



USFC2011-1120-04

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{118696}{30-110425:145427}{041411}

REPLY BRIEF

2011-1120

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

SEIKO EPSON CORPORATION,

Plaintiff/Counterclaim Defendant-Appellant,

and

EPSON RESEARCH AND DEVELOPMENT, INC.

and EPSON AMERICA, INC.,

Counterclaim Defendants,

v.

CORETRONIC CORPORATION,

Defendant/Counterclaimant-Appellee,

and

OPTOMA TECHNOLOGY, INC.,

Defendant-Appellee.

Appeal from the United States District Court for the
Northern District of California in 06-CV-6946,
Judge Marilyn Hall Patel.

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

APR 14 2011

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REPLY BRIEF OF SEIKO EPSON CORPORATION

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April 14, 2011

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INTRODUCTION

Under the guise of relying on "common sense," the district court applied a narrow analysis focusing only on one element of the invention—cooling of the power unit—while ignoring the effects of the postulated prior art combination on the invention as a whole: the projector. Such a narrow focus is contrary to 35 U.S.C. § 103 and just as artificially constrained as the rigid application of the teaching-suggestion-motivation test criticized in *KSR*. It would not have been common sense to have ignored the potential effects of a combination of Nakamura and Gourdine on the operability of Nakamura's projector. Rather, common sense would have dictated consideration of the effects on projector operability. Where, as here, both experts testified that those effects were unpredictable—and where there were a number of genuine issues of material fact as to the scope and content of the prior art and the differences between the prior art and the invention—summary judgment of obviousness was improper.

ARGUMENT

I. The District Court Wrongly Granted Summary Judgment of Obviousness Despite the Agreed-Upon Unpredictability of the Asserted Prior Art Combination and the Existence of Genuine Issues of Material Fact

A. Both Experts Agreed That It Was Unpredictable Whether Nakamura's Projector, If Modified By Insertion Of A Gourdine-like Conduit, Would Have Been Operable, Which Precludes Summary Judgment Of Obviousness

As Coretronic admits, a prior art combination must result in a working apparatus. Red Brief at 19. This Court made that clear most recently in a case cited by Coretronic, *George M. Martin Co. v. Alliance Mach. Sys. Int'l LLC*, 618 F.3d 1294, 1303 (Fed. Cir. 2010):

To be clear, prior art must teach a person of ordinary skill to make an apparatus that works for its intended purpose. *Beckman Instruments*, 892 F.2d at 1551. If the [prior art] machine did not do so on its own, [the accused infringer] would have needed to establish that a person of ordinary skill would have nonetheless been able to make a working apparatus.

The 158 patent claims are not directed to a power unit in isolation, but to a projector containing, among other things, an optical unit capable of forming an optical image by use of light beams emitted from a light source lamp. A117. Diverting cooling air from Nakamura's lamp could have resulted in a lamp that overheated and either burned out or damaged other heat sensitive components, resulting in an inoperable projector. That potential inoperability, and the consequent absence of predictable success, makes the present case factually

different from *George M. Martin Co.*, where the Court held the patent anticipated in light of evidence proving that the prior art bundle breaker was operable. 618 F.3d at 1303. Coretronic made no such showing of operability here.

Both experts agreed on the key issue of whether modifying Nakamura as suggested by the district court would have produced a predictably operable projector. Both experts testified that the consequences of modifying Nakamura's projector to provide the district court's "dedicated cooling path" for the power supply would not have been predictable. Thus, there is no evidence that one of ordinary skill in the art would have had a reasonable expectation of success in making such a combination.

SEC's expert, Mr. Keller, testified that the consequences of modifying Nakamura to accommodate a conduit adapted from Gourdine would have been "unpredictable," particularly because such modifications certainly would have resulted in a drastic reduction of the cooling of the lamp. A1441-42 (¶¶ 63.1 & .4). Coretronic does not rebut that testimony. Instead, Coretronic attacks Mr. Keller for omitting from his second declaration a paragraph from his first declaration about the relationship between projectors and computers, even though Mr. Keller testified that he continued to believe that paragraph was accurate. Red Brief at 9-10. Coretronic's attack elevates form over substance, as that paragraph is fully consistent with Mr. Keller's testimony—and SEC's arguments. SEC is not arguing

that one considering a problem in projector design would not have looked to the computer art in search of *relevant* teachings. *See* Blue Brief at 20 n.3. However, the methods of dissipating heat must be, as Mr. Keller said in the allegedly omitted paragraph, "tailored to the particular product." A898.

