God Rays in Modern Gaming

Abstract

The importance of lighting in games is unquestionably tremendous. Not to mention we need to see what we're doing, but to generate a great degree of realism, the lighting too needs to be as realistic. The correct depiction of interaction of light with different surfaces is required. The complexities that arise from trying to render global illumination is multiplied tenfold when the environment itself is interactive, as opposed to it just being there in the background. This is further complicated when the issue of rendering caustics is considered, as this can only be satisfactorily achieved if the light rays (or photons) are traced right back to their sources. The aim of our contribution is to provide a review of the currently used techniques for the real-time rendering of God rays, complete with their advantages and disadvantages to depict exactly how far we have come in this field. And despite all the modern technology available at our fingertips, we shall see that there is a lot of work yet to be done to ensure cheap and accurate representations of stunning visual effects like God rays for the enjoyment of the average gamer.
References

- www.Wikipedia.com/Crepuscular_Rays
- www.Wikipedia.com/Ray_Marching

Index Terms

Computer Science
Information Sciences

Keywords

Lighting caustics God rays illumination games