

# Sprint Retrospective Document

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Project acronym: GRT

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## Sprint 8 summary

Item ID (from the previous retrospect ive doc)	Workpackage ID (from the Kick-off doc)	Status	Group's comments
11	WP4	Complete	Masking algorithm for ray tracer in CPU is completed.
13	WP4	In Progress	Implementation is started for Unity and will be completed.
16	WP3	Complete	Scene is successfully parsed into buffers and transferred into GPU.
17	WP3	Complete	Implementation of basic compute shader ray tracer is completed.
18	WP4	Complete	BVH construction implementation in C# is done.
19	WP4	In Progress	Implementation of BVH intersections in compute shader is started.
20	WP5	Complete	Full Diffuse Global Illumination implementation is completed in CPU.
21	WP6	Complete	Research for sampling mechanisms are done. Possible implementations are considered.

## Sprint 9 plan

Item ID	Workpackage ID (from the Kick-off doc)	Description	Status
13	WP4	Transferring the BVH structure to GPU memory as a heap data structure.	Leftover from Sprint7
19	WP4	Implementation of BVH intersection in Unity compute shaders.	Leftover from Sprint8
22	WP5	Implementation of partial diffuse global illumination in CPU.	New
23	WP5	Area light implementation in Unity compute shaders.	New
24	WP5	Global Illumination implementation in Unity compute shaders.	New
25	WP5	Implementation of Masking Algorithm in Unity compute shader.	New
26	WP6	Implementation of a possible researched sampling mechanism.	New
27	WP7	Research of different offline renderers for comparison purposes.	New

## Overall progress

	Sprint 1	Sprint 2	Sprint 3	Sprint 4	Sprint 5	Sprint 6	Sprint 7	Sprint 8	Sprint 9
MF1	0%	10%	10%	50%	50%	60%	65%	65%	
MF2	0%	50%	70%	70%	70%	70%	80%	80%	
MF3	0%	0%	0%	0%	0%	0%	0%	0%	

MF4	0%	0%	0%	0%	0%	0%	0%	0%	
MF5	0%	0%	0%	30%	35%	50%	65%	75%	
MF6	0%	0%	0%	0%	0%	0%	100%	100%	
MF7	0%	0%	0%	0%	0%	0%	40%	70%	
MF8	0%	0%	0%	0%	0%	0%	0%	0%	
MF9	0%	0%	0%	0%	0%	0%	20%	30%	
MF10	0%	0%	10%	90%	90%	90%	90%	90%	
MF11	0%	10%	20%	30%	30%	30%	40%	50%	

## Discussion with Supervisor

With our supervisors suggestion, masking algorithm for partial global illumination (and ray tracing) is slightly changed. Also cosine based sampling mechanism will be implemented once global illumination is transferred to the Unity compute shaders.