

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN P. BUSCH
and GREGORY N. STEWART

Appeal No. 96-2444
Application 08/360,194¹

ON BRIEF

Before HAIRSTON, BARRETT, and FLEMING, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

¹ Application for patent filed December 20, 1994, entitled "Portable Computer With Tri-Model Power Management Switch," which is a continuation of Application 08/131,109, filed October 4, 1993, now abandoned, which is a continuation of Application 07/655,619, filed February 14, 1991, now abandoned.

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DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1-38.

We reverse.

BACKGROUND

The disclosed invention is directed to a portable computer having various modes of operation for power management, in particular, a normal mode, a standby mode, and a sleep mode. The computer has a single button or switch actuable by a user's digit and actuable by closing the case and cover. The modes are entered into depending on the existing mode and the duration the button is depressed.

Claim 30 is reproduced below.

30. A portable computer system, comprising:

a microprocessor CPU, coupled to one or more input devices and one or more output devices;

a case and a cover, mated so that said case and cover close together, said case and said cover enclosing said microprocessor and at least some of said one or more input and output devices; and

a button, positioned to be actuable by a user's digit and also positioned to be actuated when said case and said cover are mated together;

said system having at least two modes of operation, including:

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a normal mode in which said microprocessor is allowed to operate at a predetermined clock speed, and

an alternate mode in which at least one of said one or more input and output devices is not allowed to operate at full power

said system being electronically connected and configured

to enter said alternate mode from said normal mode when said button is pushed and held and to remain in said alternate mode for as long as said button is held in a depressed position,

to enter said alternate mode from said normal mode when said button is pushed and immediately released, and

to enter said normal mode from said alternate mode when said button is pushed and immediately released.

THE REFERENCES

The examiner relies on the following prior art reference:

Carter et al. (Carter) 4,980,836 December 25, 1990

Appellants state (Brief, pages 5-6): "The Examiner has relied on Carter as the sole reference, but has also combined various assertions of 'notorious knowledge' and has also combined various references to the background of the application, where the application background is referred to as admitted prior art." We see that this is so. Where the examiner relies on admitted prior art it should be expressly

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mentioned in the statement of the rejection to give an applicant notice of the factual basis of the rejection. Since appellants address the teachings of the admitted prior art, we will also address it.

Carter discloses in the Background of the Invention that it was known in the prior art of power management on portable computers to provide a switch which the user could press to place the computer in a standby mode (col. 1, lines 50-57). Although it is not stated, presumably the computer was returned to the normal mode using the same switch. Carter further discloses that it was known to blank the display and shut down peripherals such as the hard disk unit and some interface circuitry after a period of inactivity. Thus, Carter discloses that it was known to switch to a standby mode (as defined in appellants' claims) from a normal mode either by a manual switch or automatically after a period of inactivity.

Carter's invention is directed to a power management system that shuts down the system automatically (it is not dependent on an action by the user) after a given inactivity period, thus entering a standby mode (also called an inactive

mode or sleep mode) in which "power is removed from the hard disk unit, the floppy disk unit, the LCD, and miscellaneous circuitry, and the system clock provided to the microprocessor and other portions of the circuitry is stopped" (col. 2, lines 20-23). Carter's standby mode corresponds to appellants' sleep mode. The system comes out of the standby mode when the user depresses a switch 58 which starts the wake up operation. Thus, Carter discloses that it was known to switch to a sleep mode (as defined in appellants' claims) from a normal mode automatically after a period of inactivity and to switch to a normal mode from a sleep mode by a manual switch.

The relevant admitted prior art is found mostly in the section entitled "Commanding Entry into a Reduced-Power Mode" at pages 4-5 of the specification. It was known to use more than one reduced power mode, including a standby mode for operation at a first level of reduced power and a sleep mode for deeper inactivity. It was known in the prior art to use two buttons: a button actuable by a user's digit to switch the computer between a normal and a standby mode and a

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separate "case-closed" button to put the computer into a sleep mode.

THE REJECTION

Claim 1-38 stand rejected under 35 U.S.C. § 103 as being unpatentable over Carter. As noted supra, we also consider the admitted prior art in the rejection.

We refer to the Office action entered September 23, 1992, (Paper No. 4), the first Final Rejection entered April 7, 1993, (Paper No. 7), and the Examiner's Answer (Paper No. 25) (pages referred to as "EA__") for a statement of the examiner's position and to the Brief (Paper No. 24) (pages referred to as "Br__") for appellants' position.