The particular computer cabinet disclosed in Gourdine is very open, with plenty of room for air to circulate among the non-isolated components. *See* A1284 (Gourdine, Fig. 3). Nakamura, on the other hand, is a projector, expressly disclosed to have limited space available for the internal components and containing—as its hottest component—a projector lamp that must be adequately cooled. A1276, A1279 (Nakamura, ¶¶ 5 & 14); A1411 (Biber 22:6-7); A1440-41 (Keller ¶ 62). Mr. Keller's testimony that adding a Gourdine-like conduit to Nakamura would have drastically reduced the cooling of the lamp, with unpredictable consequences, is fully consistent with his original comments about the importance of tailoring the cooling system to the particular product.

Consistent with Mr. Keller's testimony, Coretronic's expert, Dr. Biber, testified that modifying Nakamura in view of Gourdine would have had unpredictable effects on the amount of air available to cool the projector lamp, due to the "mysterious" characteristics of airflows. A1414; Blue Brief at 29-30. Coretronic mischaracterizes SEC's argument as being limited to Dr. Biber's inability to predict "the volume of airflow in the proposed combination." Red

Brief at 17. The significance of Dr. Biber's testimony is that modifying Nakamura as proposed by Coretronic (and the district court) would have been a fundamental change in the cooling system of Nakamura's projector, with unpredictable effects on the cooling of the lamp. Adequate cooling of the lamp is a requirement for an operable projector.

Coretronic says that Dr. Biber testified that "less airflow might still be sufficient to cool the lamp," presumably referring to her statement: "It's possible that it could be. I don't know for sure." Red Brief at 29 (emphasis added); A1414. Coretronic misses the point: if Dr. Biber does not know whether the lamp would be adequately cooled after application of the modifications Coretronic proposes (and the district court adopted), then that means the effects were unpredictable even to one of Dr. Biber's extraordinary skill in the art (Dr. Biber is a self-described expert in thermal design, specializing in system cooling issues, and of more than ordinary skill in the art of projector design, with a Ph. D. in mechanical engineering from MIT, A1408 (11:4-6), A1227). *A fortiori*, one of ordinary skill would clearly not have had a reasonable expectation of success.¹

¹ The district court held that one of ordinary skill in the art was: "one with a Bachelor's degree in physics, engineering, optics or other related field who also is familiar with the design of projectors." A122.

Because patents are presumed valid, "a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of facts underlying invalidity that no reasonable jury could find otherwise." *Trimed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1340 (Fed. Cir. 2010) (quoting *SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351, 1357 (Fed. Cir. 2006)). The combinability of references is an issue of fact, generally evaluated as part of the first *Graham* factor, the scope and content of the prior art. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238-39 (Fed. Cir. 2010); *Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1370 (Fed. Cir. 2006). In particular, whether the result of a combination is predictable is an issue of fact. *Trimed*, 608 F.3d at 1341 (citing *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) ("explaining that whether there is 'a reasonable expectation of success in making the invention via' a combination of prior art elements is a question of fact")).

As addressed above, the experts were in agreement that the effects of modifying Nakamura's airflows by adding a conduit for the power supply were unpredictable, which would have supported summary judgment *in SEC's favor* that a combination of Nakamura and Gourdine would *not* have rendered the asserted 158 patent claims obvious. Nor can a common sense argument overturn a factual predicate as to which experts for both sides agree, especially not on summary judgment. *See, e.g., Trimed*, 608 F.3d at 1341-43 (conclusory common sense

arguments do not permit summary judgment if even one expert testifies to contrary genuine issues of material fact). Moreover, even if Dr. Biber's agreement on such issue is ignored, there are at least genuine issues of material fact based on Mr. Keller's declaration. Unlike the expert declaration in *KSR*, Mr. Keller's assertions were not conclusory, but very specific and detailed, as in *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1373-74 (Fed. Cir. 2010) (affirming nonobviousness). *See* Blue Brief at 24-26; A1430-43 (Keller, ¶¶ 26-64). When the expert testimony puts in question the combinability of references, such a factual issue cannot be resolved on summary judgment. *See, e.g., Trimed*, 608 F.3d at 1342; *Commonwealth Sci. & Indus. Res. Org. v. Buffalo Tech. (USA), Inc.*, 542 F.3d 1363, 1375-76 (Fed. Cir. 2008).

