

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte RAYMOND M. CUNDIFF, SR.

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Appeal No. 2006-0455  
Application No. 10/217,378

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ON BRIEF

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Before THOMAS, LEVY, and SAADAT, Administrative Patent Judges.  
LEVY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-20, which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellant's invention relates to a system and apparatus for off-axis loading/unloading an optical disc in a disc drive

(specification, page 1).

Claim 1 is representative of the invention, and is reproduced as follows:

1. An optical drive comprising:

means for reading an optical disc; and

means for receiving an optical disc to be transported to said means for reading an optical disc, wherein said means for receiving is oriented off-axis at an angle  $\theta$  that is an acute angle from a vertical axis to maintain said optical disc within said means for receiving and wherein said means for reading is oriented off said vertical axis at said angle  $\theta$  during operation thereof.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Mitsui et al	5,930,218	Jul. 27, 1999
Iwata	JP63271754	Nov. 9, 1988

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitsui in view of Iwata.

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitsui.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed July 27, 2005) for the examiner's complete reasoning in support of the rejections, and to the brief (filed June 2, 2005) and reply brief

(filed September 27, 2005) for the appellant's arguments thereagainst.

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 § 41.37(c)(1)(vii)(eff. Sept. 13, 2004).

#### OPINION

In reaching our decision in this appeal, 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, 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.

Upon consideration of the record before us, we make the determinations which follow. We begin with the rejection of claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui. 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. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); 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 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. 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).

The examiner's position (answer, page 4) is that Mitsui does not expressly show an angle that lies between vertical and horizontal, but that it would have been inherent or obvious to have oriented the disk drive at an angle.

Appellant's position (brief, page 5) is that it is not inherent in Mitsui that the means for receiving the disc can be oriented at an angle between the vertical and horizontal axes because to be inherent, the teaching must necessarily flow from the reference, and that (brief, page 6) the teachings of Mitsui are that the receiving means are either completely horizontal or completely vertical. It is further argued (brief, page 8) that although the examiner identifies various applications of tilting objects, such as tilting a store-bought fruitcake in a grocery cart or tilting a last book in a row of books on a shelf, there is no motivation for orienting the disk tray of Mitsui at an acute angle off of the vertical angle.

The examiner responds (answer, page 7) that it is well known to high school science students, that by tilting the item, the center of gravity is spread over a larger base, minimizing the

possibility that the contents of a tipped box will spill out. The examiner (answer, page 8) additionally relies upon basic physics, everyday intuition and established scientific laws/principles underlying such intuition as the basis for a suggestion to modify Matsui to arrive at the claimed invention.

From our review of the record, we find, for the reasons which follow, that the examiner is essentially relying upon common knowledge or common sense as a basis for establishing the obviousness of claims 1-20 over Mitsui. Even if we agreed with the examiner that it would have been obvious, through common knowledge and common sense, to have tilted the device having the optical drive and operating the optical drive while tilted, we note that common knowledge and common sense are not the standard for establishing obviousness. In In re Lee, 277 F.3d 1338, 1341, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002) the Board held that "[t]he conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference." As stated by our reviewing court in deciding the case (In re Lee, 277 F.3d 1338, 1341, 61 USPQ2d 1430, 1432 (Fed. Cir. 2002)):

The foundation of the principle of judicial deference to the rulings of agency tribunals is that the tribunal has specialized knowledge and

expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise. Reasoned findings are critical to the performance of agency functions and judicial reliance on agency competence. See *Baltimore and Ohio R. R. Co. v. Aberdeen & Rockfish R. R. Co.*, 393 U.S. 87, 91-92 (1968) (absent reasoned findings based on substantial evidence effective review would become lost "in the haze of so-called expertise"). The "common knowledge and common sense" on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. This court explained in *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697, that "deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is "basic knowledge" or "common sense." The Board's findings must extend to all material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability. "Common knowledge and common sense," even if assumed to derive from the agency's expertise, do not substitute for authority when the law requires authority. . . . Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review.

