

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. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte R. DOUGLAS MCPHETERS

Appeal No. 1998-0929
Application 08/469,770

HEARD: October 11, 2000

Before JERRY SMITH, FLEMING, and BLANKENSHIP, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 30-74, which constitute all the claims remaining in the application.

The disclosed invention pertains to a method and apparatus for allowing an operator to control an electronic device. More particularly, the invention generates a

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holographic image of a conventional physical control panel for the electronic device. The device is controlled by the operator actuating a section of the holographic image in the same manner as if the physical control panel had been actuated.

Representative claim 30 is reproduced as follows:

30. A control arrangement for allowing an operator to control an electronic device comprising:

an image generator for generating a holographic image of a physical control panel of the electronic device;

an actuation detector for determining a section of the holographic image which is selected by the operator; and

a signal generator for receiving the determination of said actuation detector and providing input signals to the electronic device which correspond to input signals from said physical control panel as a result of this determination.

The examiner relies on the following references:

Haugen 1986	4,593,967	June 10,
Sach et al. (Sach) 1990)	5,398,045	Mar. 14, 1995 (filed Aug. 24,
Ohkoshi et al. (Dainippon) 1991 (Japanese)	3-217925	Sep. 25,
Ward et al. (Ward) 1992	WO 92/09944	June 11,

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Benton, "White-Light Transmission/Reflection Holographic Imaging," Applications Of Holography And Optical Data Processing, Edited by Marom et al., 1977 by Pergamon Press, pages 401-409.

The admitted prior art described in appellant's specification.

The following rejections are before us on appeal:

1. Claims 30-34, 36, 38, 40-44, 46, 48, 50-52, 55, 57-60, 63 and 65-74 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Dainippon in view of Ward and the admitted prior art.

2. Claims 53 and 61 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Dainippon in view of Ward and the admitted prior art, and further in view of Benton.

3. Claims 35, 39, 45, 49, 54, 56, 62 and 64 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Dainippon in view of Ward and the admitted prior art, and further in view of Haugen.

4. Claims 37 and 47 stand rejected under 35 U.S.C. §

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103 as being unpatentable over the teachings of Dainippon in view of Ward and the admitted prior art, and further in view of Sach.

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 30-74. Accordingly, we affirm.

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In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of

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presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

We consider first the rejection designated as 1. above. The claims subject to this rejection stand or fall together as a single group except that claims 36, 46, 58 and

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66 stand as one separate group, claims 38 and 48 stand as a second separate group, claims 52 and 60 stand as a third separate group, and claims 70-74 stand as a fourth separate group [brief, pages 10-11]. We consider the rejection of claim 30 as the representative claim for the large single group.

With respect to independent claim 30, the examiner cites Dainippon as a teaching of replacing a touch control panel with a holographic image for inputting data into a device. Ward is cited to teach the conventionality of replacing a conventional electromechanical input device with a touch panel. The examiner concludes that it would have been obvious to replace the holographic image of Dainippon with a holographic image of a keyboard because Ward suggests replacing a keyboard with a touch panel and Dainippon teaches replacing a touch panel with a holographic image [answer, pages 4-5].

Appellant makes the following arguments: 1) appellant argues that there is no way of knowing what is disclosed or even contemplated in Dainippon without engaging in

impermissible speculation, conjecture and hindsight; 2) appellant argues that Dainippon has no teaching or suggestion of controlling electronic devices from a holographic input image; 3) appellant argues that Dainippon has no teaching as to how or why a conventional control could or should be replaced by a holographic display as claimed; and 4) appellant argues that the applied prior art fails to teach or suggest the actuation detector as claimed [brief, pages 16-25].

After a careful consideration of the record in this case, we agree with the conclusion reached by the examiner. Appellant's arguments are not convincing. Dainippon is clearly directed to the replacement of a touch panel input with a holographic image input [translation, pages 2 and 3]. Dainippon also clearly teaches that the position of a user's finger within the holographic image is judged, and that this information is inputted into a control device such as a computer [id., pages 4 and 5]. Thus, Dainippon clearly teaches the generation of some holographic image which is "touched" by an operator, and the location of the touch is sent to a computer as input data. The key question is whether

