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(54) **GAZE-OPERATED POINT DESIGNATION ON A 3D OBJECT OR SCENE**

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(57) **ABSTRACT**

A method for controlling the video display of a virtual 3D object or scene on a 2D display device is provided. A virtual video camera, controlled by a virtual-video-camera state variable consisting of camera control and location parameters, generates the 2D video of the object or scene. A target virtual camera state, representing an optimal view of a given surface point, is generated for each model surface point. A 2D coordinate of the image display is received from a user, either by looking at a point or selecting it with a mouse click. A corresponding 3D designated object point on the surface of the object is calculated from the received 2D display coordinate. The virtual camera is controlled to move its view toward the 3D designated object point with dynamics that allow the user to easily follow the motion of the designated object point as he watches the video.