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(54) Title: SYNCHRONOUS DMA TRANSFER PROTOCOL

(57) Abstract

A synchronous DMA burst transfer method is provided for transferring data between a host device and a peripheral drive device connected by an ATA bus. The method provides synchronous data transfer capability in an asynchronous system by having one device in charge of both a strobe signal and a data signal. When a host read or write command (901) is delivered to the drive device, the device decides when to start the synchronous DMA burst (902). For a read command (B), the device requests the synchronous DMA burst, then drives a data word onto the ATA bus (908) after the host acknowledges that it is ready to begin the burst (904 and 906). After the device toggles a strobe signal (910), the host latches the data word on the bus (912). Additional data words can be driven on the bus and the strobe signal can be retoggled to latch additional data words into the host (914). After all data words have been transferred, the burst is terminated and ready to be used for another host command (918).

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