

Hybrid CPU/GPU KD-Tree Construction for Versatile Ray Tracing : Supplemental Material

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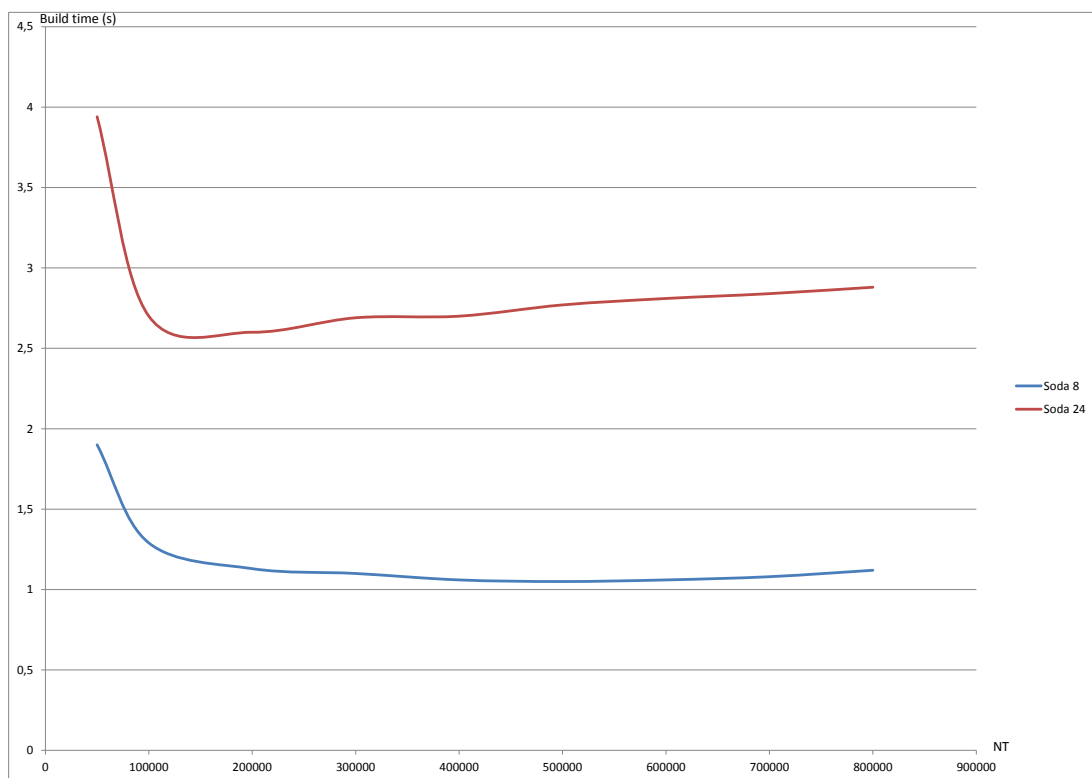


Figure 1: Influence of the small nodes threshold NT on building times for the Soda model at two different maximum KD-Tree depth.

	1-core CPU	4-cores CPU	GPU	4-cores CPU/GPU
Dragon (871K)	1.55	0.77	2.67	0.43
Happy (1M)	1.86	0.92	2.88	0.50
Soda (2M)	4.5	2.68	2.24	1.03

Table 1: Construction times (in seconds) on some well-known Stanford Computer Graphics Laboratory models, maximum tree depth = 8 for all measures. CPU: Intel Core i7 920, GPU: NVidia GeForce GTX 560.



Figure 2: Well-known University of Utah Fairy forest model rendered at 10 fps in Full HD (1920*1080).

