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Trika et al.

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(54) **GENERATION OF STEREOSCOPIC DISPLAYS USING IMAGE APPROXIMATION**

(75) Inventors: **Sanjeev N. Trika**, Hillsboro, OR (US);
John I. Garney, Aloha, OR (US)

(73) Assignee: **Intel Corporation**, Santa Clara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 883 days.

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(51) **Int. Cl.**⁷ **G06T 15/00**

(52) **U.S. Cl.** **345/419; 348/42**

(58) **Field of Search** **345/419, 422, 345/427; 348/42, 43, 44, 616, 617, 620, 845.1**

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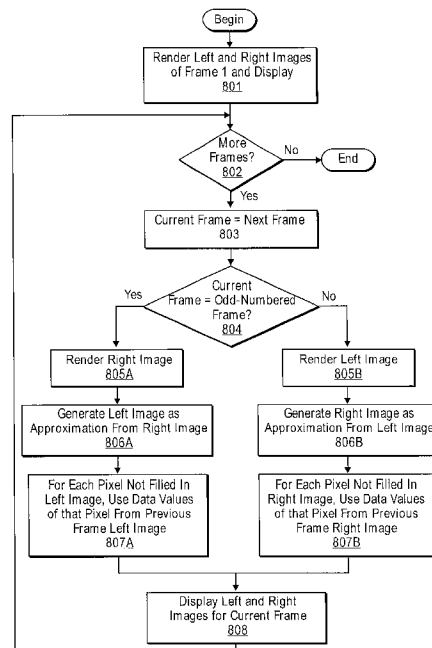
Primary Examiner—Mano Padmanabhan

(74) *Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor & Zafman LLP

(57) **ABSTRACT**

A method and apparatus for generating stereoscopic displays in a computer system. Each frame in a sequence of frames includes a left image and a right image, and each image includes a plurality of pixels. Depth information for objects depicted in the display is stored in a z buffer. Either the left image or the right image is computed as an approximation of the other using the depth information stored in the z buffer. The approximated image is alternated between the left and the right image on a frame-by-frame basis, so that the left and right image are each approximated every other frame. Pixels which are not filled in the approximated image are assigned values based on the corresponding pixels in the same (non-approximated) image from the preceding frame.