B. Prior Art Deficiencies Cannot Be Overcome Merely By Crediting One of Ordinary Skill In the Art With the Alleged Ability to "Make Whatever Adaptations Were Necessary"

Faced with the candid testimony of its own expert as to the unpredictable effects of diverting air away from Nakamura's projector lamp, Coretronic implies that the issue of predictability need never be confronted because the hypothetical person of ordinary skill in the art is to be credited "with the ability to combine teachings from separate references and make whatever adaptations were necessary to make the combination work for the purposes intended." Red Brief at 10. Coretronic apparently extrapolates that proposition from the district court's reliance

on a statement in *KSR* that "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 23-24 & 29; A12; *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). The Supreme Court in *KSR* did not suggest, however, that all prior art patents are necessarily combinable to render later inventions obvious. To the contrary, the Supreme Court cautioned that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." 550 U.S. at 418.

Nor did the Supreme Court suggest that the puzzle-piece paradigm is applicable regardless of the difficulty or predictability of combining prior art. Rather than grappling with the evidence of record establishing that combining Nakamura and Gourdine would not have been straightforward, easy or predictable, Coretronic says that the district court "properly assumed the skilled artisan would take [the practical factors] into account and make whatever adjustments were needed." Red Brief at 10. Neither Coretronic nor the district court explain how assuming that the combination would have worked for its intended purpose can be reconciled with the requirement to draw all inferences in favor of the non-movant (SEC). To the contrary, both the Supreme Court and this Court require a "predictable" improvement rather than unsupported assumptions about the effects of modifications. *See KSR*, 550 U.S. at 416-17 & 421; *DePuy Spine, Inc. v.*

Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1326 (Fed. Cir. 2009). Merely assuming, like *Candide*, that all will turn out for the best is not clear and convincing proof of obviousness.

Whether something is predictable is a factual determination, as discussed above. Here, Coretronic relies solely on the declaration statement of Dr. Biber that "one of ordinary skill would be reasonably certain that retrofitting the projector of Nakamura with a second cooling air intake port located on the outer case that directly conducts cooling air from outside of the outer case would result in better cooling for the power supply." Red Brief at 16; A1233 (¶ 32). There are at least two significant flaws in this evidence.

First, Dr. Biber addresses only whether changing Nakamura would improve cooling of the *power supply*. That is too narrow a context. The claims are not drawn to a power supply, but to a projector, and Dr. Biber fails to address the broader context of a projector. Indeed, when asked about that context at her deposition, she testified that the effects on the projector of changing Nakamura's cooling system were unpredictable.

Second, Dr. Biber's declaration is conclusory. She does not even say whether her "second cooling air intake port" would be one in substitution for one of the two cooling air intake ports already in Nakamura (neither of which directly conduct cooling air to the power supply) and, if so, which one, or whether she

would introduce a third cooling air intake port and, if so, where. The only reason she gives for her "reasonable certainty" is that Gourdine includes test results that show better cooling of a 4.5 watt microprocessor chip in its computer cabinet context. A1233 (¶ 32). Dr. Biber does not address the substantially greater wattage associated with projector power supplies, *see* Blue Brief at 31, nor the projector context of Nakamura.

As has repeatedly been held, such conclusory expert declarations are entitled to no weight. *See, e.g., KSR*, 550 U.S. at 426; *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373-74 (Fed. Cir. 2008). Accordingly, Coretronic's motion for summary judgment of obviousness was fatally unsupported even without consideration of Mr. Keller's contrary, and much more detailed, testimony or of Dr. Biber's admissions during her deposition.

