

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT SHAPIRO and PAUL A. DARWIN

Appeal No. 1997-1984
Application 08/408,127

ON BRIEF¹

Before URYNOWICZ, THOMAS, and FRAHM, Administrative Patent Judges.

FRAHM, Administrative Patent Judge.

DECISION ON APPEAL

¹ The oral hearing set for May 3, 2000 was waived by appellants in a communication received on April 25, 2000.

Appellants have appealed to the Board from the examiner's final rejection of claims 1 and 3 to 6, which constitute all of the pending claims in the application before us. Claim 2 has been canceled.

BACKGROUND

The subject matter on appeal is directed to a computer system which can report system failures to a remote site after an attempt to reboot. An important feature of appellants' computer system and method on appeal is that local firmware resident in the computer attempts to reboot the system, and then, even if reboot fails, the firmware sends an error report to the remote facility.

Representative independent system claim 1 is reproduced below:

1. A computer system having a mechanism for reporting complete system failure to a remote site without requiring the system to be successfully rebooted, comprising:

a system CPU;

coupled to said CPU,

a non-volatile control store;

main memory;

a storage device storing a computer operating system; and

means resident in said non-volatile control store for reporting complete system failure to a remote site without requiring the system to be successfully rebooted by reloading said operating system into main memory, said means being invoked upon occurrence of a non-recoverable error and comprising:

means for assembling failure-related information;

means for establishing communication with said remote site; and

means for transmitting said failure-related information to said remote site.

Representative independent method claim 3 is reproduced below:

3. A method of reporting complete failure of a computer system to a remote site without requiring the system to be successfully rebooted, the computer system running a[n] [sic] computer operating system, the method comprising the steps of:

the computer operating system determining that a non-recoverable system error currently exists;

the operating system invoking a firmware mechanism within the computer system;

the firmware mechanism attempting to reboot said system; and

the firmware mechanism, if the system cannot be rebooted, sending to a remote location notification of system failure.

The following reference is relied on by the examiner:

Farrand et al. (Farrand)	5,257,384	Oct. 26, 1993 (filed Sept. 9, 1991)
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Claims 1 and 3 to 6 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Farrand alone.

Rather than repeat the positions of appellants and the examiner, reference is made to the Brief and the Answer for the respective details thereof.

OPINION

In reaching our conclusion on the issues raised in this appeal, we have carefully considered appellants' specification and claims, the applied patent, and the respective viewpoints of appellants and the examiner. As a consequence of our review, we are in general agreement with appellants (Brief, pages 4 to 9) that claims 3 to 6 on appeal would not have been obvious to one of ordinary skill in the art at the time the invention was made in light of the collective teachings of Farrand. However, we are in agreement with the examiner (final Office action, page 3) that the subject matter of claim 1 on appeal would have been obvious in light of Farrand, at least to the extent that claim 1 is broadly set forth. For the reasons which follow, we will reverse the decision of the examiner with respect to claims 3 to 6, and we will sustain the decision of the examiner with respect to claim 1.

We agree with appellants' argument (Brief, page 8) that in Farrand there is no relation between firmware and rebooting. We note that the examiner admits that in Farrand, "[n]ot explicitly disclosed is the step of the firmware mechanism attempting to reboot the system before reporting the error" (final Office action, page 3) (emphasis added). Our close review of the Farrand reference, especially column 9, lines 14 to 29, reveals that rebooting of the computer system 22 is done by the remote facility 34 as opposed to locally by the computer system as in appellants' claims 3 and 6. Further, in Farrand rebooting is done by remote console emulation or hard reboot simulation, but no hard reboot can be performed (see column 9, lines 26 to 28). We cannot agree with the examiner (Answer, page 3) that Farrand's disclosure of firmware as performing "alert determination functions" (column 9, lines 47 to

56) means that firmware performs a reboot. Instead, we find that Farrand simply uses firmware to control error reporting, which is a type of alert determination function. Because claims 3 to 6 on appeal all require that a firmware mechanism (claims 3 to 5) or an operating system (claim 6) resident in the computer

system attempt the reboot using a firmware routine, we cannot sustain the examiner's rejection of these claims under 35 U.S.C. § 103.

We also agree with appellants' argument (Brief, page 8) that in Farrand the reboot is performed in response to, or after, the error reporting. The examiner admits that in Farrand, "[n]ot explicitly disclosed is the step of the firmware mechanism attempting to reboot the system before reporting the error" (final Office action, page 3) (emphasis added). We are not persuaded by the examiner's assertion that to reboot the computer system before reporting errors to the remote site would have been obvious in order to resolve problems locally so that the remote would not need to be contacted unless local reboot failed (final Office action, page 3; Answer, page 4). The examiner has provided no reference teaching or suggestion for such a proposition. Accordingly, we find that the examiner has failed to show that the collective teachings and/or suggestions of Farrand would have taught or suggested attempting to reboot before reporting an error as claimed in claims 3 to 6 on appeal.

In fact, our careful review of Farrand reveals that after a complete loss of power occurs (a catastrophic failure), the event is reported to the remote facility (column 7, lines 34 to 41). After alert determination element 52 detects an error such as power failure, it then issues an alert (i.e., an error report). As stated by Farrand, "[i]n addition to alert determination and generation . . . , the information processing and alert determination element 52 also perform several other functions" (column 8, lines 65 to 68), such as post mortem diagnostics and/or rebooting (column 9, lines 3 to 20). Thus, we agree with appellants that in Farrand "[t]he attempted reboot is in response to the error report" (Brief, page 8). Claims 3 to 6 on appeal all require that the firmware mechanism (claims 3 to 5) or firmware routine (claim 6) perform error reporting "if the system cannot be rebooted" (claims 3 to 5) or "if rebooting cannot be successfully performed" (claim 6). Accordingly, since Farrand reboots after error detection/reporting and the invention recited in claims 3 to 6 attempts reboot before error reporting, we cannot sustain the examiner's rejection of these claims under 35 U.S.C. § 103.

With respect to claim 1 on appeal, we find that this claim does not require any rebooting to occur. Therefore, appellants' arguments discussed earlier, that rebooting be done by firmware and that rebooting occur before error reporting, are moot. The language in claim 1 of "without requiring the system to be successfully rebooted" does not require that any rebooting actually occur, whether the reboot be successful or otherwise. Claim 1 contains no positive requirement that rebooting be attempted or be successful. Accordingly, all that remains is system error detection and error reporting.

Appeal No. 1997-1984
Application 08/408,127

Strictly speaking, Farrand teaches error detection and reporting in a computer system with the use of a remote site as recited in claim 1 on appeal. Thus, we agree with the examiner (final Office action, page 3) that Farrand teaches a computer system where a remote manager is notified upon detection of an error. Accordingly, we must sustain the examiner's rejection of claim 1 as being obvious over Farrand under 35 U.S.C. § 103.

In light of the foregoing, the differences between the subject matter recited in claims 3 to 6 and the reference to Farrand are such that the claimed subject matter as a whole would not have been obvious within the meaning of 35 U.S.C. § 103. Accordingly, we shall not sustain the rejection of claims 3 to 6 on appeal. We reach the opposite conclusion with respect to claim 1, since we find that Farrand meets the broadly recited system limitations of claim 1 on appeal.

CONCLUSION

The decision of the examiner rejecting claims 3 to 6 under 35 U.S.C. § 103 is reversed.

The decision of the examiner rejecting claim 1 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED-IN-PART

Appeal No. 1997-1984
Application 08/408,127

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