As common knowledge and common sense are not the standard for establishing non-obviousness, we cannot sustain the rejection of claims 1-20. The rejection of claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui is reversed.

We turn next to the rejection of claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui in view of Iwata. The examiner's position (answer, pages 3-5) is that Mitsui does not expressly disclose that the drive is oriented at an angle. To overcome this deficiency of Mitsui, the examiner turns to Iwata for a teaching of orienting the disc receiving receptacle at an angle between the vertical and horizontal orientations of the drive.

Appellant's position (brief, page 17) that "it is not apparent how providing such a rotatable disk tray would improve the operability of the optical disk drive of *Mitsui*, as the operation of floppy drives and optical disk drives are different." It is argued that the proposed modification is in direct conflict with Mitsui's desire to orient the drive in an upright position in order to reduce the size of the computer unit, and (brief, page 18) that an artisan would not be motivated to make the modification.

From our review of Mitsui, we find disclosed that for the purpose of reducing the size of the computer unit, some CD-ROM drives are built into the unit in an upright position. It is further disclosed that in a conventional CD-ROM drive, if the CD is put in a upright position, it slips out of the disc tray (col.

1, lines 26-31). However, Mitsui is silent as to orienting the drive unit at an angle other than vertical or horizontal.

From the disclosure of Iwata, we find that the reference discloses (page 2) that:

Problems to be solved by the invention. In a personal computer system, computer main body 3 is usually arranged horizontally under display device 1 as shown in Figure 4(A) or arranged vertically beside display device 1 as shown in Figure 4(B). Therefore, FDD 4 is used either horizontally or vertically concerning direction of disc inserting port 4a on its operating surface. Since a computer main body 3 is not set or used obliquely, the use angle of FDD 4 is limited to a horizontal or vertical angle. However, there are various requirements for the angle of FDD 4 depending on the preference of the user or the situation of the application site. The aforementioned limitation can cause problems in using FDD 4.

We find from this disclosure that it was known to orient the disc drive in a horizontal or vertical fashion. Iwata further recognizes that a computer is not set or used obliquely, and that the use angle of the disc drive is limited to a vertical or horizontal angle. In addition, Iwata recognizes that there are various requirements for the angle of the disc drive "depending on the preference of the user," and that limiting the angle of the disc drive to vertical or horizontal orientations can cause problems in using the disc drive. Iwata's solution, as shown in

figures 1 and 2, is to allow for the disc drive to be oriented at various angles between vertical and horizontal orientations.

From the disclosure of Iwata, we find that an artisan would have been motivated to allow the disc drive of figures 10 or 11 of *Mitsui* to be oriented at different angles from the vertical axis, as recited in claim 1.

We are not persuaded by appellant's assertion (brief, page 17) that "it is not apparent how providing such a rotatable disk tray would improve the operability of the optical disk drive of *Mitsui*, as the operation of floppy drives and optical disk drives are different." Whether the disc drive is an optical drive or a floppy drive, an artisan would have been taught by Iwata that a disc drive can be oriented at different angles from the vertical axis.

Nor are we persuaded by appellant's assertion (brief, page 18 and reply brief, pages 4 and 5) that the modification would not have been obvious because it would be in direct conflict with *Mitsui*'s express desire to reduce the size of the overall computer. In Iwata, the adjustable disc drive is configured such that the amount of space required in the computer for the disc drive does not change when the disc drive is oriented between the vertical or horizontal positions, or in the gradients between the

vertical and horizontal positions. In addition, we note that Mitsui discloses (col. 1, lines 31 and 32) that the compact disc will slip out of place if placed in a vertical position, but does not indicate that slippage will occur in any position other than vertical. Accordingly, upon modifying Mitsui as taught by Iwata, the tray tabs will only be needed when the disc is in the vertical position. However, even if the tabs were present when the disc was in a position other than the vertical position, the disc would be kept in place by the offset angle of the drive and the tabs would be surplusage. Nothing in the language of the claim precludes the use of tabs, as long as the disc was kept in place by the off-axis angle of the drive.