OPINION

There are four main features in the claims: (1) a single switch on a portable computer that performs multiple functions (independent claims 1, 2, 4, 30, and 32 recite that the switch changes power management modes; independent claim 3 recites that the switch indicates a user power management command or a case closed condition); (2) the number of modes (independent claims 1, 2, 4, and 32 recite three modes; independent claim 3 recites no particular modes, but that momentary actuation is

interpreted as a user power management command and sustained actuation is interpreted as a case closed condition; independent claim 30 recites "at least two modes of operation"); (3) the single button is actuatable by a user's digit and is also positioned to be actuated by closing the case and cover (claims 1-31); and (4) switching between modes (independent claims 1, 2, 4, 30, and 32) or interpretation of switch operation as a user power management command or case closed condition (independent claim 3) depends upon the duration the button is depressed. Features (1), (3), and (4) are considered dispositive of the obviousness issue.

- (1) Single button that performs multiple functions
- (3) Single button actuatable by user's digit and case closure

The examiner concludes that it would have been obvious from Carter to switch from the normal mode to the sleep or standby mode, and vice versa, by pressing a button (Paper No. 4, page 3). We agree. Appellants do not contest this teaching of Carter (see appellants' description at Br6, lines 3-16). However, Carter teaches no more than the admitted prior art, which discloses a "Standby Button which, when pushed, puts the computer into a Standby Mode"

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(specification, page 4) and, presumably, returns the computer to a normal mode when pushed again.

The examiner found that "it was notoriously well known that some portable computers had a sensor which noticed when the case was closed to power down the computer, but not to remove the power from certain elements such as RAM memory" (Paper No. 4, page 3). Appellants disagree with this finding of "notoriously well known" prior art. However, as discussed in the section entitled "Appellants' arguments," infra, we find that appellants admitted in the specification that separate case-closed switches to put a portable computer in a sleep mode were known. The admitted prior art discloses two separate switches, one actuable by a user's digit to switch between a normal and standby mode and one actuable by closing the case to switch to a sleep mode.

The examiner recognized that one difference between the prior art and the claimed invention is the claimed use of a single button to place the laptop computer into one of many modes (Paper No. 4, page 4; EA4, EA7). The examiner concluded that "[i]t clearly would have been obvious to have implemented the true sleep mode as notoriously well known to those skilled

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in the art and to have further used the only button provided by the Carter reference" (Paper No. 4, page 4). This is a mere conclusion and, further, the button in Carter is only actuatable by the user. The examiner also states that "clearly it would have been obvious to those skilled in the art to use the switch [for switching back and forth between the normal and standby modes] in the same manner as one would use a refrigerator sensor [which is actuated by closing the refrigerator door]" (EA4), which indirectly addresses a switch actuatable by a user's digit and by closing the case. The examiner further states (EA8):

Though the art of record fails to detail a single switch that sensed not only the case cover's position and a user's finger, it would have been obvious to those skilled in the art to implement one switch by integrating the function of many into one.

No art has been applied to support the examiner's conclusion.

While it seems like a simple modification to combine the functions of two prior art switches, one which is actuated by a user's digit to switch between a normal and standby mode and one which is actuated by case closure to enter a sleep mode, into a single switch which is actuated both by a user's digit and by closure of the case, the single switch for multiple

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functions and single switch activated by the user's digit and by case closure are two main differences argued by the appellants. Simplicity does not equate to obviousness. The examiner has offered only conclusions and speculation about what would have been obvious to one of ordinary skill in the art. We believe the examiner must present factual evidence or more persuasive argument rather than mere conclusions to address differences at the contested point of novelty. The rejection is based on obviousness and, therefore, we do not expect an exact teaching of a single button in the portable computer art. The examiner could have offered examples (in patents, printed publications, or from everyday experience) of switches in other arts which do more than switch back and forth between two conditions and which are actuated manually and by closure of structure. The examiner's example of a refrigerator door switch is a switch which turns the light off and on, and is not as relevant a teaching as the "case-closed" switch in the admitted prior art. The examiner might also have shown examples of case-closed switches which were capable of being actuated manually. In our opinion, the examiner's mere conclusions that integrating several functions into one

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switch and providing a switch which is actuated by both a user's digit and closure of the case would have been obvious to one of ordinary skill in the art has failed to establish a prima facie case of obviousness. The single switch with multiple functions appears in all claims and the single switch actuatable by the user's digit and the case appears in claims 1-31. The rejection of claims 1-38 is reversed.

