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Rhodes et al.

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- [54] **INTEGRATED GRAPHICS AND VIDEO COMPUTER DISPLAY SYSTEM**
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- [73] Assignee: **Intel Corporation**, Santa Clara, Calif.
- [21] Appl. No.: **261,284**
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- [51] Int. Cl.^o **G06T 1/00**
- [52] U.S. Cl. **395/154; 345/118**
- [58] Field of Search **348/589; 345/118; 395/153, 154, 162, 163**

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Assistant Examiner—N. Kenneth Burraston
Attorney, Agent, or Firm—Blakely, Sokoloff, Taylor Zafman

[57] ABSTRACT

Graphical, video, and audio data is integrated into a single processing environment. The present invention employs an integrated graphics/video controller (IVC) which interfaces with application software through a graphics API and a video API. The IVC receives graphics commands through the graphics API and video commands through the video API. A mask driver produces information from the graphics commands including clipping information, graphics information and mask information. A blender uses the mask information, the graphics information, and the clipping information for combining or compositing graphics images with video images. The video commands of the video command stream provide functions for configuring the operation of the IVC. These functions include commands for loading software video decoders in a decoder block within the IVC. Video data transferred to the IVC via the video API may be encoded in a variety of different formats. The present invention provides a means for dynamically loading a plurality of different video decoders through a video command interface to a video decode block both within the IVC. Each of the independent decoders within the decode block contain processing logic for decoding a particular type of video data to produce a uniform type of decoded video data which is provided to the blender. The blender receives the decoded video data and combines the video data with graphics data as defined by the mask information, the clipping information, and the graphics information.

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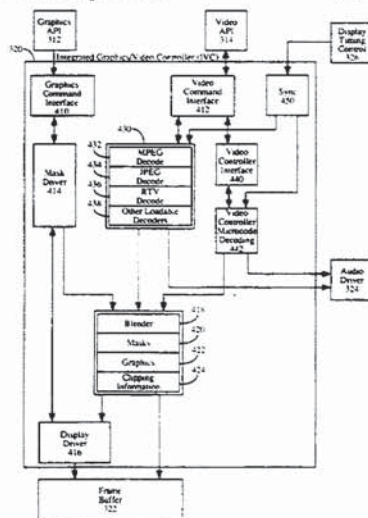
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26 Claims, 14 Drawing Sheets



