



[54] ENHANCED DUAL SPEED BUS COMPUTER SYSTEM

5,809,291 9/1998 Munoz-Bustamante et al. 395/556
5,838,995 11/1998 Chen et al. 385/880

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FOREIGN PATENT DOCUMENTS

57-210495 12/1982 Japan .
7282000 10/1995 Japan .

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[21] Appl. No.: 08/897,573

[22] Filed: Jul. 21, 1997

[51] Int. Cl.⁶ G06F 13/42; G06F 13/00;
G06F 1/12

[52] U.S. Cl. 710/60; 710/100; 713/501

[58] Field of Search 395/280, 307-309,
395/880, 849; 710/60, 29, 62, 33, 104,
100, 127-129; 709/233; 713/501, 551

[57] ABSTRACT

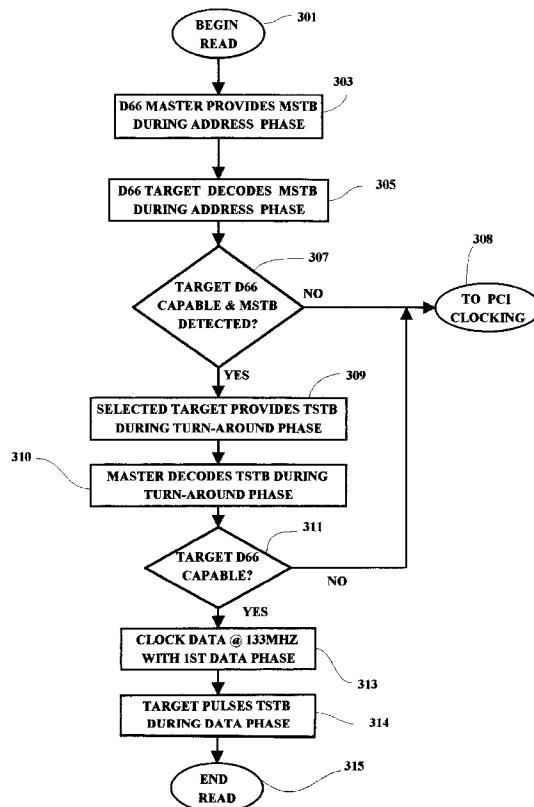
A methodology and implementing system 101 are provided in which a PCI bus is enhanced to operate at a plurality of data transfer speeds, including for example, 133 MHz in order to accommodate subsystem boards operating at higher frequencies, while at the same time allowing normal 66 MHz PCI clocking for devices designed to operate at the lower 66 MHz standard PCI speed. Master strobe MSTB 303, 403 and target strobe TSTB signals 309, 411 are generated in a handshaking methodology to determine if a master data transaction requesting device and a target data transaction device are designed to operate at the higher data transfer frequency. Higher frequency capable devices or boards are run at the increased frequency when both the requesting master and the selected target devices request the higher transfer rate, and standard devices or boards are run at the lower standard PCI frequency, while both master and target devices are coupled to and run from the same multi-speed PCI bus 125.

[56] References Cited

U.S. PATENT DOCUMENTS

4,931,924	6/1990	Kageura	395/500
5,058,054	10/1991	Feldman	395/849
5,386,517	1/1995	Sheth et al.	395/880
5,513,327	4/1996	Farmwald et al.	395/309
5,535,343	7/1996	Verseput	395/308
5,537,660	7/1996	Bond et al.	395/878
5,625,847	4/1997	Ando et al.	395/880

