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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 13/28 | A1

(11) International Publication Number: WO 96/15499

(43) International Publication Date: 23 May 1996 (23.05.96)

(21) International Application Number: PCT/US95/13865

(22) International Filing Date: 27 October 1995 (27.10.95)

(30) Priority Data:
08/337,924 10 November 1994 (10.11.94) US

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(81) Designated States: JP, SG, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

SG 9701629-9

(54) Title: SYSTEM AND METHOD FOR COMMAND PROCESSING AND DATA TRANSFER IN A COMPUTER SYSTEM FOR SOUND OR THE LIKE

(57) Abstract

A system and method for providing sound in a computer are disclosed. An audio module for controlling digitized sound I/O is included in a media stream controller. The media stream controller may also coordinate graphics and video which allows multiple media subsystems to be supported from a single bus device. A software application may initiate sound data transfer by sending a conventional DMA mode command to the media stream controller. The media stream controller activates an audio interrupt service routine which processes the request without using a conventional DMA controller. Digital sound data is transferred across a local bus using high speed burst mode block transfer commands and is buffered by the media stream controller in a display memory. Concurrently, the media stream controller may output sound data from the display memory to a sound output device using a double buffering method. Alternatively, the media stream controller may read sound data from a sound input device and store it in the display memory. The audio interrupt service routine may be activated to transfer the sound data in blocks to a software application. After sound data transfer is complete the audio interrupt service routine may reset the count in the DMA controller to provide compatibility with software applications written for DMA mode transfer. Thus high speed burst mode block transfer may be used with sound data to free up bandwidth for video, graphics and other uses, and yet still provide compatibility with conventional DMA mode sound I/O.

