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(54) **ELECTRONIC SYSTEM AND METHOD FOR SELECTIVELY ALLOWING ACCESS TO A SHARED MEMORY**

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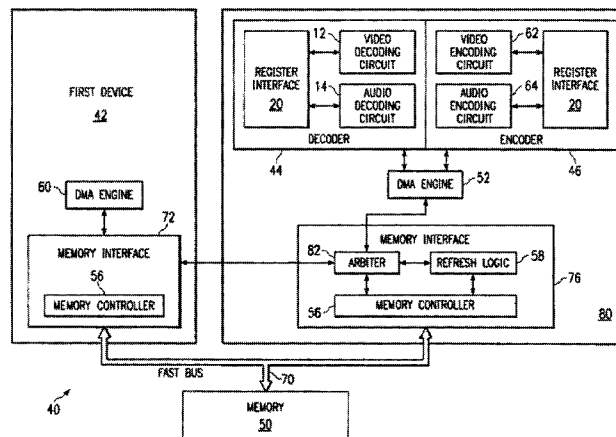
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(57) **ABSTRACT**

An electronic system, an integrated circuit and a method for display are disclosed. The electronic system contains a first device, a memory and a video/audio compression/decompression device such as a decoder/encoder. The electronic system is configured to allow the first device and the video/audio compression/decompression device to share the memory. The electronic system may be included in a computer in which case the memory is a main memory. Memory access is accomplished by one or more memory interfaces, direct coupling of the memory to a bus, or direct coupling of the first device and decoder/encoder to a bus. An arbiter selectively provides access for the first device and/or the decoder/encoder to the memory based on priority. The arbiter may be monolithically integrated into a memory interface. The decoder may be a video decoder configured to comply with the MPEG-2 standard. The memory may store predicted images obtained from a preceding image.

17 Claims, 6 Drawing Sheets

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