C. In the Circumstances of this Case, A Generalized Teaching Is Insufficient To Demonstrate Obviousness

A fundamental premise of both the district court's conclusion and Coretronic's argument is that projectors are simple mechanical devices. However, the 158 patent invention relates to providing adequate airflow to the key internal components of a projector. That is not a simple mechanical issue, as Coretronic's expert, Dr. Biber, made clear when she testified that airflow, a "hydrodynamic thing," is "mysterious" and cannot necessarily be predicted. Blue Brief at 29-30; A1414. What effects would result from insertion of Gourdine's conduit into

Nakamura's projector thus would not have been "easy, obvious, routine, or within the grasp of a common sense application of the prior art to the apparent problem." *Source Search Technologies, LLC v. LendingTree, LLC*, 588 F.3d 1063, 1073 (Fed. Cir. 2009).²

This case is not like the truck trailer cover systems of *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356 (Fed. Cir. 2008), the candle holder cover used as a base in *Ball Aerosol and Specialty Container, Inc. v. Limited Brands, Inc.*, 555 F.3d 984 (Fed. Cir. 2009), the try, try again method of generating additional email addresses in *Perfect Web Technologies, Inc. v. InfoUSA, Inc.*, 587 F.3d 1324 (Fed. Cir. 2009), the hitch pin locks of *Wyers v. Master Lock Co.*, 616 F.3d 1231 (Fed. Cir. 2010), or the utility lighter safety devices of *Tokai Corp. v. Easton Enterprises, Inc.*, 632 F.3d 1358 (Fed. Cir. 2011). All of those cases involved simple, predictable mechanisms or business methods. None involved "mysterious" technology or combinations that had complex and potentially negative interactions between components.

² Nor can the lack of specific dimensions in Nakamura's drawings, as is customary in patent drawings, be taken as evidence that one of ordinary skill in the art would have been able to modify Nakamura's airflows and still make all of Nakamura's components work. *See* Red Brief at 18. Altering the disclosed structure, such as inserting a plenum to assist in drawing air through a conduit, would have been a change in kind, not degree, with unpredictable effects. *See* Blue Brief at 24-26.

Coretronic has entirely ignored *Source Search*, on which SEC relied in its Blue Brief (pp. 20-21). Airflow in projectors is less predictable than the art at issue in *Source Search*, which involved an e-commerce system that matched buyers with sellers through a filtering process that limited the number of quotes a buyer would receive. This Court held in *Source Search* that a genuine issue of material fact was presented as to whether one of ordinary skill in the art would have found the claim obvious viewed as a whole, notwithstanding a high level teaching of the advantages of information filtering in a computer context, because such teaching did "not apply those general filtering methods to the '328 patent's context of matching buyers with vendors." 588 F.3d at 1071-73. In the same way, applying a generic conduit from Gourdine to divide the airflow passing through Nakamura's light source chamber 3, with resulting diminished airflow to the lamp, would have made the operability of the resulting projector unpredictable, would have been more than a mere substitution of elements, and would have changed the cooling functions of Nakamura's elements. Therefore there was at least a genuine issue of material fact as to the existence of a reasonable expectation of success, which issue cannot be resolved by summary judgment.

D. District Court Findings Regarding Genuine Issues of Material Fact Are Not Reviewable By The Clearly Erroneous Standard

Coretronic repeatedly asserts that the issue before this Court is whether the district court's determinations were "clearly erroneous." See Red Brief at 3-4, 11,

13, 31. The clearly erroneous standard applies to review of findings of fact made at trials and other evidentiary hearings. *See* Fed. R. Civ. P. 52(a)(6). In contrast to summary judgment, where review is *de novo*, review for clear error presupposes that the trial court judge has determined the facts by evaluating the credibility of witnesses at trial and weighing the evidence. *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 855 (1982); *Concrete Pipe and Prods. v. Construction Laborers Pension Trust*, 508 U.S. 602, 620-23 (1993).³ If a court needs to make findings of fact, it cannot grant summary judgment. Facts are to be resolved at trial. Blue Brief at 15-16. Summary judgment may only be granted where there are no genuine issues of material fact in dispute, viewing the record in the light most favorable to the non-movant. *See, e.g., Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, Appeal No. 2010-1020, slip op. at 19-20 (Fed. Cir. Apr. 1, 2011) (expert dispute as to inherent characteristics of prior art precluded summary judgment).