15 Claims, 4 Drawing Sheets



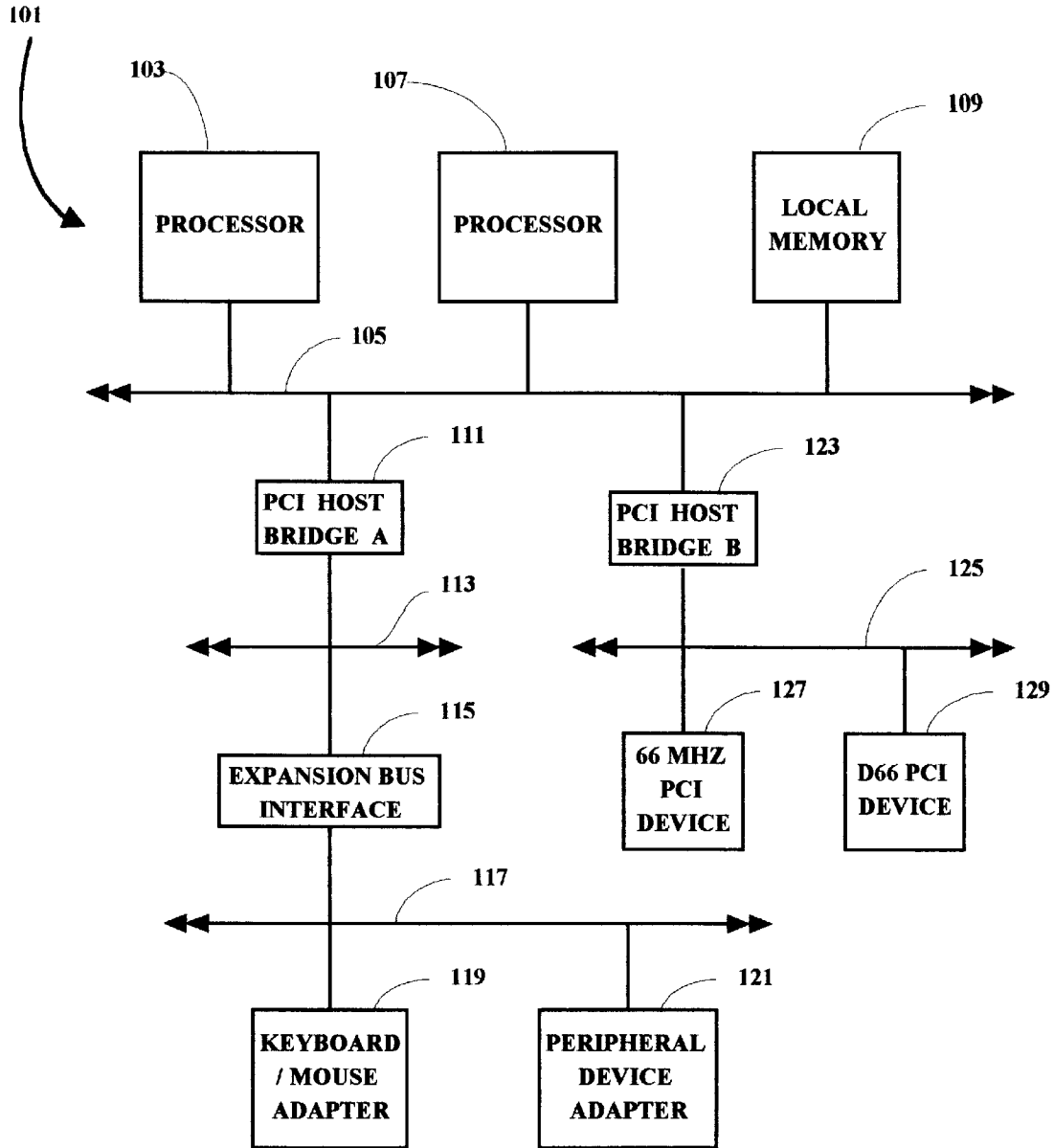


FIG. 1