it would have been obvious to the artisan for this holographic image to have the appearance of a physical control panel. Although Dainippon does not specifically identify the appearance of the holographic image, it does state that the image replaces a conventional touch panel and that the image may have the appearance of a menu. We agree with the examiner that these teachings would have suggested to the artisan that the holographic image should have the appearance of a touch panel input (menu) for a control device. As taught by Ward, it was conventional for touch panel inputs to appear as physical control panels for some devices. We note that keyboards and touch panels were known as conventional input devices for use with computers. Since the holographic image of Dainippon generates input signals for a computer, we agree with the examiner that it would have been obvious for this image to take the form of a keyboard which was a known physical control panel for inputting data into a computer. Therefore, we sustain the rejection of claims 30-34, 40-44, 50, 51, 55, 57, 59, 63, 65 and 67-69 which have been grouped together for purposes of this appeal.

With respect to claims 36, 46, 58 and 66 which are grouped together, appellant argues that the rejection does not address the output interface of representative claim 36. The personal computer 10 of Dainippon, however, clearly has an output interface including a video display device as broadly recited in claim 36 [note Figure 4]. Thus, we sustain the rejection of claims 36, 46, 58 and 66.

With respect to claims 38 and 48, appellant argues that there is no mention of acoustic waves in the references. We agree with the examiner, however, that these claims are met by prior art teaching either acoustic waves or electromagnetic waves, and that the Dainippon actuation detector clearly uses electromagnetic waves (light) for this purpose.

With respect to claims 52 and 60, appellant argues that claim 52 recites not merely a transmission hologram but a combined innovative free-floating holographic control arrangement not shown in the applied references [brief, page 36]. Although there is nothing in claim 52 which limits the image to a free-floating image, we agree with the examiner that the holographic image of Dainippon is clearly a free-

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floating image as it exists at a certain distance from the hologram.

With respect to claims 70-74, appellant argues that the numerous applications of these claims are not disclosed by the prior art. As noted above, however, the holographic image input of Dainippon is sent to a personal computer for control of the personal computer. Since a personal computer is one of the devices recited in these claims, Dainippon clearly meets the invention as broadly recited in these claims.

In summary, we have sustained the examiner's rejection of claims 30-34, 36, 38, 40-44, 46, 48, 50-52, 55, 57-60, 63 and 65-74 based on the teachings of Dainippon, Ward and the admitted prior art.

With respect to the rejection of claims 53 and 61 using the additional teachings of Benton, and the rejection of claims 35, 39, 45, 49, 54, 56, 62 and 64 using the additional teachings of Haugen, appellant argues that neither Benton nor Haugen overcomes the deficiencies of the basic combination previously considered [brief, pages 44 and 45]. Since we have

determined above that there is no deficiency in the basic combination of references, we also sustain the rejection of these claims.

With respect to the rejection of claims 37 and 47 using the additional teachings of Sach, appellant argues that there is no teaching in Sach of generating a holographic image of another physical control panel of a different electronic device as claimed therein [brief, pages 45-47]. The examiner responds that appellant's arguments are not commensurate in scope with the claimed invention [answer, page 17].

Claim 37 recites that "said image generator may generate a holographic image of another physical control panel of a different electronic device." Claim 47 is similar. Sach teaches the use of a single man/machine interface for controlling a plurality of different subsystems. More specifically, Sach teaches that touching different points on a touch panel display can lead to different display panels which permit the operator to control different subsystems. The examiner's position is that it would have been obvious to the artisan to change the holographic display in Dainippon (which

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represents a touch panel) with a different holographic display to control a different device as suggested by Sach.

We agree with the examiner's conclusion. Claims 37 and 47 simply recite that the image generator may generate the image for a different device to be controlled. Sach clearly teaches that it was known in the use of touch panels to change the panel image to permit the control of different devices (subsystems). Since the holographic image of Dainippon is intended to replace a conventional touch panel, the artisan would have found it obvious to simulate all conventional type of inputs permitted by touch panels. Since Sach teaches that one conventional form of touch panel input is to display a different image based on a given input, we agree with the examiner that it would have been obvious for the artisan to have the holographic image of Dainippon do the

same thing. Thus, the generation of different images for the control of different devices is suggested by the collective teachings of the applied prior art.

In conclusion, we have sustained the examiner's prior

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art rejection of each of the claims on appeal. Therefore, the decision of the examiner rejecting claims 30-74 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

JERRY SMITH)	
Administrative Patent Judge)	
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