³ Coretronic cites *Media Techs. Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1334, 1337 (Fed. Cir. 2010), and *Tokai Corp.*, which cited *Media Techs.* However, neither case involved material factual disputes and *Media Techs.* referred to the clearly erroneous standard only by citation to *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1355 (Fed. Cir. 2007), an appeal from a bench trial. Mistaken reference to the clearly erroneous standard as relevant to summary judgment does not alter the standards for summary judgment. *Twentieth Century-Fox Film Corp. v. MCA, Inc.*, 715 F.2d 1327, 1328-29 n.2 (9th Cir. 1983).

It is incumbent on a proponent of summary judgment invalidity of an issued patent to come forward with clear and convincing evidence of obviousness that is not in genuine dispute. Coretronic failed to do so in this case. Aside from the record evidence of unpredictability discussed above, all of which favors SEC, it was also undisputed that Nakamura lacked direct exhaust of air from a power unit to the outside of the projector (admitted by the district court to be a genuine issue of material fact, A13 (11:10-12), A27). There are also disputed issues of material fact as to the scope and content of the prior art, including whether Nakamura discloses (1) airflow "through" a power unit, and (2) an air inlet and air outlet of a power unit. *See* Blue Brief at 36-42; *compare* Keller Dec., ¶¶ 28-58 (A1431-39) *with* Biber Dec., ¶¶ 13-25 (A1228-31). Gourdine does not address those issues, as it does not disclose a power unit at all, but instead a hollow housing into which the district court and Coretronic propose to put Nakamura's power supply.

There is thus no basis on this record for summary judgment of obviousness.

II. The District Court's Obviousness Analysis Is Incorrect In Additional Ways

A. Focusing Only on Better Cooling of the Power Unit Does Not Address The Invention As A Whole

The district court and Coretronic focus exclusively on a problem solved by the claimed invention—better power unit cooling by means of the second cooling air intake port that this Court held was absent from Nakamura. Thus, Coretronic

claims that "the correct inquiry is whether a projector designer . . . would have seen a benefit 'to installing a dedicated air path to cool the power supply.'" Red Brief at 4 (quoting Op. at A12); *see also id.* at 16, 22. However, the issue on obviousness is whether "the *subject matter as a whole* would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103 (emphasis added); *Source Search*, 588 F.3d at 1071. This is not an academic distinction. One of ordinary skill in the art may not ignore practical difficulties that compromise the invention as a whole, i.e., the projector. There was no "common sense" in focusing exclusively on better cooling of Nakamura's power supply and adopting a generalized component cooling solution without regard for the negative impacts of the solution on the cooling of other critical projector components, particularly the lamp. Additionally, focusing only on the obviousness of ways to cool a component also distorts the obviousness analysis by ignoring the inherent complexity and unpredictability of modifying any hydrodynamic system.

The district court's result-oriented focus upon the specific limitation addressed by the Federal Circuit, as well as the district court's erroneous reliance (at Coretronic's urging, A1540-42) upon the law of the case doctrine, caused the district court to ignore the other elements missing from Nakamura and to discount the problems that Gourdine's conduit would have introduced to Nakamura's airflow system. Indeed, the district court's opinion reveals that it did not fully understand

either SEC's evidence or the nature of projectors. Thus, when describing the effects of introducing a secondary cooling path, the district court characterized SEC's argument as being that this "would result in the loss of some cooling air for the fan." A10 (8:13-14). The testimony of Mr. Keller, of course, was instead that there would be a loss of cooling air for the lamp, not the fan. A1441 (Keller ¶ 63.1). Similarly, the district court described the liquid crystal display [*sic*, liquid crystal display panels] as "the greatest heat producer in the projector," A10 (8:22), even though both experts agreed that the lamp was the greatest heat producer in the projector. A1411 (Biber 22:6-7); A1440-41 (Keller ¶ 62). Both these errors are significant, because they show that the district court granted summary judgment of obviousness of projector claims without an adequate overall understanding of projector technology or SEC's projector claims.