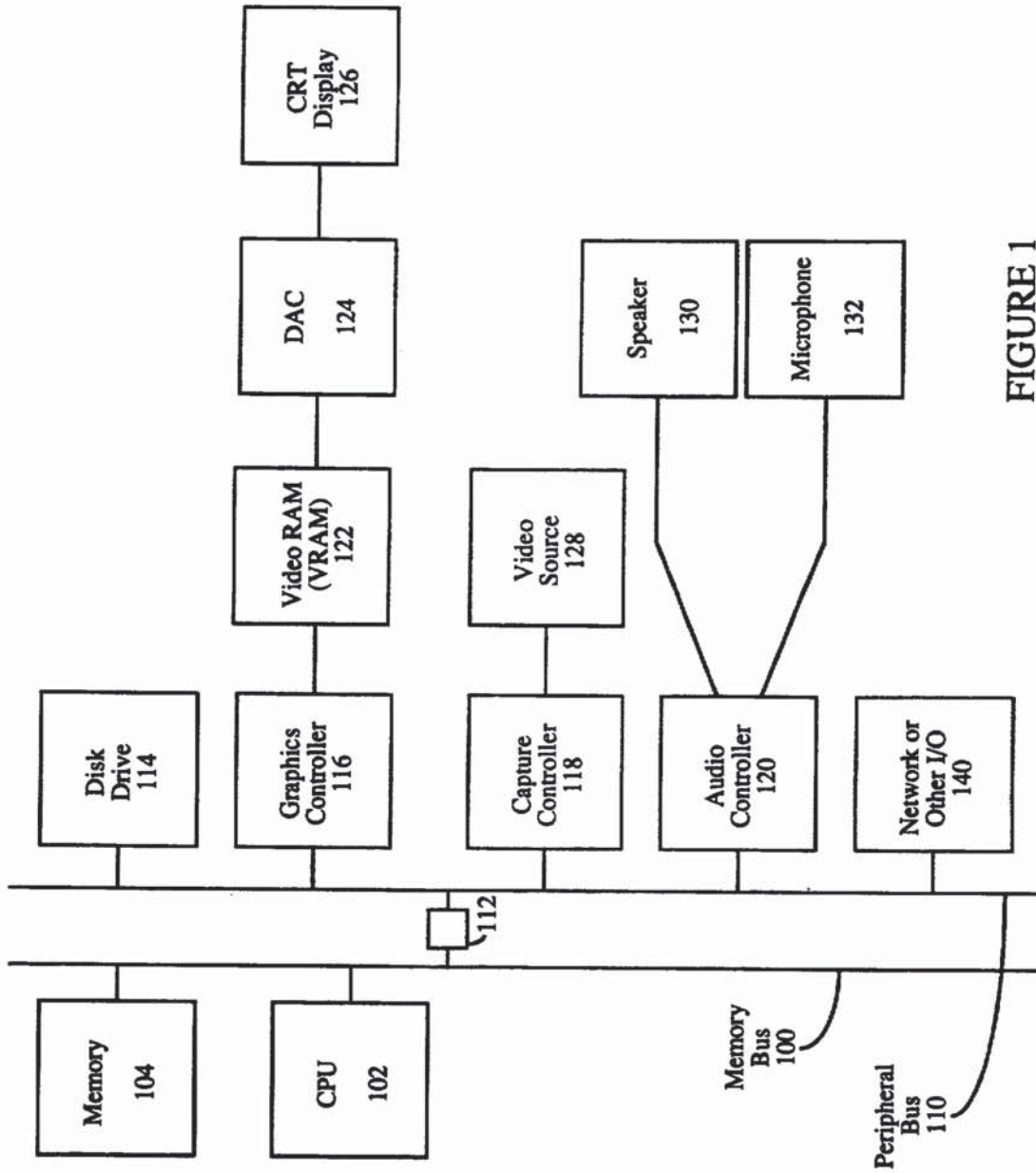


FIGURE 1

FIGURE 2
(Prior Art)

