

Abstract

A REAL-TIME OBJECT BASED GRAPHICS SYSTEM

Common methods of rendering computer graphic images involve the use of a frame store for storing a full copy of the image. By expressing the outlines of objects by curves in the form of object fragments, such as quadratic polynomial fragments (QPS's), the rendering of an image in real time, without the need for a frame store can be achieved. Disclosed is an object based graphics processor (4) comprising input means (11,12) for receiving object outlines of an image intended for rasterised display, each said outline comprising at least one object fragment (OF,QPF), sorting means (18) for sorting said object fragments (OF,QPF) into a rasterisation sequence corresponding to a scan line in a raster format for rasterised display, storing means (5) having a first storage area and a second storage area connected to said sorting means (18) and adapted to store said rasterisation sequence in one of said storage areas, reading means (19) connected to said storing means (5) for reading a previously stored rasterisation sequence in real-time and calculating object edges (41-43) in a respective scan line (45), and priority means (21,22) for assigning pixel data values within each said scan line (45) based upon priority levels assigned to said object edges (41-43), said pixel data values being output from said processor (4) for rasterised display (7). A graphics system (1) incorporating the processor (4) is also disclosed.



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