

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOSEPH H. McCAIN, E. R. WEBB and WILLIAM R. LUEDERS

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Appeal No. 1996-4063  
Application 08/389,087<sup>1</sup>

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HEARD: NOVEMBER 2, 1999

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Before FLEMING, FRAHM, and BARRY Administrative Patent Judges.

FRAHM, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 55 to 88, which constitute all of the pending claims in the application before us. Claims 1 to 54 have been

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<sup>1</sup> Application for patent filed February 14, 1995. According to appellants, the application is a continuation of Application 08/090,354, filed July 12, 1993, now abandoned, which is a division of Application 07/939,565, filed September 2, 1992, now U.S. Patent No. 5,309,351, issued May 3, 1994, which is a continuation of Application 07/808,036, filed December 12, 1991, now abandoned, which is a continuation of Application 07/263,679, filed October 27, 1988, now abandoned.

canceled.<sup>2</sup>

### BACKGROUND

The subject matter on appeal is directed to a portable handheld unit for use in a communications, information, maintenance, diagnostic, and training system having a communications link or interface for data exchange (see specification, page 1). Appellants' portable handheld unit provides the advantage that a processor, boot ROM, input/output (I/O) ROM, RAM, I/O port and communications link, display and display touch scanner, and optical disk interface can all be integrated into a handheld computing unit (see claims 55, 69, and 84 on appeal). Appellants also recognized that the handheld unit could be provided with a communications link which uses infrared (IR) in order to communicate data (see pages 1 to 2 of the specification; and see claims 56, 61, 70, 75, and 84).

As stated by appellants at pages 2 to 4 of their specification, their handheld computing unit with an infrared communications interface allows for benefits not previously recognized in the prior art such as "providing detailed diagnostic, repair, and maintenance information in a processor-controlled, handheld device for use in any environment where operating equipment may be maintained by minimally trained personnel" (specification, page 2). By conveniently placing receiving/transmitting infrared satellite(s) within an area of operation, information concerning operating machinery, other processors, and/or other handheld units may be sent and received between satellite(s) and the handheld computing

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<sup>2</sup> We note that claims 1 to 20, 44 to 49, and 54 were canceled as per applicants' amendment of September 29, 1993; and claims 21 to 43 and 50 to 53 were canceled as per applicants' amendment of February 14, 1995.

unit (see specification, page 4). Thus, appellants' combination of infrared communication with a handheld computing unit provides a unique advantage in maintenance, diagnostic, and training systems.

Representative system claim 55 is reproduced below:

55. A self-contained portable handheld computing unit, comprising,  
a processor unit to process data for the self-contained portable handheld computing unit,  
a boot ROM having data to boot the self-contained portable handheld computing unit,  
an input/output ROM to input and output data for the self-contained portable handheld computing unit,  
at least one input/output port to input and output data,  
a communication interface to interface with the self-contained portable handheld computing unit,  
a RAM memory,  
a display to display data for said self-contained portable handheld computing unit,  
a display touch scanner to input data for said self-contained portable handheld computing unit  
and  
an optical disk interface to interface with stored data for the self-contained portable handheld computing unit.

The following references are relied on by the examiner:

Dunn	4,497,036	Jan. 29, 1985
Berstein et al. (Berstein)	4,608,486	Aug. 26, 1986
Mayer et al. (Mayer)	4,608,872	Sept. 2, 1986
Auer et al. (Auer)	4,725,694	Feb. 16, 1988
Abe et al. (Abe)	4,766,427	Aug. 23, 1988

Appeal No. 96-4063  
Application 08/389,087

Rabinowitz	4,774,493	Sept. 27, 1988
Mitchell et al. (Mitchell)	4,894,792	Jan. 16, 1990 (filed Sept. 30, 1988)

Robinson, The HP 150, BYTE, pages 36 to 50 (October 1983).

Claims 55, 57 to 59, 63, 68, 69, 71 to 73, 77, 83, and 85 to 88 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Robinson, Mitchell, and Rabinowitz.

Claims 56, 60 to 62, 66, 70, 74, to 76, 80, and 81 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Robinson, Mitchell, and Rabinowitz, further in view of Dunn and Auer.

Claims 64 and 78 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Robinson, Mitchell, and Rabinowitz, further in view of Berstein and Mayer.

Claims 65, 67, 79, 82, and 84 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Robinson, Mitchell, Rabinowitz, Dunn, and Auer, further in view of Abe.

Rather than repeat the positions of the appellants and the examiner, reference is made to the Briefs and the Answer for the respective details thereof.<sup>3</sup>

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<sup>3</sup> We note that the after final amendment of February 13, 1996, has been entered as per the Advisory Action of March 11, 1996; and the Reply Brief of September 3, 1996, has been entered and considered by the examiner as per the letter of September 16, 1996.

OPINION

In reaching our conclusion on the issues raised in this appeal, we have carefully considered appellants' specification and claims, the applied patents, the respective viewpoints of appellants and the examiner, and all other evidence of record. As a consequence of our review, we find that we are in general agreement with appellants (Brief, pages 6 and 10) that the handheld computing unit having an infrared interface (see claims 56, 61, 70, 75, and 84 on appeal) is neither taught nor would have been suggested by the applied references. However, we cannot agree with appellants (Brief, pages 6 to 9) that the collective teachings of Robinson, Mitchell, and Rabinowitz fail to teach or suggest a handheld computing unit having a basic communication link as so broadly set forth in appellants' independent claims 55 and 69 on appeal. For the reasons which follow, we will sustain the decisions of the examiner rejecting claims 55, 57 to 60, 62 to 69, 71 to 74, 76 to 83, and 85 to 88 on appeal; and we will reverse the decisions of the examiner rejecting claims 56, 61, 70, 75, and 84 on appeal.

