# Sprint Retrospective Document

Date: 12.03.2019
Project acronym: GRT
Members: Barış Suğur, Abdullah Mert Tunçay, Zumrud Shukurlu, Batuhan Bat
Supervisor: Ahmet Oğuz Akyüz

## Sprint 6 summary

| Item ID (from the previous retrospective doc) | Workpackage ID (from the Kick-off doc) | Status | Group's comments |
|---|---|---|---|
| 6 | WP4 | Complete | Implementation of a hierarchy tree is completed. |
| 7 | WP4 | Complete | Ray Volume Intersection functions are completed. |
| 8 | WP4 | In Progress | Implementation for BVH structure in rendering is started. |
| 9 | WP4 | In Progress | Implementation will start when we have a complete BVH. |
| 10 | WP4 | In Progress | GPU memory addresses are accessed, passing the arguments is in progress. |
| 11 | WP4 | In Progress | Research about g-buffer access is done. Implementation will start when CUDA – Unity communication is establish. |
| 12 | WP4 | In Progress | CUDA dll has been made. We are currently trying to import dll to Unity. |

# Sprint 7 plan

| Item ID | Workpackage ID (from the Kick-off doc) | Description | Status |
|---|---|---|---|
| 8 | WP4 | Implementation of a complete Bounding Volume Hierarchy (BVH) structure. | Leftover from Sprint5 |
| 9 | WP4 | Integrating BVH structure into our CUDA ray tracer. | Leftover from Sprint5 |
| 10 | WP4 | Accessing the memory of GPU in Unity and passing the g-buffer addresses to CUDA. | Leftover from Sprint6 |
| 11 | WP4 | Implementation of a Masking Algorithm to increase the performance. | Leftover from Sprint6 |
| 12 | WP4 | Integrating CUDA ray tracer API with Unity. | Leftover from Sprint6 |
| 13 | WP4 | Transfering the BVH structure to GPU memory as a heap data structure. | New |
| 14 | WP5 | Research about sample implementations for Global Illumination models. | New |
| 15 | WP5 | Implementation of a basic diffuse global illumination. | 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% | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MF2 | 0% | 50% | 70% | 70% | 70% | 70% | | | |
| MF3 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF4 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF5 | 0% | 0% | 0% | 30% | 35% | 50% | | | |
| MF6 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF7 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF8 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF9 | 0% | 0% | 0% | 0% | 0% | 0% | | | |
| MF10 | 0% | 0% | 10% | 90% | 90% | 90% | | | |
| MF11 | 0% | 10% | 20% | 30% | 30% | 30% | | | |