

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte KAUSHIK POPAT

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Appeal No. 1998-3424  
Application 08/315,792

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ON BRIEF

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Before THOMAS, KRASS, and LALL, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 5-17 and 20-22. Claims 2-4, 18, 19 and 23 have been indicated by the examiner as being directed to patentable subject matter.

The invention is directed to first in-first out (FIFO) storage devices in general. In particular, the output transitions of the device are inhibited when the last cell of the device is read or when the FIFO is erased. This is said to be an improvement over the prior art since transitions at the output of conventional devices consume considerable

amounts of power, which has an adverse effect on the length of time a portable device comprising the FIFO can operate without recharging.

Representative independent claim 1 is reproduced as follows:

1. A method of operating a first in-first out computer device having N storage stages capable of storing N entries between an input and output, the computer device responding to read and write commands for entries to be read from and written into the computer device, the method comprising the step of: controlling the output so no transition occurs thereon after a last one of said stages having an unread value stored therein is read when a read command is supplied to the device without a write command being supplied to the device.

The examiner relies on the following references:

Ward et al. (Ward)	4,864,543	Sep. 05, 1989
McClure	5,502,655	Mar. 26, 1996 (filed Apr. 1, 1994)

Claims 1, 5-17 and 20-22 stand rejected under 35 U.S.C. 102(b) as anticipated by either one of Ward or McClure.

Reference is made to the brief and answer for the respective positions of appellant and the examiner.

### OPINION

Independent claim 1 is directed to the situation where the output is controlled so that no transition occurs after a last one of the stages having an unread value stored therein is read when a read command is supplied to the device without a write command being supplied to the device. Independent claim 5 is directed to the situation where the output is controlled so no transition occurs thereon in response to a command for erasing all entries in the device. Independent claim 8 is directed to the situation wherein

transitions are prevented under either of the two circumstances discussed in claims 1 and 5. Independent claim 13 is basically an apparatus counterpart to method claim 8 wherein transitions are prevented under either of the two recited circumstances. Independent claim 17 is similar to claim 1 in that it requires setting a write pointer value equal to the stored reader pointer value after reading a last unread value in response to reception of a read command if the read command is received without a corresponding reception of the write command. Independent claim 22 requires the controller changing the write pointer value to equal the read pointer value after execution of a first read signal if the number of entries equals one and a corresponding write signal is not received during reception of the first read signal.

Thus, the instant claimed subject matter is directed to controlling the output of the FIFO so no transitions occur at the output of the device under various conditions. The examiner has pointed to sections within Ward and McClure which the examiner alleges meet the various control portions of the instant claims. In Ward, the examiner points to column 1, lines 41-48 and column 8, lines 55-57. With regard to McClure, the examiner identifies column 2, lines 42-54, column 3, lines 54-63 and column 5, lines 9-12.

Appellant argues that neither Ward nor McClure recognizes the problems solved by appellant and that neither of the references prevents transitions on the output under the circumstances specified in the claims.

We agree with the examiner and refer to the reasoning set forth at pages 2-9 of Paper No 9. Clearly, Ward is concerned with a similar problem as is appellant. Column 2, lines 19-23 of Ward recites that a disadvantage of the prior art is the large amount of

power consumption because cell locations are continuously powered up and enabled for read or write operation.

Further, regardless of appellant's arguments regarding dissimilar problems and no disclosure by the references of the "affirmative steps taken to prevent the transitions" in the instant invention, Ward clearly discloses the invention as broadly set forth by the instant claims. For example, claim 1 calls for controlling the output "so no transition occurs...when a read command is supplied to the device without a write command being supplied to the device." Ward, at the identified portion of column 8, clearly meets this claim language in that the read clock generator 82 is disabled until at least one write operation occurs. This portion of Ward similarly meets the language of instant claim 5 since no transition occurs at the output in response to a command for erasing all entries in the device [Note lines 52-54 of column 8 of Ward which discloses that the empty condition prevents further read./write pulses.]. In a similar manner, since independent claim 8 recites an output control responsive to either one of the conditions of claims 1 and 5, claim 8 is met by Ward. Claim 13 is also met for similar reasons.

With regard to claim 17. Appellant argues [brief-page 11] that neither of the references talks about setting the write pointer value to equal the stored reader pointer value after reading a last unread value in response to reception of a read command if the read command is received without a corresponding reception of the write command. However, Ward, for example, recites that the reset signal sets both pointers to the same address [column 8, lines 55-56] and this is apparently done after reading the last unread value, i.e., an empty condition.

Similarly, with regard to McClure as it applies to independent claims 1, 5, 8, 13 and 17, the examiner has indicated portions of this reference which are considered to meet the claim limitations. For example, the examiner points to column 2, lines 42-45, reciting that

The empty and full flags are somewhat easier to generate because once the matching condition is met, signifying empty for example, all subsequent reads are disabled until a valid write is completed.

This recitation appears to meet the output control limitations set forth in the instant claims.

With regard to independent claim 22, the examiner explains the applicability of Ward at pages 2-3 of Paper No. 9 and the applicability of McClure at page 9 of Paper No. 9. Yet, appellant's response [page 12 of the brief] is merely to reiterate what is recited by the claim and then to merely state that this "is not shown by either of the references." This is not a persuasive or an adequate argument since it does not point out the alleged errors in the examiner's position. Similarly, while appellant has chosen to have each claim stand on its own merits, the only "arguments" presented against the rejection of the claims is to reiterate the claim language and repetitively state that the references do not show the particular feature recited without pointing out the alleged errors in the examiner's position. Since the examiner has presented a prima facie case of anticipation, in our view, the mere statement by appellant that the references do not disclose or show the recited limitations is not a persuasive argument to overcome the prima facie case.

At pages 5-6 of the brief, appellant describes the operation of Ward and then contends that the operations of Ward are "normal FIFO registers" operations under empty

and full conditions and “do not address the improvements claimed.” However, appellant does not point out the perceived “improvements claimed” nor does appellant recite specific claim language on which the argument relies. Still further, even if Ward does, indeed, disclose what appellant contends as “the operation of normal FIFO registers,” appellant has not explained how or why those “normal” operations fail to read on the broad claim language.

With regard to the erasing operation, appellant agrees [brief-page 6] that when a FIFO is erased, it is appropriate that the read and write pointers point to the same address, as in Ward, for example. Appellant queries, however, as to “How do you get there”? While appellant strenuously contends that setting the pointers to the same address is “not sufficient” and that there “must be affirmative steps taken to prevent the transitions,” appellant never identifies the particular claim language on which he relies for these “affirmative steps.” Where, for example, are these “affirmative steps” in claim 1 which distinguish over that disclosed by either of the references?

Appellant contends [brief-page 7] that neither Ward nor McClure contains “the structure need [sic, needed] to achieve the functions claimed. But, again, appellant fails to identify the claimed structure relied upon for patentability.

Since, in our view, the examiner has set forth a prima facie case of anticipation which has not been successfully rebutted by appellant, the examiner’s rejection of claims 1, 5-17 and 20-22 under 35 U.S.C. 102(b) as anticipated by either one of Ward or McClure is sustained.

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No time period for taking any subsequent action in connection with this appeal  
may be extended under 37 CFR 1.136 (a).

AFFIRMED

JAMES D. THOMAS )  
Administrative Patent Judge )  
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ERROL A. KRASS )  
Administrative Patent Judge )  
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PARSHOTAM S. LALL )  
Administrative Patent Judge )

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