15 Claims, 7 Drawing Sheets



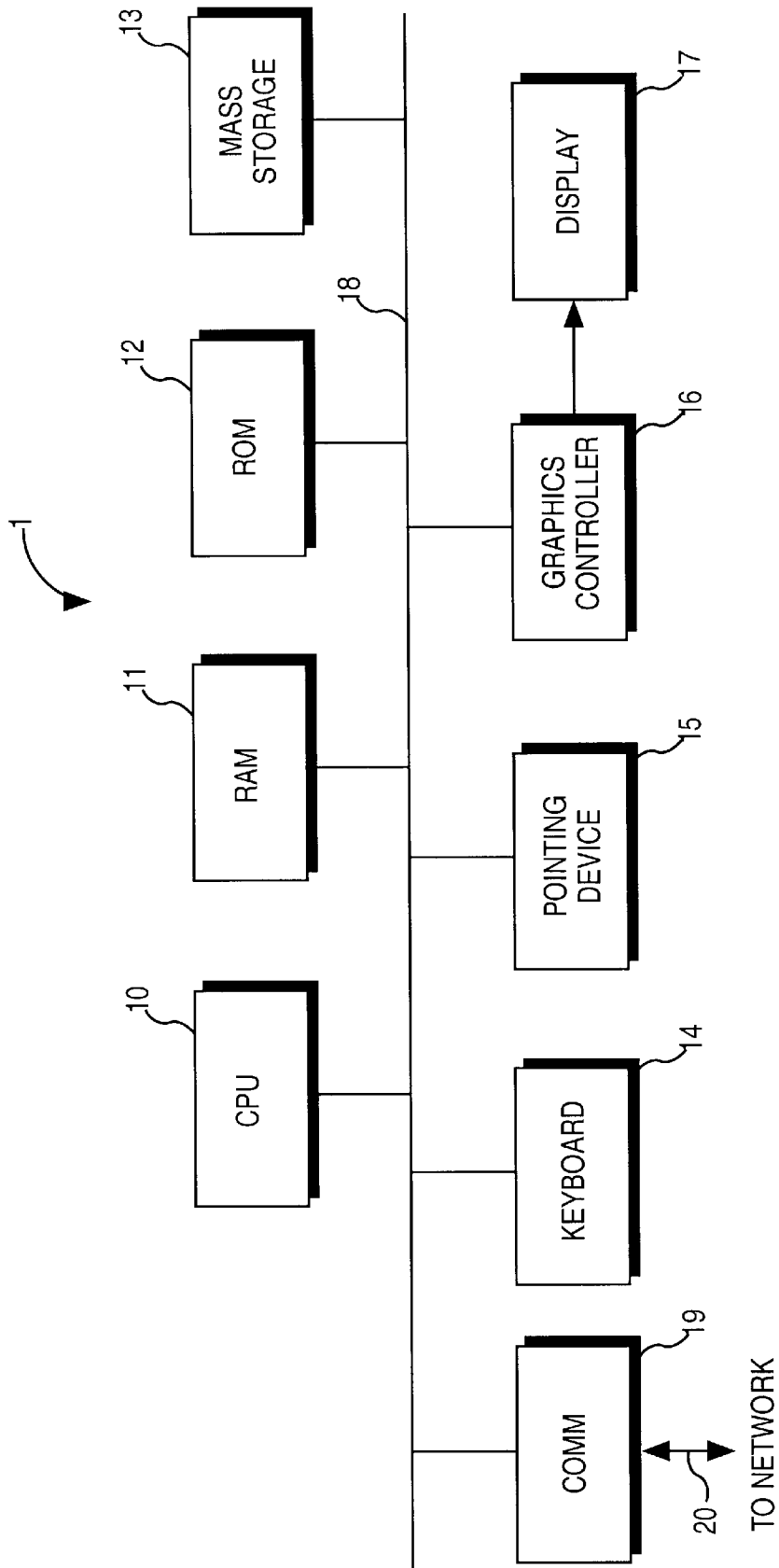


FIG. 1

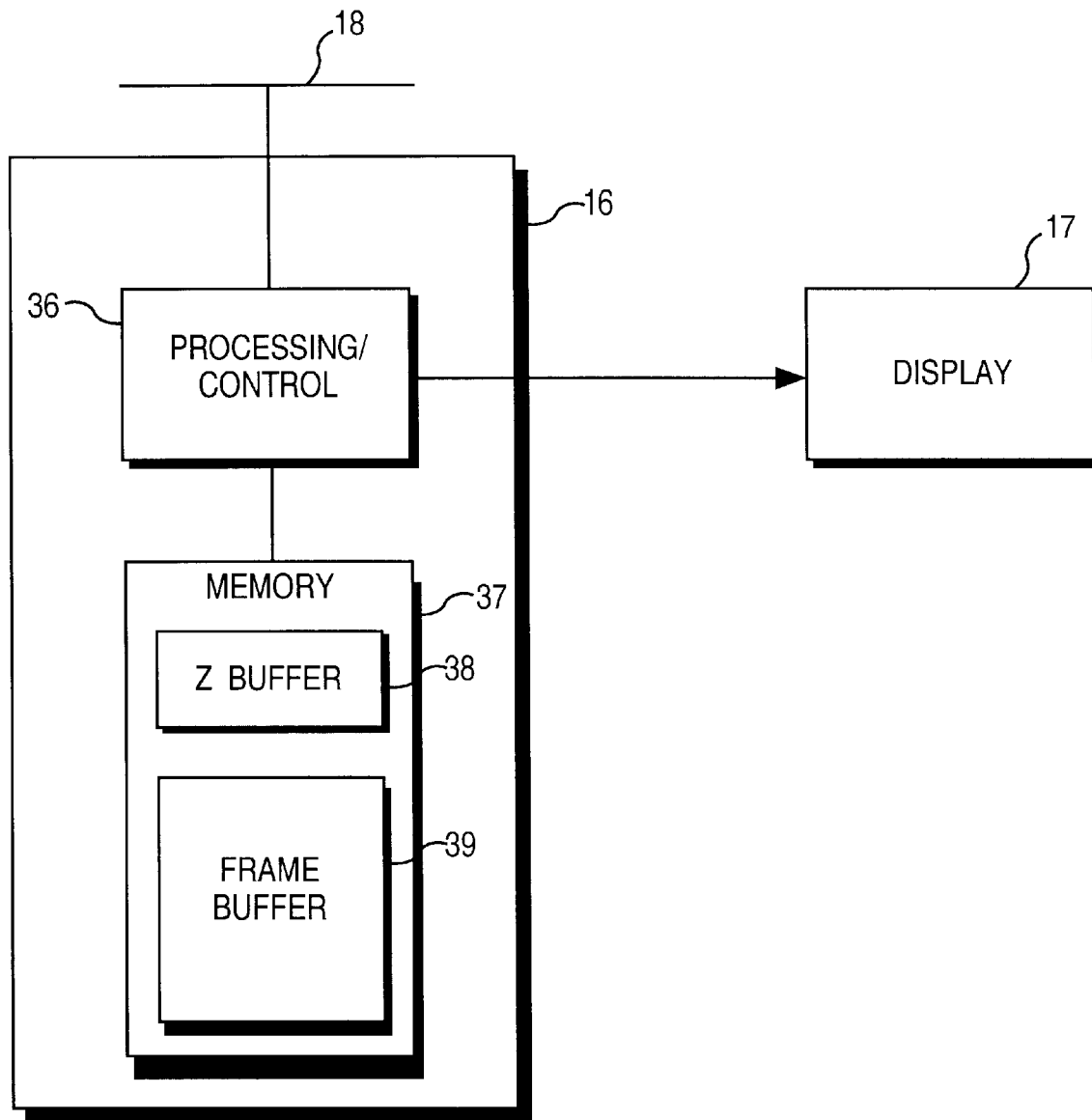


FIG. 2