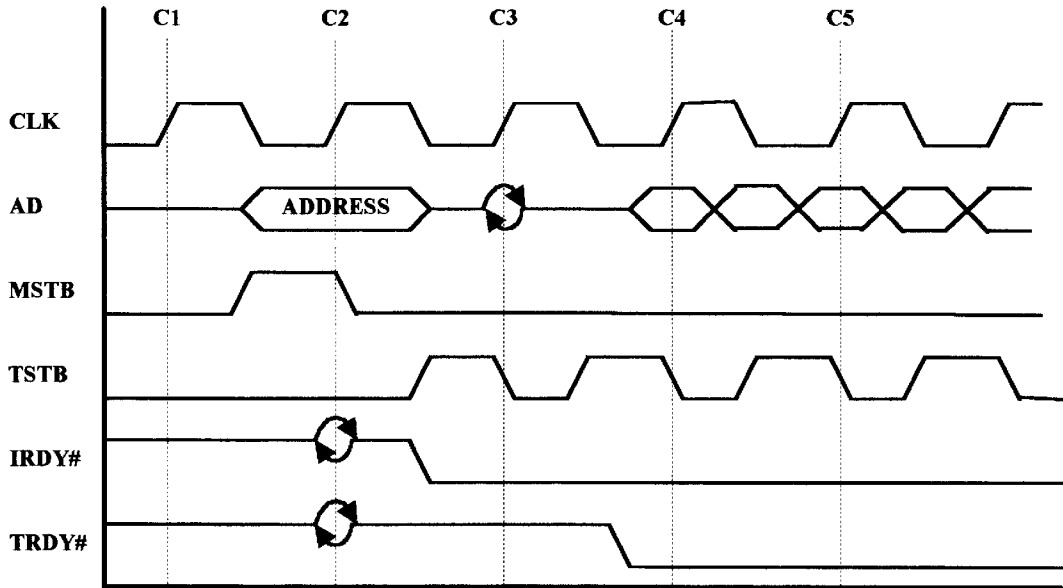


FIG. 2A

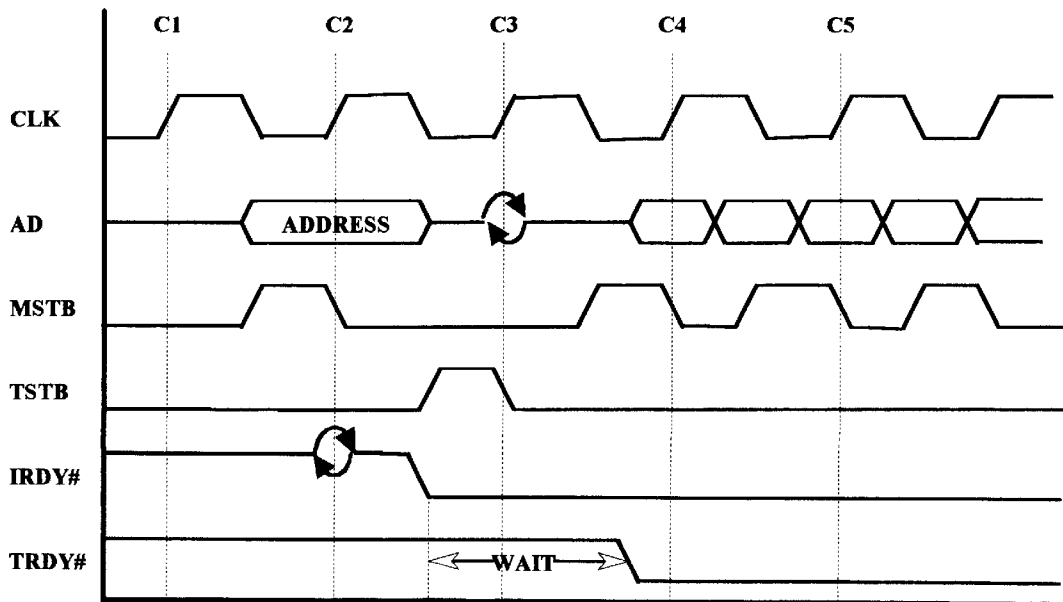


