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United States Patent [19]

Walsh et al.

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[54] **COMPUTER BASED VIDEO SYSTEM**

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[73] Assignee: **Data Translation, Inc.**, Marlboro, Mass.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/666,960**

[22] Filed: **Jun. 20, 1996**

[51] **Int. Cl.**[6] **G09G 5/00**

[52] **U.S. Cl.** **345/302**; 345/418

[58] **Field of Search** 395/806, 807; 382/235, 236; 345/302, 418; 348/423, 845.3; 352/12

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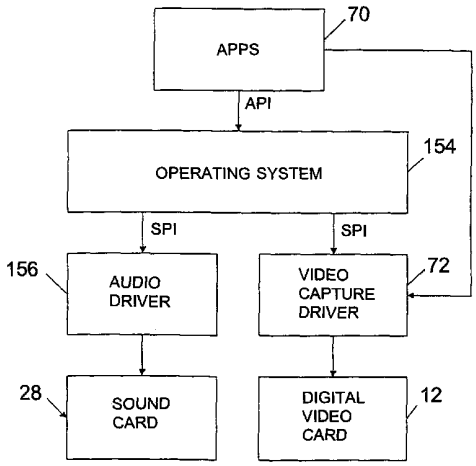
[57] **ABSTRACT**

A computer based system for displaying and compressing video including a video capture card with a video compressor and a bus interface circuit that acts as a busmaster and outputs uncompressed video and compressed video to a computer bus for display of the uncompressed video on the computer monitor and storage of the compressed video on a memory of the computer. The system also includes a software virtual interrupt generator that uses timer events provided by a computer system service and a transfer status indicator to generate interrupts to initiate transfer of a new block of video; an overlay controller implemented in software that transfers video from the video capture card over the computer bus to a graphics subsystem for display in a window on the computer monitor in an overlay mode; a display controller implemented in software that causes display of uncompressed video from the video capture card or software decompressed video; a software controller that compresses audio in software and sends video data to be compressed across the computer bus to the compressor; a controller that is implemented in software and calibrates startup delay of the audio input subsystem and uses the delay to synchronize the audio and video; and a user interactive input mechanism for adjusting the rates of compression within a range of acceptable rates that varies as a function of the output target medium for compressed video.

8 Claims, 12 Drawing Sheets



RPX Exhibit 1043
RPX v. DAE

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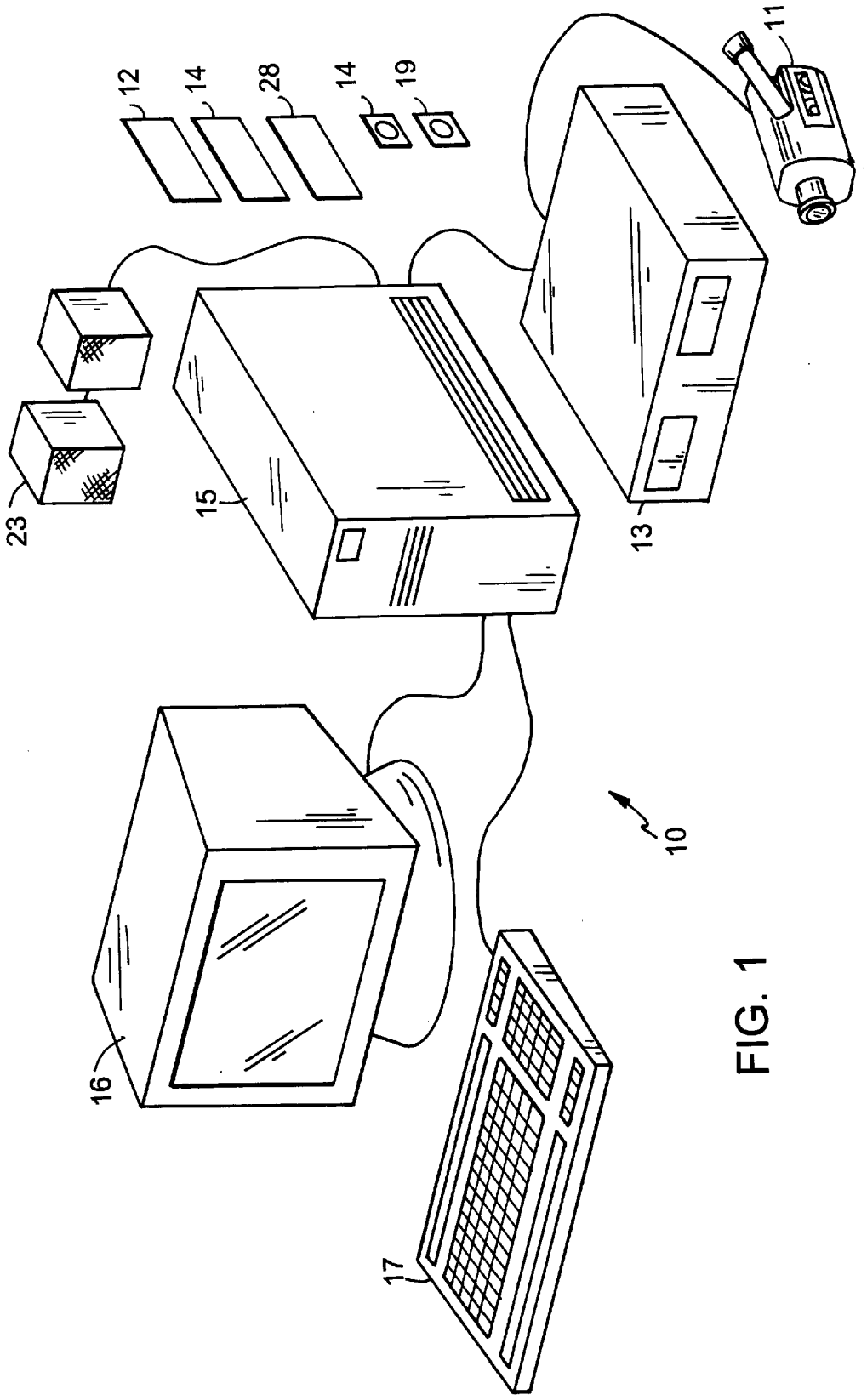