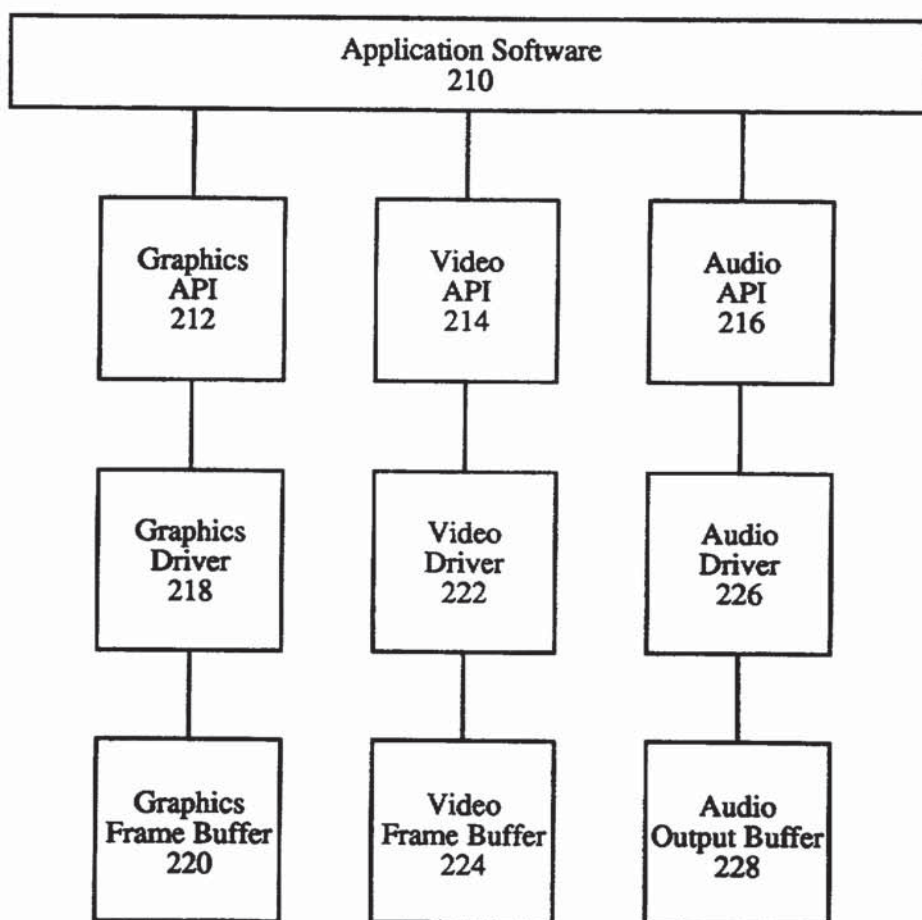


FIGURE 3

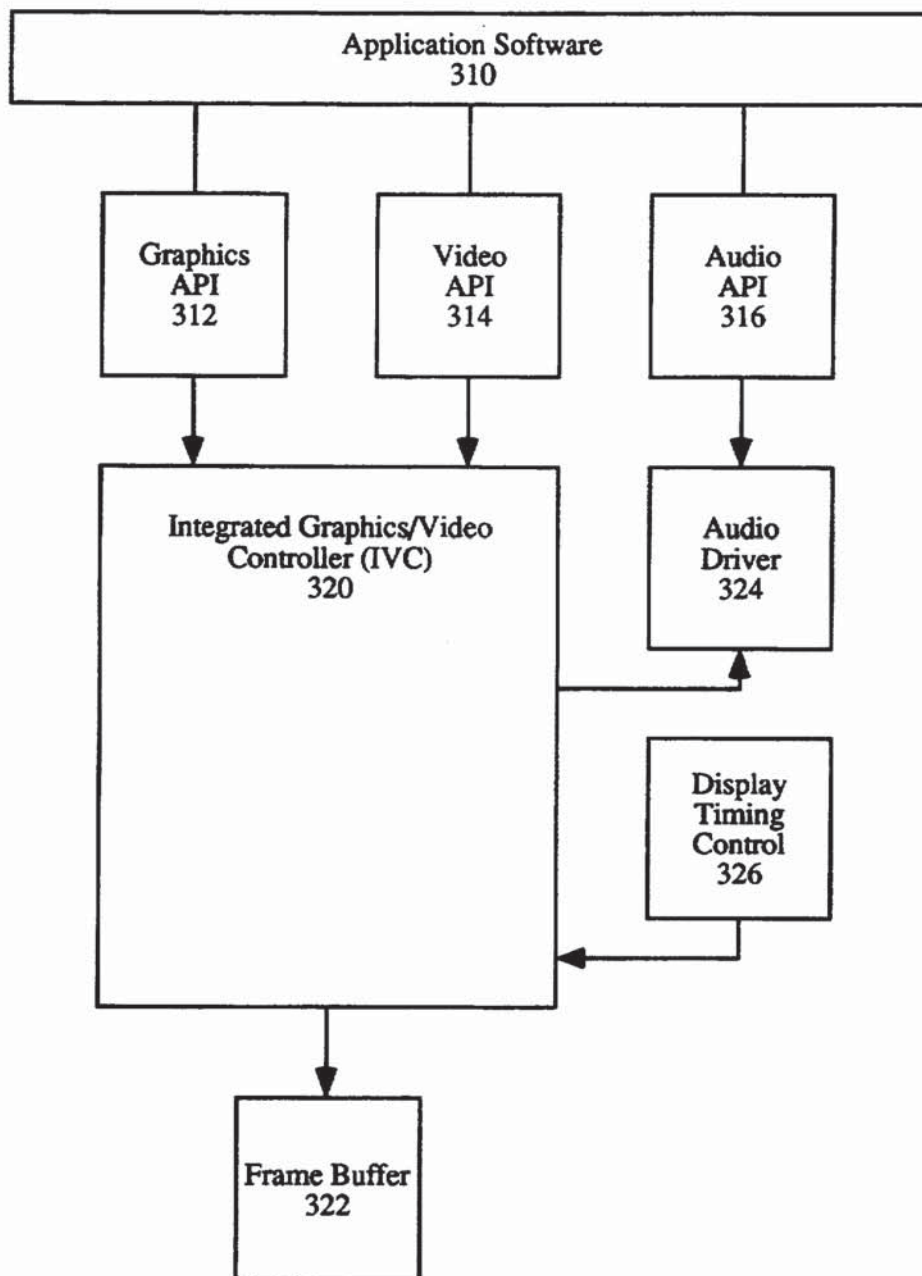