By ignoring the effects on non-power supply components of a fundamental alteration of Nakamura's cooling system, the district court ignored the required perspective of one of ordinary skill in the art. *See* Blue Brief at 17-22.

B. The Purposes of the Inventors in the Prior Art References Would Have Been Relevant To One of Ordinary Skill in the Art

Contrary to Coretronic's contentions, the purpose served by a prior art reference is relevant to whether and how one of ordinary skill in the art would have combined it with other references or otherwise modified it. A prior art reference is

relevant for all it teaches to one of ordinary skill in the art. *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551 (Fed. Cir. 1989).

In its Blue Brief (p. 27), SEC cited *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992), and *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984), for the relevance of the purpose of prior art references. *Fritch*, for example, involved a claimed landscape edging strip, which included both a flexible base portion and a retainer portion extending upward along one edge of the strip, which retainer portion served to contain landscape fill and separate it from the adjacent mowable lawn. 972 F.2d at 1262. The Board had rejected the claims as obvious, primarily in reliance on a prior art Wilson reference. This Court reversed, pointing out several distinctions between the Wilson reference and the claimed invention, including that the only upwardly extending portion of Wilson's mowing strip contained a water conduit and sprinkler heads that faced away from the grass and toward the plant beds. This Court rejected the argument that one of ordinary skill in the art would have had incentive to use the water conduit as a landscape retainer "since this would arguably result in clogged sprinkler heads." This Court cited *Gordon* for the proposition that a proposed modification "render[ing] the prior art reference inoperable for its intended purpose" is inappropriate in an obviousness inquiry. *Id.* at 1265-66 & n.12.

KSR's liberalization (but not rejection) of the teaching-suggestion-motivation test did not overrule the principle of *Fritch* and *Gordon* that one of ordinary skill in the art would not have combined or modified references if doing so would have rendered a prior art reference unsatisfactory for its intended purpose. Indeed, the Supreme Court in *KSR* concerned itself not only with the obviousness of upgrading a prior art adjustable pedal assembly to include an electronic pedal position sensor (solution of a known problem), but also with whether it could have been done without defeating the purpose of some of the relied-upon prior art of avoiding adverse wire chafing. *KSR*, 550 U.S. at 408-409, 425. Thus, just as *KSR* admonished that, in looking for a reason for combining references, a court should not "look[] only to the problem the patentee was trying to solve," 550 U.S. at 420, a court likewise should not (as the district court did here) focus only on the patentee's problem and solution while disregarding other problems caused by combining or modifying references. *See also, e.g., Ex Parte Belokin*, 2011 WL 1114212 (Bd. Pat. App. & Interf. March 24, 2011) (reversing obviousness rejection because the proposed modification would have rendered a reference unsatisfactory for its intended purpose); MPEP ¶ 2143.01 (V) (instructing patent examiners post-*KSR* that a proposed modification of prior art is improper if it would render the prior art unsatisfactory for its intended purpose).

Accordingly, one of ordinary skill in the art evaluating a combination of Nakamura and Gourdine would have considered not only the potential effect of diminished cooling of the lamp on the operability of the projector, but the size, weight, design complexity and noise considerations of concern to both Nakamura's projector designers and projector designers generally. *See* Blue Brief at 24-26.

C. The Directly Conducting Exhaust Vent Limitation of Claim 5 Also Would Not Have Been Obvious

In addition to the missing features shared by claim 1 and claim 5 discussed above—including the second cooling air intake port and the power unit with air inlet and air outlet—claim 5 would not have been obvious for another reason. Neither Coretronic's prior art nor common sense would have taught or suggested an exhaust vent that directly conducted air from the power unit outlet to the outside of the outer case.

The district court admitted that there was a genuine issue of material fact as to whether Nakamura disclosed such a feature, but claimed that it was incumbent on SEC to prove a teaching away from that structure, an assertion Coretronic repeats in its Red Brief (p. 25, citing A11). There is, of course, no burden on a patentee to negate invalidity—whether through the prior art teaching away or otherwise. Rather, the burden rests with the invalidity proponent to adduce clear and convincing evidence of such invalidity and, in the summary judgment context, without resort to evidence subject to a genuine issue of material fact.

