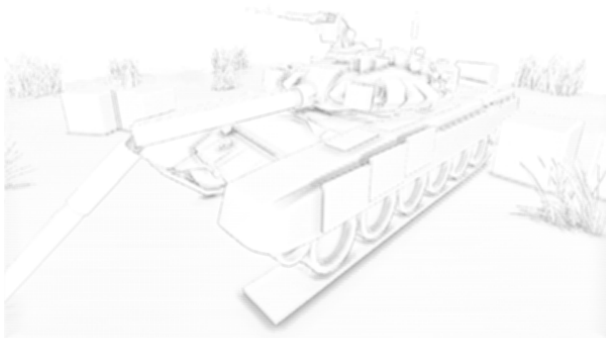


Optimized Screen-Space Ambient Occlusion in Mobile Devices

Sunet, Marc; Vazquez, Pere-Pau



Screen space ambient occlusion is a popular dynamic global illumination technique that has seen widespread adoption in PC computer games and other applications due to its simplicity, scalability, and ability to be integrated with other techniques. Mobile platforms, however, have traditionally been unable to run screen space ambient occlusion and other global illumination techniques in real-time, forcing developers to bake most of the illumination as a consequence. In this paper, we analyze the technical aspects involved in porting Ambient Occlusion to mobile devices and propose an optimized pipeline that is able to improve

Ambient Occlusion calculation in OpenGL-based pipelines. We demonstrate our optimizations by applying them to four popular techniques: Crytek, Starcraft, Alchemy, and Horizon-Based Ambient Occlusion.