FIG. 1

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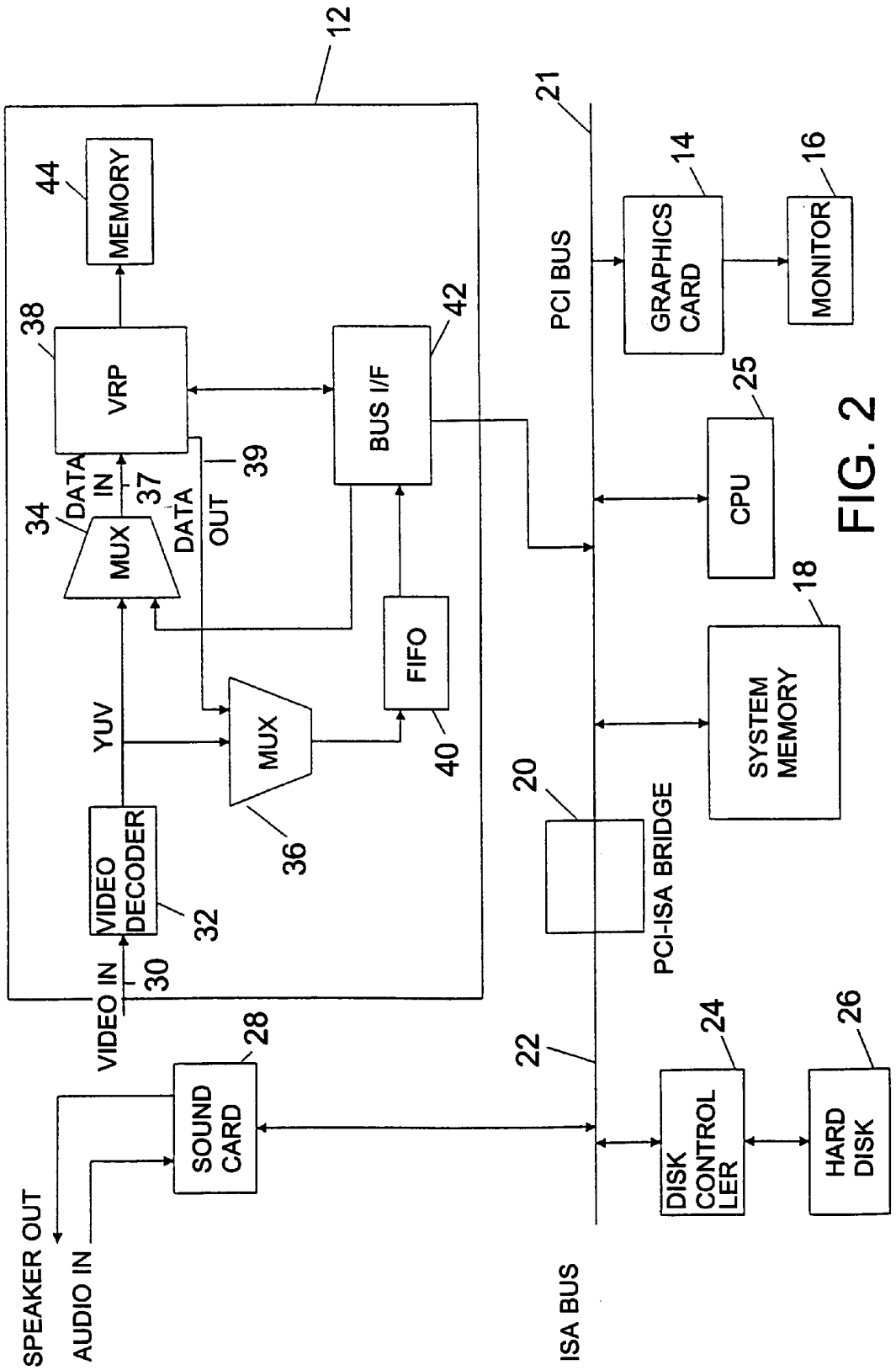