FIG. 2B

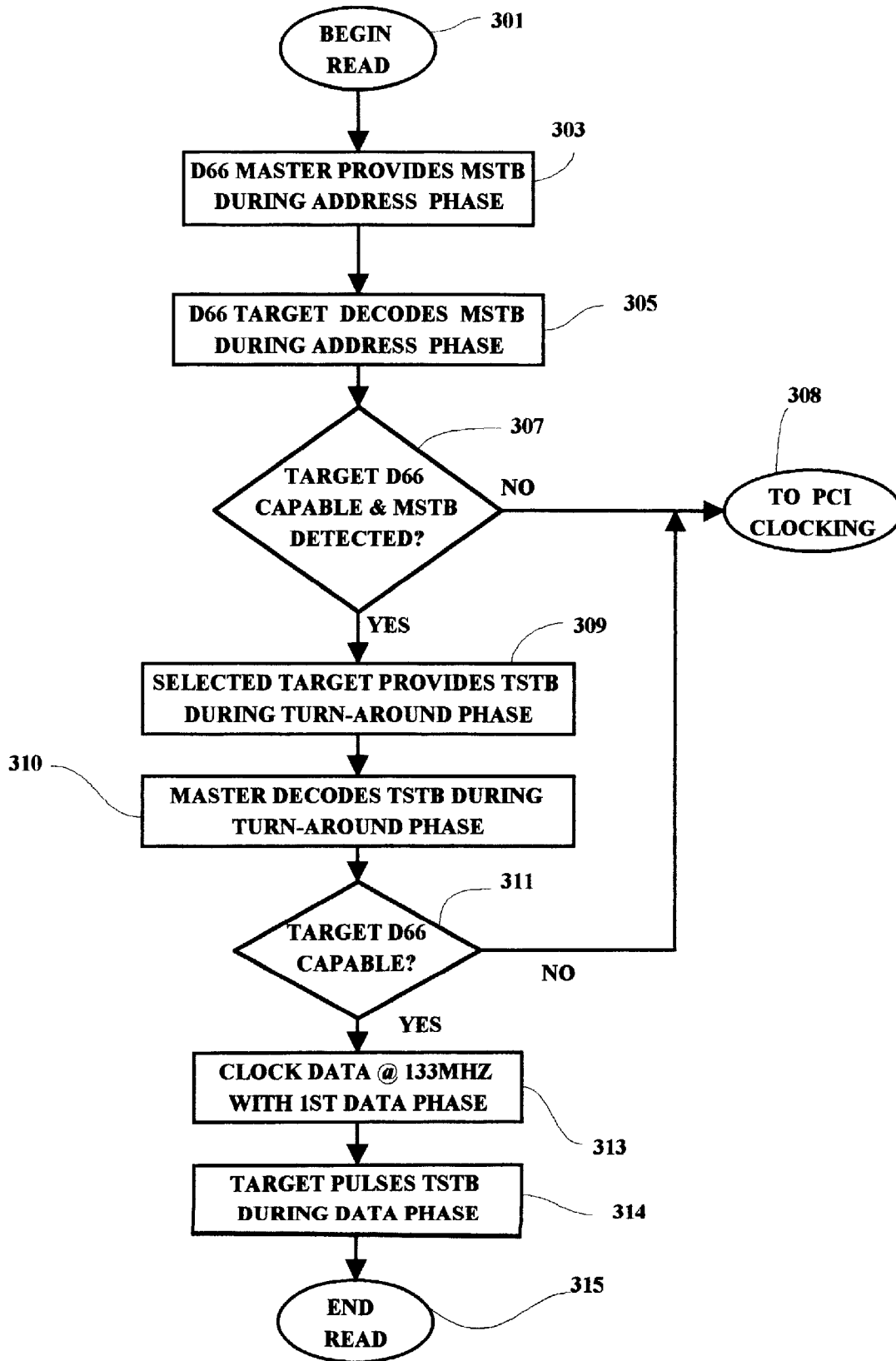


FIG. 3