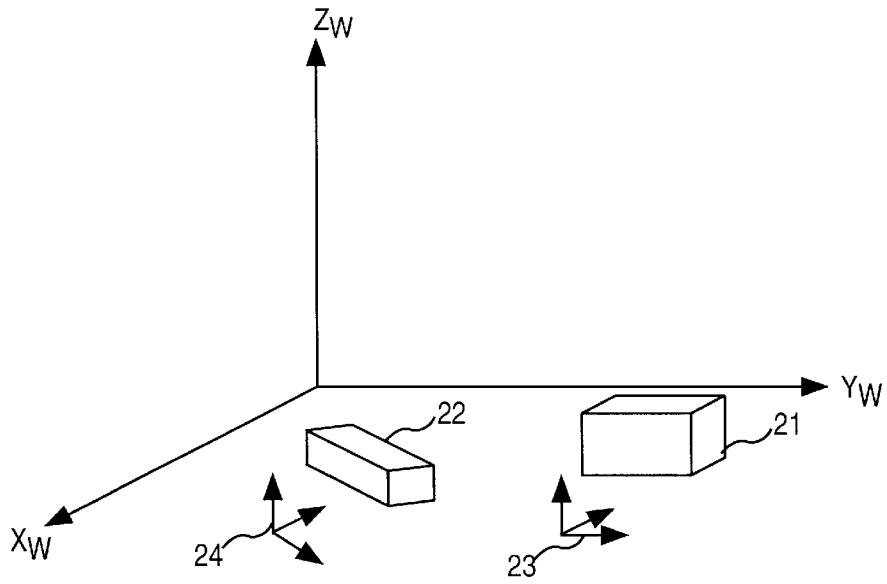


FIG. 3

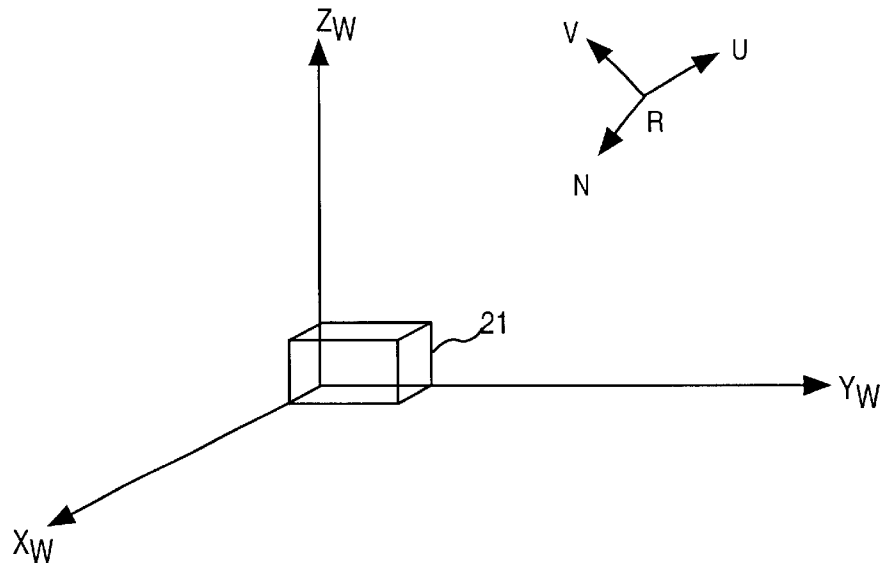


FIG. 4

FIG. 5A