The district court and Coretronic rely on Gourdine as "confirming" "that one of ordinary skill in the art was aware, from the prior art, that a duct could be used to directly exhaust cooling air from the outlet of the power unit to the exterior of the outer case." Red Brief at 26 (emphasis added). This misrepresents both Gourdine and Nakamura, however, as Gourdine discloses no power unit, and Nakamura does not disclose a power unit with an outlet. Nor would one of ordinary skill in the art have applied Gourdine to add an exhaust duct to Nakamura because that would have conflicted with the projector-adapted airflow system of Nakamura, as discussed above.

Coretronic argues that the purpose of Nakamura's system was only of concern to Nakamura's projector designers and would be of "no importance" to a projector designer confronting the issues addressed by the 158 patent. *Id.* at 27. Nothing could be further from the truth: all projector designers are concerned with cooling the lamp and with limiting the size, weight and noise of the projector, including those considering how better to cool the power unit. *See, e.g.*, 158 patent at 4:35-40, 52-55, 14:31-56 (A111, A116); A1430-31, A1441-42 (Keller ¶¶ 26 & 63). An approach that would have compromised those purposes, as in *Fritch* and *Gordon*, would not have been obvious to one of ordinary skill in the art.

Nakamura's projector designers chose to cool the lamp by the conventional means of using the power supply air. *See* A1441 (Keller ¶ 63.1); Blue Brief at 19

& 36. The inventors of claim 5 of the 158 patent, in contrast, departed from the accepted wisdom by conducting the power supply air directly out of the projector. Such a departure from conventional thinking is evidence of nonobviousness. *See, e.g., In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986).

Coretronic also tries to bolster the district court's "obvious to try" argument by relying on a false dichotomy (Red Brief at 28):

The designer has two general options for where to send air from the ventilating path for the power supply: exhaust it directly to the outside through a hole in the outer case, or send it elsewhere first. Both are obvious.

Both would not have been obvious, however, because the record does not show that, prior to the 158 patent, projector designers ever chose to exhaust power unit air directly outside, rather than using it for further cooling. Gourdine reinforces this teaching, rather than undercuts it, because Gourdine chose to put its hottest element—the microprocessor chip—into the isolated system. This had the advantage of "maximizing" the cooling of the non-isolated components. A1287 (3:27-32). Thus, absent impermissible hindsight, applying Gourdine's teaching to Nakamura would have suggested providing isolated cooling for the lamp, not the power supply. Moreover, there were many ways to design a projector cooling system and Coretronic did not establish, as required, that sending air from the power supply directly to the outside was one of a finite number of identified, predictable solutions to a recognized problem or need at the time of the 158 patent

invention. *See* A1430-31 (Keller, ¶ 26); Blue Brief at 32 (citing *KSR*, 550 U.S. at 421).

Without explaining how such cooling could be maximized if the component inserted into the isolated system were not the hottest, Coretronic argues that Gourdine does not directly refer to the microprocessor chip as the "hottest" component. Red Brief at 28-29. This ignores, however, that both Coretronic's expert and SEC's expert testified that the microprocessor chip was the hottest component in Gourdine's computer cabinet. *See* Blue Brief at 13; A1411 (Biber 22:1-5); A1440 (Keller, ¶ 62). It is thus beyond dispute that one of ordinary skill in the art would have so understood Gourdine.

CONCLUSION

For the reasons described above, and in SEC's Blue Brief, Coretronic has not demonstrated by clear and convincing evidence that 158 patent claims 1, 2 and 5 would have been obvious to one of ordinary skill in the art as of the date of the 158 patent invention. There are, moreover, genuine issues of material fact as to alleged obviousness, precluding summary judgment. Accordingly, the district court's grant of summary judgment should be reversed and this case remanded to the district court for trial.

Dated: April 14, 2011

Respectfully submitted,

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CERTIFICATE OF SERVICE

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