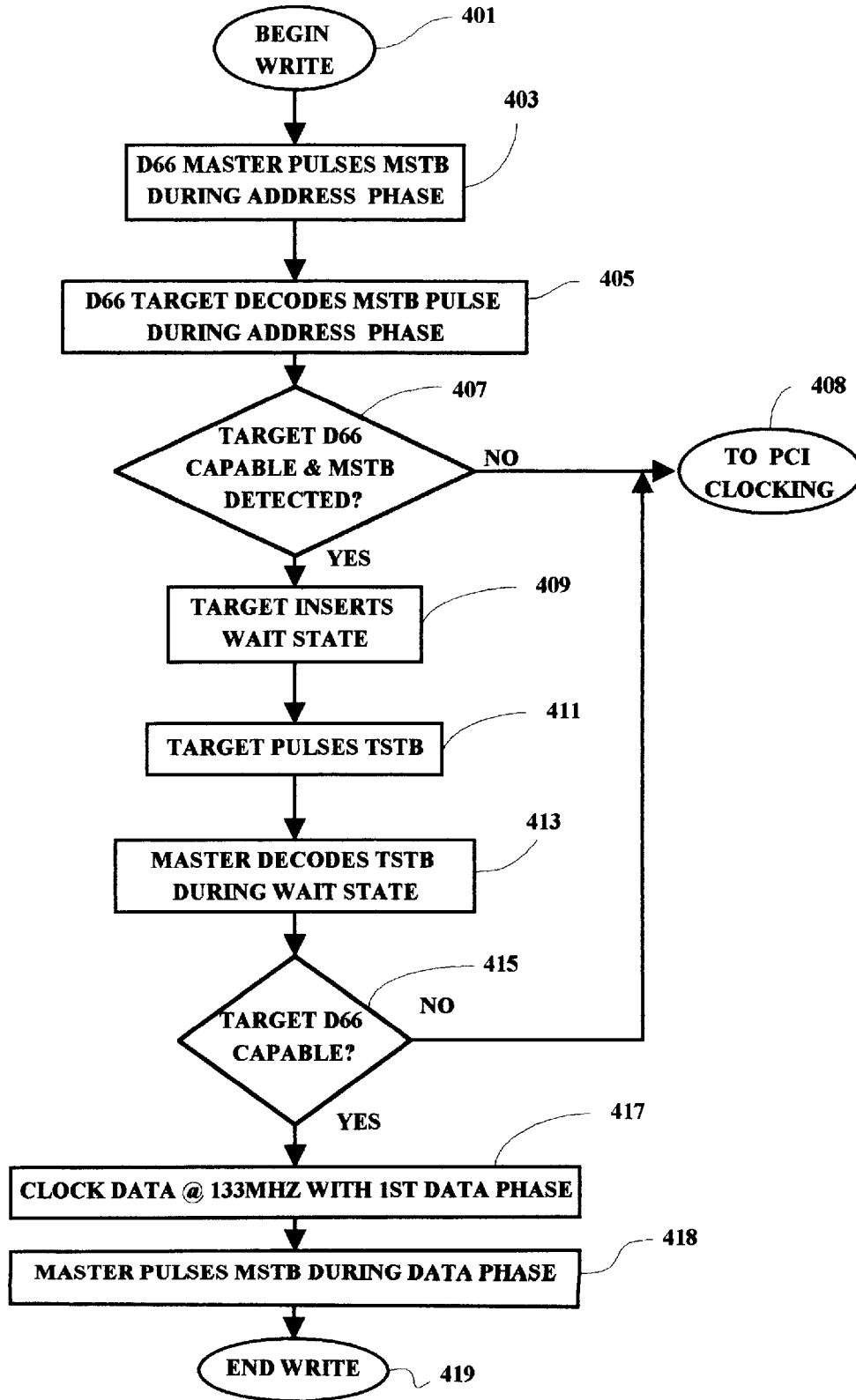


FIG. 4

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