(4) Switching based on period of button depression

The examiner discusses how to integrate the functions of normal, standby, and sleep modes into a single switch in the Office action of Paper No. 4 (pages 3-4, para. 25). To the best of our understanding, the examiner seems to say that it would have been obvious to enter the sleep mode when the switch is held down because that is what happens with case-closed switches in the prior art, and to switch between normal and standby modes depending on whether the system was previously in the normal or standby mode. This discussion does not clearly address switching between three functions based on time. For example, although prior art case-closed switches remain held down for a long time, this is a mere incident of operation; presumably the switch triggers a sleep

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mode whenever the cover is closed and the system does not measure how long the case has been closed. The examiner provides no factual support for switching based on the time the button is depressed. It appears that the examiner is trying to make up a plausible explanation for doing what appellants have done without providing any factual evidence.

The next closest statement we find on the examiner's treatment of the difference about switching based on the time the switch is depressed is the following (Paper No. 7, page 3):

Moreover, different button actuations would have been inherently required such the [sic] system knew if the human was the one pushing the button or if the cover had been closed.

Appellants respond (Br11):

It is unclear what the Examiner means by "different button actuations" or how such actuations would be "inherently required." . . . The Examiner further does not even discuss how the system would distinguish the user pressing the button versus case closure pressing the button. It is clear that time-dependency for making such distinction is not disclosed, taught, or even suggested in Carter or the admitted prior art.

The examiner glosses over the difference about switching based on the time the switch is depressed. We agree with the examiner that IF it would have been obvious to use a single

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switch to perform the functions of the normal mode/standby mode switch and the case-closed switch, which has not been established, some way of distinguishing between the different modes would have to be provided. However, the examiner does not explain why one of ordinary skill in the art would have been led to use the particular time-dependency technique claimed. In our opinion, the examiner has failed to establish a prima facie case of obviousness with respect to switching between modes depending on the time period the switch is depressed, which limitations appears in various forms in all claims. The rejection of claims 1-38 is reversed for this additional reason.

Appellants' arguments

Although we reverse the examiner's rejection, we note our disagreement with appellants' arguments regarding the sleep function.

Appellants' argue (Br9-10):

Applicant has acknowledged a case closed detector which senses whether the case is closed for sounding an alarm to the user. However, in such circumstances, the user has a responsibility to respond to the alarm and to act in accordance with good computer practice by opening the computer, toggling the computer to a standby mode and closing the computer. Opening and closing the case with

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such a detector did not affect the mode of the computer.
[Emphasis added.]

The specification describes "a 'case-closed' microswitch, separate from the button used to control entry into standby mode" (specification, page 5). When the microswitch was tripped by closing the case, the screen's backlight was turned off, a beeper was sounded to alert the user of a "case-closed while ON" condition, and "[a] power saving mode was entered, slowing down the processor, and turning off all unnecessary features" (specification, page 5). Thus, the case-closed switch causes a mode change and does more than trigger an alarm. It appears that the "power saving mode" corresponds to the sleep mode, which is different from the standby mode activated by the standby button. The alarm is evidently to warn the user that the computer is still on and using power, albeit at a reduced rate, so that the user can shut off power to the machine and the alarm is not just to inform the user to enter the standby mode manually.

Appellants also argue (Br10):

On pages 2-3 in paragraph 23 of paper #7, the Examiner referenced notorious knowledge of sensing computer closure and referred to Applicant's remarks on page 16, last 3 lines, of Applicant's response filed February 1, 1993 as admission of such. However,

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Applicant's remarks in that response specifically referenced case close detectors for sensing the case closed and sounding an alarm. There was no discussion of placing the computer in a sleep mode when the case was closed. The Examiner simply concludes that placing the Carter system into a sleep mode when the case was closed would have been obvious to one skilled in the art for various reasons. The Examiner, however, did not come forth with references teaching this feature of switching power modes based on case closure. Applicant requested specific references clearly illustrating the computer placed in sleep mode upon closure of a portable computer, rather than merely reciting such as notorious knowledge.

We agree that the examiner should have, when challenged, provided a reference. Regardless of what was admitted in appellants' remarks in the response of February 1, 1993, the examiner could have pointed to appellants' own specification, which describes that when a prior art case-closed switch is tripped, "[a] power saving mode was entered, slowing down the processor, and turning off all unnecessary features" (specification, page 5), which indicates going into a sleep mode as defined by appellants. Appellants' arguments that the admitted prior art case-closed switch is only for sensing when the case closed and sounding an alarm are therefore not consistent with the specification.

CONCLUSION

The rejection of claims 1-38 is reversed.

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REVERSED

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Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
LEE E. BARRETT)	APPEALS
Administrative Patent Judge)	AND
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