PhD Proposal

MAP-i

Title: **Realtime Interactive High Quality Graphics**

Abstract:

Current PC's architecture support different levels of parallelism. There are multi-core CPUs and GPUs that are inherently parallel. These features have been explored in isolation so far, as graphics are concerned.

In this project we would like to explore the parallelism between the GPU and the CPU focused on real time image synthesis. The goal is to study the algorithms commonly used for non real time rendering, such as ray tracing, radiosity, or photon mapping, and algorithms commonly used in real time, such as shadow mapping, or normal and parallax mapping and deferred rendering. Deploy new strategies for real time graphics combining these two different approaches, exploring the potential of the two processors simultaneously.

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