From all of the above, we find that the combined teachings of Mitsui and Iwata would have suggested to an artisan the limitations of claim 1, and are not convinced of any errors on the part of the examiner. The rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui in view of Iwata is affirmed. As claims 2-4, 8-14 and 16-18 have not been specifically argued with respect to this ground of rejection, these claims fall with claim 1. Accordingly, the rejection of claims 2-4, 8-14 and 16-18 under 35 U.S.C. § 103(a) is affirmed.

We turn next to claim 5. Appellant's position (brief, page 15) is that Iwata does not teach or suggest a receptacle that transports a disk to a means for reading the disc. We are not persuaded by appellant's argument because Mitsui discloses the loading tray, and because the combined teachings of Mitsui and Iwata, as we found, supra, would have taught orienting the disc drive mechanism of Mitsui, including the loading tray, at an angle from the vertical. Accordingly, the rejection of claim 5 under 35 U.S.C. § 103(a) is affirmed.

We turn next to claim 6. Appellant's position (brief, page 16) is to rely upon the dependency of claim 6 from claim 1, and asserts that Iwata does not have a receptacle for transporting the disc. We are not persuaded by appellant's argument because the receptacle, having a cavity for receiving the disc and transporting the disc to the reading means, is taught by Mitsui, see, e.g., figure 12. Accordingly, the rejection of claim 6 under 35 U.S.C. § 103(a) is affirmed.

We turn next to claim 7. Appellant's position (brief, page 16) is that Iwata does not disclose a receptacle that has a cavity with a base having a vertex at a lower portion of the cavity. From our review of the prior art, we find that neither

reference teaches or suggests this feature. From the lack of any response by the examiner to this argument of appellant, we find that the examiner has failed to establish a prima facie case of obviousness of claim 7, The rejection of claim 7 under 35 U.S.C. § 103(a) is reversed.

We turn next to claim 15. We cannot sustain the rejection of claim 15 for the same reasons as we reversed the rejection of claim 7. The rejection of claim 15 under 35 U.S.C. § 103(a) is reversed.

We turn next to claim 19. Appellant's position (brief, pages 14 and 15, and reply brief, pages 3 and 4) is that the prior art does not teach that the angle  $\theta$  maintains the optical disc in the cavity, and that maintaining the disc in the slot is not an issue for Iwata as it is for maintaining the optical disc in the tray of Mitsui. We are not persuaded by appellant's assertion because Mitsui discloses the receiving tray having a cavity for receiving the disc. As we stated, supra, upon modifying the disc drive of Mitsui to be at an angle as taught by Iwata, the entire disc drive of Mitsui, including the loading tray, will be at the angle  $\theta$ . Accordingly, the rejection of claim 19 under 35 U.S.C. § 103(a) is affirmed.

We turn next to claim 20. Appellant argues (brief, page 15) that claim 20 is allowable based upon its dependency from claim 19, and because of its novel claim features. From our review of claim 20, we find that the claim recites that the angle  $\theta$  has a value selected from approximately 5 degrees to approximately 15 degrees from the vertical axis. From the disclosure of Iwata of providing several angles between the vertical and horizontal positions, we find that the specific range set forth, in the absence of any unexpected result, would have been within the level of ordinary skill of an artisan. Accordingly, the rejection of claim 20 under 35 U.S.C. § 103(a) is affirmed.

#### CONCLUSION

To summarize, the decision of the examiner to reject claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui is reversed. The decision of the examiner to reject claims 1-6, 8-14 and 16-20 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui in view of Iwata is affirmed. The decision of the examiner to reject claims 7 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Mitsui in view of Iwata is reversed.

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

AFIRMED-IN-PART

JAMES D. THOMAS	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
STUART S. LEVY	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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