Section 103 Rejection of Claims 55, 57 to 60, 62 to 69, 71 to 74, 76 to 83, and 85 to 88

At the outset, we note that claims are to be given their broadest reasonable interpretation during prosecution. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Yamamoto, 740 F.2d 1569, 1571, 222 USPQ 934, 936 (Fed. Cir. 1984); In re Heck, 699 F.2d 1331, 1332, 216 USPQ 1038, 1039 (Fed. Cir. 1983); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA

1969). It is improper to narrow the scope of the claim by implicitly reading in disclosed limitations from the specification which have no express basis in the claims. See In re Morris, supra; see also MPEP § 2111.

Independent claims 55 and 69 on appeal are broadly directed to a portable handheld computing unit (17 in Figure 1 of the specification) which has a processor (31), a boot ROM (32), an I/O ROM (34), at least one I/O port and a communication interface (40, 42, and/or 43), a RAM (33), a display (36) and display touch scanner (39), and an optical disk interface (40) (Figure 4).

We find that the broad language of independent claims 55 and 69 is met by the combination of applied references to Robinson, Mitchell, and Rabinowitz. We are in general agreement with the examiner (Answer, pages 4 to 6) that the collective teachings of Robinson, Mitchell, and Rabinowitz would have taught or suggested all of the salient features of appellants' portable handheld computing unit recited in independent claims 55 and 69, and their corresponding dependent claims.

We note that although appellants' arguments are presented in relation to a communications link being of the wireless or "infrared" type, as disclosed in detail in the specification, independent claims 55 and 69 and their corresponding dependent claims 57 to 60, 62 to 68, 71 to 74, 76 to 83, and 85 to 88 merely call for a "communication interface." See claim 55, line 6 and claim 69, line 6 on appeal. Robinson (pages 36, column 1, line 7) teaches a communication interface as does Mitchell (column 1, lines 5 to 52). We note that only claims 56, 61, 70, 75, and 84 on appeal specifically require that the

communication interface be "an infrared

communication interface" (claims 56, 70, and 84) having "infrared transmit and receive circuits" (claims 61 and 75).

We do not agree with appellants' principal argument (Brief, page 8; Reply Brief, page 4) that neither Rabinowitz nor the other applied references teach or suggest a handheld unit or reducing a computing unit to handheld size. Specifically, we find that Mitchell actually shows a portable handheld computing unit (Figure 1) in as much as this term is defined in appellants' claims and specification. Mitchell teaches a "portable computer" (column 1, line 7) and further recognized that "[o]ne of the primary considerations in constructing a portable computer is to make the portable computer light enough and small enough in overall size to be adequately and comfortably portable." Column 1, lines 11 to 14. Furthermore, we find that Rabinowitz suggests reducing the size of portable computing unit (such as a data processing system typically consisting of a CPU, RAM, ROM, and one or more I/O ports/devices) to that of a "handheld personal calculator" (column 1, lines 20 to 21; also see column 1, lines 15 to 22). Rabinowitz recognized that "[g]reat consumer interest has been generated in these system[s][sic] as their size has been reduced" (column 1, lines 19 to 20). In addition, Robinson suggests that the HP 150 family be expanded to include a "portable and transportable unit" (page 42, columns 1 and 2).

Our review of appellants' specification reveals no specific size, weight, or dimensions given for the computing unit, other than to say that it is "portable" and capable of being "handheld." Thus, in accordance with In re Morris and the other cases cited supra, we find that the collective teachings of Robinson, Mitchell, and Rabinowitz as discussed supra would have taught or suggested the recited "portable handheld computing unit" having a "communication interface" of independent claims 55 and 69, especially to the extent claimed.

In view of the foregoing, the decisions of the examiner rejecting claims 55, 57 to 60, 62 to 69, 71 to 74, 76 to 83, and 85 to 88 under 35 U.S.C. § 103 are sustained.

Section 103 Rejection of Claims 56, 61, 70, 75, and 84

Appellants argue that their "present invention provides advantages not [previously] achieved of coupling a factory environment with the host computer and a portable handheld unit" (Brief, page 5), and that an improvement is provided that "the user of the handheld unit is free to move about the factory environment without concerns of being near to a non-handheld unit so that communication with the host computer can be achieved" (Brief, pages 5 to 6). We agree, in as much as these features are claimed. Because the advantages of hands-free operation of the handheld unit are possible only with the disclosed infrared communications link, we will reverse only the decisions of the examiner rejecting claims 56, 61, 70, 75, and 84 which recite such an infrared communications link feature.

Claims 56, 61, 70, 75, and 84 on appeal specifically require that the communication interface

Appeal No. 96-4063  
Application 08/389,087

be "an infrared communication interface" (claims 56, 70, and 84) having "infrared transmit and receive circuits" (claims 61 and 75). Accordingly, we will reverse the examiner's decision rejecting dependent claims 56, 61, 70, and 75, as well as independent claim 84.

CONCLUSION

The decisions of the examiner rejecting claims 55, 57 to 60, 62 to 69, 71 to 74, 76 to 83, and 85 to 88 under 35 U.S.C. § 103 are affirmed.

The decisions of the examiner rejecting claim 56, 61, 70, 75, and 84 under 35 U.S.C. § 103 are reversed.

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

MICHAEL F. FLEMING )  
Administrative Patent Judge )  
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Appeal No. 96-4063  
Application 08/389,087

ERIC FRAHM  
Administrative Patent Judge

LANCE LEONARD BARRY  
Administrative Patent Judge

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Appeal No. 96-4063  
Application 08/389,087

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