FIG. 2

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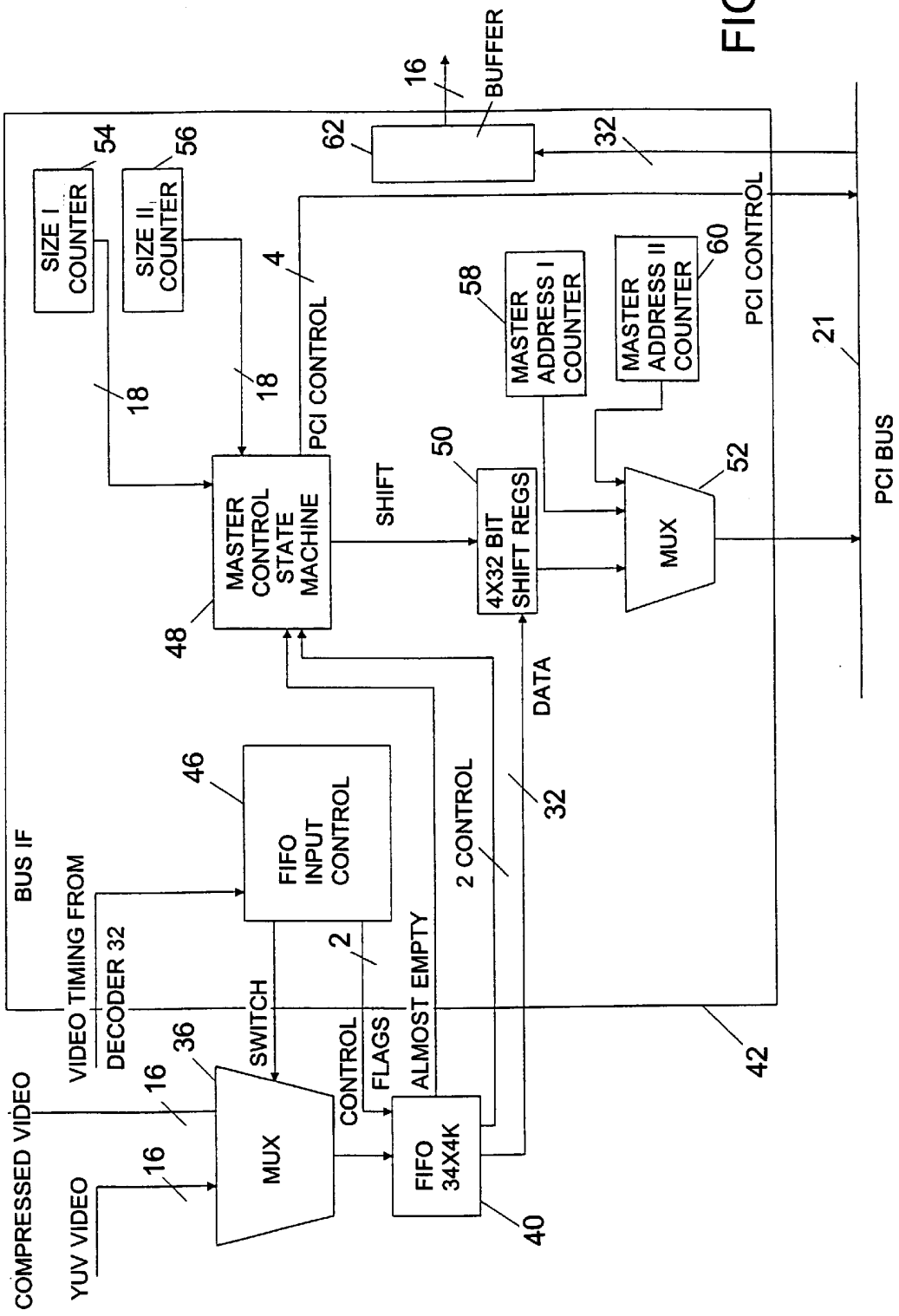

FIG. 3

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