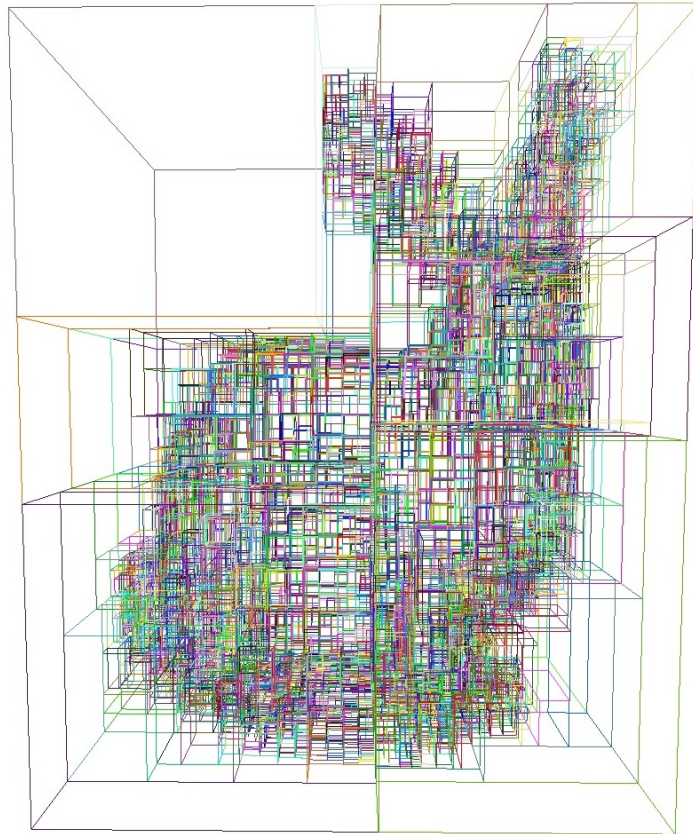


Figure 3: KD-Tree cells view on the Stanford Computer Graphics Laboratory bunny model.

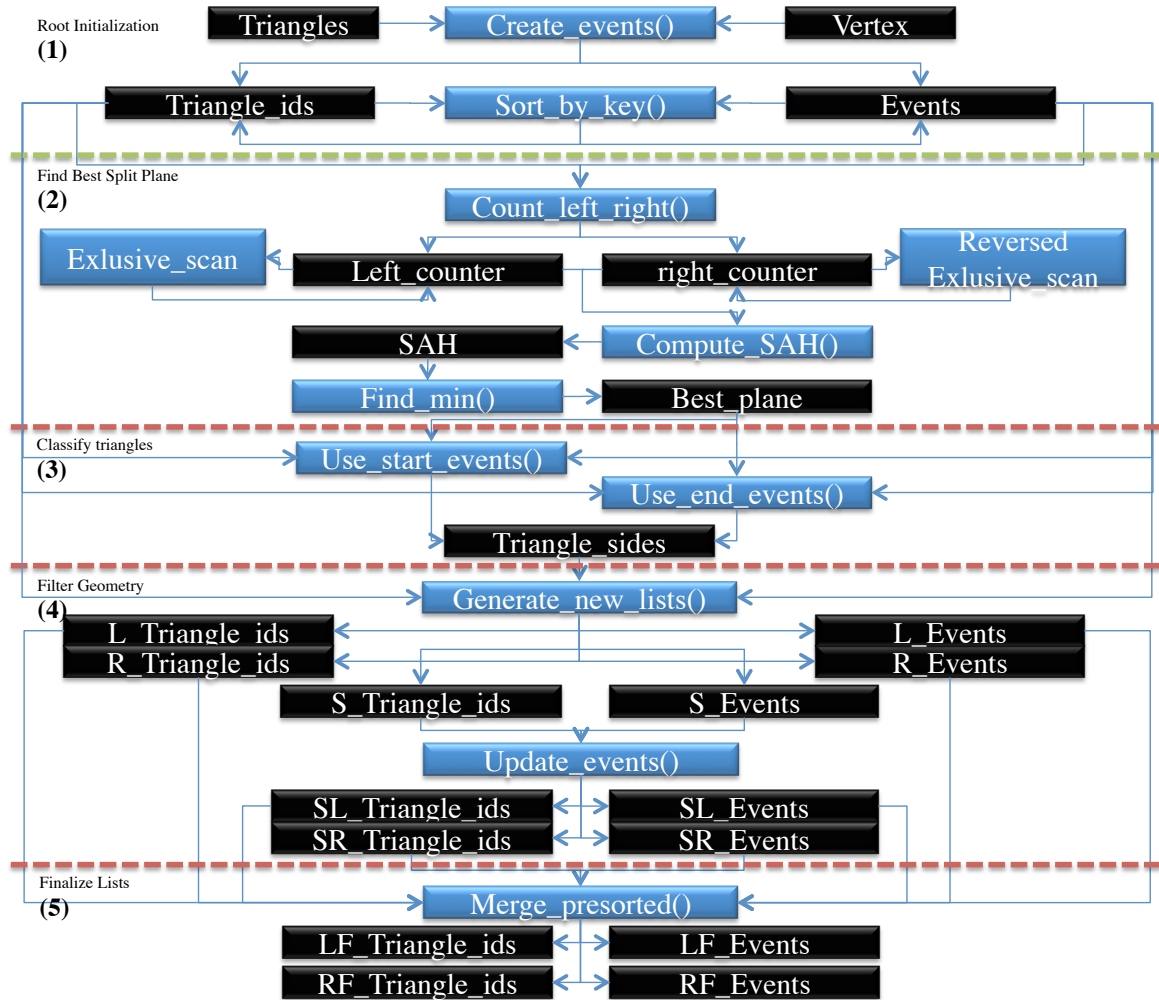


Figure 4: GPU large node processing implementation details, step by step. Blue cells for CUDA kernels, black cells for data. L=left, R=right, S=shared, F=final.