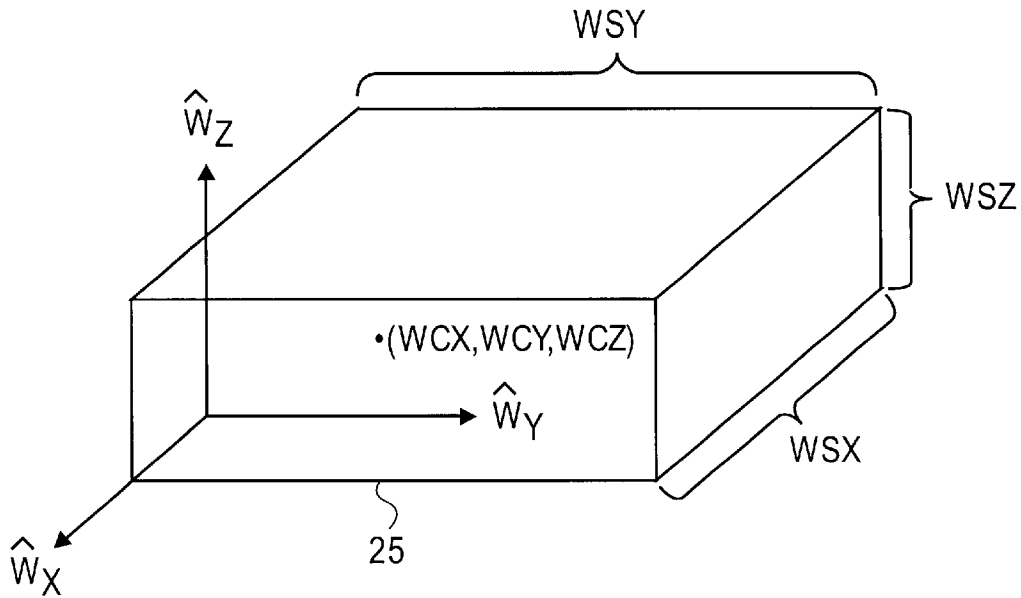
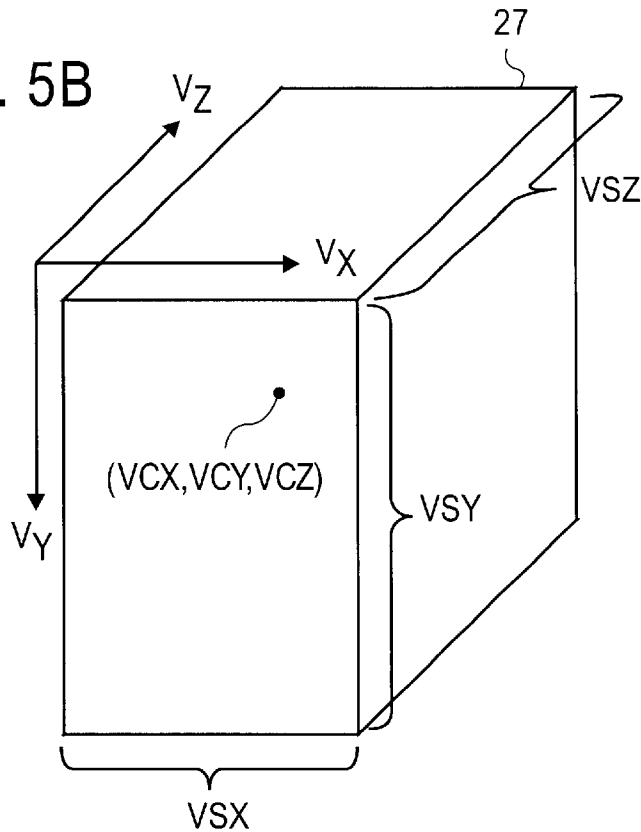


FIG. 5B



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