

## **Framework for Real Time Cloud Rendering**

### Abstract

Computer Graphics (CG) is a key technology for producing visual contents. Currently computer generated imagery techniques are being developed and applied, particularly in the field of virtual reality applications, film production, training and flight simulators, to provide total composition of realistic computer graphic images. Clouds are an integral feature of the sky without them synthetic outdoor scenes seems unrealistic. Modeling and animating clouds is a difficult task. Most systems are difficult to use, as they require adjustment of numerous, complex parameters, and are non-interactive. This paper presents an intuitive, interactive system to artistically model, animate, and render visually convincing clouds using modern graphics hardware. A high-level interface models clouds through the visual use of cubes. Clouds are rendered as textured billboards by making use of hardware accelerated API - OpenGL. The resulting interactive design and rendering system produces perceptually convincing cloud models that can be used in any interactive system.