area
L0	18%
L1	16.5%
BI	65.5%

RefIdxL0	by inter area
unused	16.5%
0	80.2%
1	3.1%
2	0.1%
3	0.2%

RefIdxL1	by inter area
unused	18%
0	79.9%
1	2.1%
2	0%
3	0%

Transform Unit Statistics

Intra Transform Unit Statistics

transform unit size	by intra area	by intra bits
4x4	18%	28.8%
8x8	26%	18.6%
16x16	32.7%	16.4%
32x32	23.3%	8.7%

trafoDepth	by intra area	by intra bits
0	67.7%	39.1%
1	28.5%	29.6%
2	3.8%	3.9%

	picture area
cbf_luma=1	77.5%
cbf_cb=1	26.7%
cbf_cr=1	25.6%

Inter Transform Unit Statistics

transform unit size	by inter area	by inter bits
4x4	0.5%	5.9%
8x8	2.1%	10.6%
16x16	4.8%	11.2%
32x32	8%	4.5%

trafoDepth	by inter area	by inter bits
0	8.3%	19.8%
1	6.1%	8.9%
2	1%	3.6%

	picture area
cbf_luma=1	12.3%
cbf_cb=1	0.8%
cbf_cr=1	0.8%

SAO Statistics

SaoTypeIdx[0]	by picture area
off	20.5%
band	1.3%
edge	9.2%

SaoTypeIdx[1]	by picture area
off	29.5%
band	0.7%
edge	0.7%

Syntax Element Bin Statistics

	syntax elements	Decode Decision	Decode Bypass	Decode Terminate	bits	bit distribution histogram
<code>end_of_slice_segment_flag</code>	5000	0	0	5000	32.847	
<code>end_of_sub_stream_one_bit</code>	0	0	0	0	0	
<code>sao_merge_up_flag</code>	168	168	0	0	132.509	
<code>sao_merge_left_flag</code>	1054	1054	0	0	892.125	
<code>sao_type_idx_luma</code>	1181	1181	329	0	1,381.773	
<code>sao_type_idx_chroma</code>	457	457	55	0	452.13	
<code>sao_offset_abs</code>	1756	0	3323	0	3,323	
<code>sao_offset_sign</code>	205	0	205	0	205	
<code>sao_band_position</code>	101	0	505	0	505	
<code>sao_eo_class_luma</code>	282	0	564	0	564	
<code>sao_eo_class_chroma</code>	28	0	56	0	56	
<code>split_cu_flag</code>	35604	35604	0	0	29,825.307	
<code>cu_transquant_bypass_flag</code>	0	0	0	0	0	
<code>cu_skip_flag</code>	40524	40524	0	0	29,602.738	
<code>pred_mode_flag</code>	22885	22885	0	0	16,073.641	
<code>part_mode</code>	25244	37248	2368	0	38,066.331	
<code>pcm_flag</code>	0	0	0	0	0	
<code>prev_intra_luma_pred_flag</code>	24265	24265	0	0	22,408.8	
<code>mpm_idx</code>	15836	0	22986	0	22,986	
<code>rem_intra_luma_pred_mode</code>	8429	0	42145	0	42,145	
<code>intra_chroma_pred_mode</code>	13621	13621	2334	0	8,145.733	
<code>rqt_root_cbf</code>	12700	12700	0	0	10,171.544	
<code>merge_flag</code>	22142	22142	0	0	21,122.096	
<code>merge_idx</code>	25953	25953	12428	0	35,663.161	
<code>inter_pred_idc</code>	13828	23579	0	0	17,952.471	
<code>ref_idx_I0</code>	8134	8685	241	0	6,293.513	
<code>ref_idx_I1</code>	6084	6117	12	0	3,035.348	
<code>mvp_I0_flag</code>	9519	9519	0	0	8,872.701	
<code>mvp_I1_flag</code>	6192	6192	0	0	5,848.643	
<code>split_transform_flag</code>	23832	23832	0	0	17,532.824	
<code>cbf_luma</code>	42480	42480	0	0	38,078.858	
<code>cbf_cb</code>	20834	20834	0	0	10,820.634	
<code>cbf_cr</code>	20734	20734	0	0	9,984.334	
<code>abs_mvd_greater0_flag</code>	30848	30848	0	0	26,101.252	
<code>abs_mvd_greater1_flag</code>	22551	22551	0	0	19,001.985	
<code>abs_mvd_minus2</code>	16841	0	83170	0	83,170	
<code>mvd_sign_flag</code>	22551	0	22551	0	22,551	
<code>cu_qp_delta_abs</code>	5165	10331	142	0	10,431.039	
<code>cu_qp_delta_sign_flag</code>	2722	0	2722	0	2,722	
<code>transform_skip_flag</code>	18535	18535	0	0	5,741.248	
<code>last_sig_coeff_x_prefix</code>	35088	70003	0	0	64,107.453	
<code>last_sig_coeff_y_prefix</code>	35088	60695	0	0	54,644.789	
<code>last_sig_coeff_x_suffix</code>	2056	0	2339	0	2,339	
<code>last_sig_coeff_y_suffix</code>	1718	0	2118	0	2,118	
<code>coded_sub_block_flag</code>	5617	5617	0	0	3,547.375	
<code>sig_coeff_flag</code>	205759	205759	0	0	171,895.788	
<code>coeff_abs_level_greater1_flag</code>	133208	133208	0	0	96,829.475	
<code>coeff_abs_level_greater2_flag</code>	18793	18793	0	0	13,707.158	
<code>coeff_abs_level_remaining</code>	30248	0	72470	0	72,470	
<code>coeff_sign_flag</code>	124525	0	124525	0	124,525	