Frustum-Traced Raster Shadows
Revisiting Irregular Z-buffers

Abstract & Summary

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Thanks to rebuilt data structure compared to state-of-the-art ray tracers and optimization in hardware use, these guys managed to keep an interactive system and get better quality regarding shadows and their calculation. All this with 32 samples per pixel for only approximatley double the cost of 1 sample per pixel, incredible enough under 2 ms per frame. This was partly made possible by using hardware conservative raster and early z-culling. The result of all this is greatly improved shadows that can be calculated in real-time and might very soon be implemented for performance friendly use in game development in the comming years.

Review

Personally I think this was a interesting paper with marvelous results and clever ways to reach their goal. The spelling and the way they explained the process and their thoughts was very good, it was easy for me to get a grip of what everything ment. As they themself say at the end of the paper, their performance results are surely impressive. At my current state of knowledge and skills within the are of real-time graphics I might not be able to reproduce such an amazing result, but I could surely get a bit closer thanks to the researchers discussions and comparisons of all the possible problems and solutions with render technices