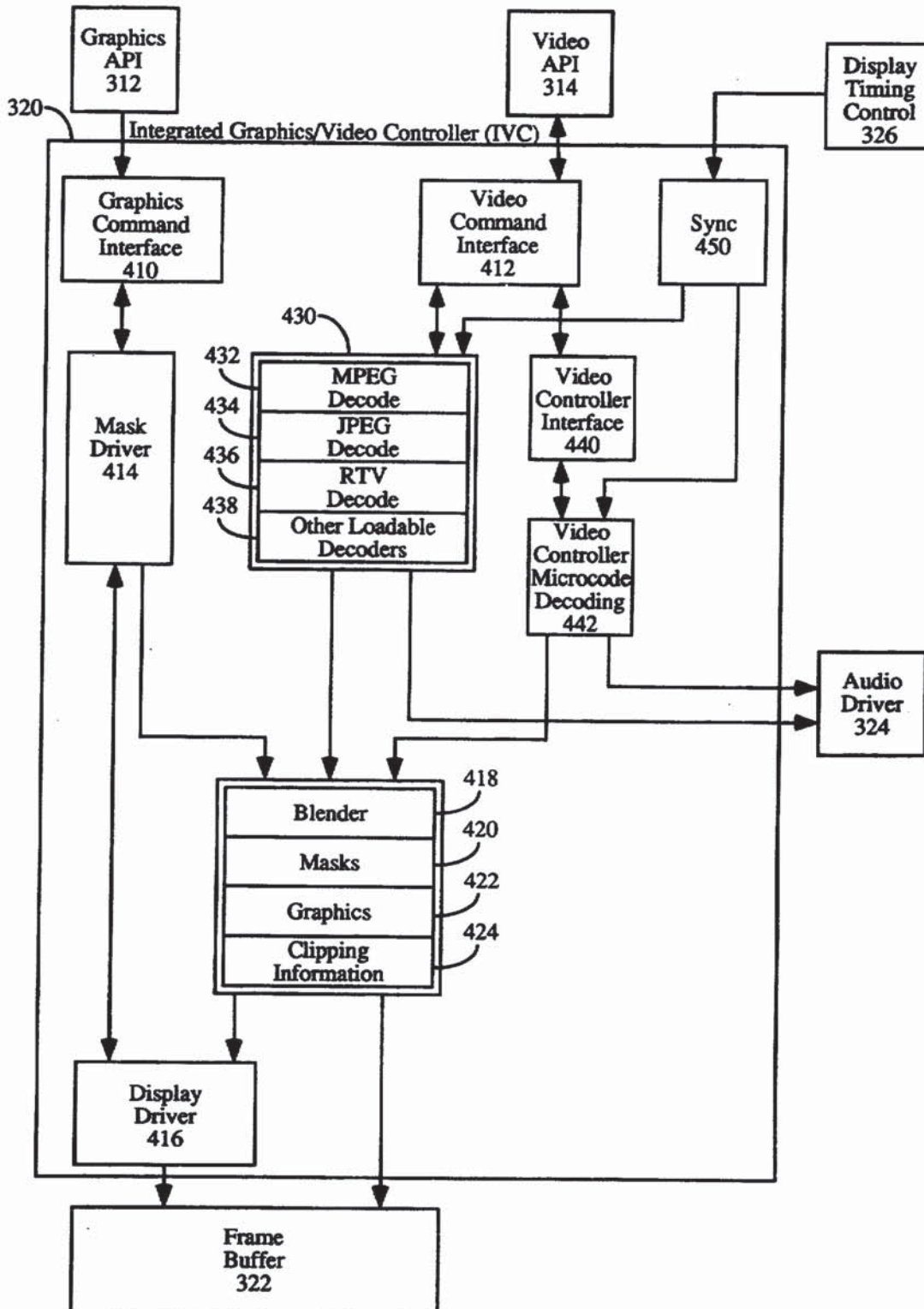


FIGURE 4



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