

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition
is not citable as precedent. It is a public record.

United States Court of Appeals for the Federal Circuit

04-1007, -1008

ISCO INTERNATIONAL, INC.,

Plaintiff-Appellant,

v.

CONDUCTUS, INC., and
SUPERCONDUCTOR TECHNOLOGIES, INC.,

Defendants-Cross-Appellants.

DECIDED: February 3, 2005

Before LOURIE, Circuit Judge, ARCHER, Senior Circuit Judge, and PROST, Circuit Judge.

LOURIE, Circuit Judge.

ISCO International, Inc. ("ISCO") appeals from the decision of the United States District Court for the District of Delaware: (1) denying its motion for judgment as a matter of law ("JMOL"), thereby sustaining a jury verdict in favor of Conductus, Inc. and Superconductor Technologies, Inc. (collectively, "the defendants") holding the asserted claims of ISCO's United States Patent 6,263,215 to be invalid and not infringed; and (2) adopting the jury's advisory determination that the '215 patent is unenforceable due to inequitable conduct. ISCO Int'l, Inc. v. Conductus, Inc., 279 F. Supp. 2d 489 (D. Del.

2003) (“Decision on Appeal”). The defendants cross-appeal from the decision granting ISCO’s motion for JMOL that it did not engage in unfair competition. Id. We affirm.

BACKGROUND

ISCO sued the defendants for allegedly infringing its ’215 patent, which is directed to a receiver front end for a cellular base station. At controversy are claim limitations pertaining to a set of cryogenically-cooled components—RF filters made from high-temperature superconducting material, and low-noise amplifiers—coupled to an automatic bypass circuit for routing signals around those components in the event of a cooling failure. Claim 10, the only claim at issue on appeal, reads as follows:

A receiver front end for receiving wireless signals on a plurality of channels, the receiver front end comprising:

a plurality of planar filters for filtering a corresponding plurality of RF signals corresponding to a plurality of channels to form a corresponding plurality of filtered RF signals;

a corresponding plurality of amplifiers for amplifying the plurality of filtered RF signals;

a cryogenic cooler for cryogenically cooling the plurality of filters and amplifiers, the cryogenic cooler having a cooling member being configured to cool simultaneously the plurality of planar filters and the plurality of planar amplifiers; and

a switched bypass circuit around the receiver front end and one or more sensors, wherein in a first mode when the one or more sensors measure acceptable operational parameters the bypass circuit is unswitched such that RF signals pass through the plurality of filters and amplifiers in the cryogenic cooler and not through the bypass circuit and in a second mode when the one or more sensors measure at least one unacceptable operational parameter the bypass circuit is switched and RF signals pass through the bypass circuit and not through the plurality of filters and amplifiers in the cryogenic cooler.

’215 patent, col. 20, ll. 41-65 (emphases added).

The case was tried to a jury, which returned a verdict in favor of the defendants; the asserted claims were found to be invalid for obviousness, not infringed, and unenforceable for inequitable conduct. The jury also found in favor of the defendants on

their counterclaim that ISCO engaged in unfair competition. Arguing that the verdict was not supported by substantial evidence, ISCO moved for JMOL and for a new trial. The district court granted ISCO's motion for JMOL only on the unfair competition claim, but sustained the verdict of invalidity and noninfringement, and adopted the jury's advisory conclusion of unenforceability for inequitable conduct. Notwithstanding the inequitable conduct determination, the district court did not find the case exceptional, and accordingly denied the defendants' motion for attorney fees under 35 U.S.C. § 285.

On appeal, ISCO challenges the district court's denial of JMOL on the issues of invalidity, noninfringement, and unenforceability, while the defendants cross-appeal from the ruling granting JMOL in overturning the jury's verdict on unfair competition. The denial of attorney fees is not being appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

On appeal from a judgment denying a motion for JMOL following a jury trial, an appellant "must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied from the jury's verdict cannot in law be supported by those findings." Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984). Accordingly, fact findings reviewed under the substantial evidence standard require affirmance unless it can be shown that no reasonable juror could have reached such a result. See id. Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." Consol. Edison Co. v. NLRB, 305 U.S. 197, 229 (1938). Given the highly deferential nature of the substantial evidence standard and because the

issues are “highly fact-specific and evidence-oriented,” this case provides yet another illustration of “the difficulty appellants face in attempting to persuade a court to reverse a jury verdict involving questions of fact.” In re Hayes Microcomputer Prods., Inc. Patent Litig., 982 F.2d 1527, 1532 (Fed. Cir. 1992).

A. Invalidity

ISCO attacks the verdict of invalidity primarily on two grounds: (1) that the jury was not entitled to consider the ARPA report¹ as prior art; and (2) that the jury could not have reasonably reached its conclusion of obviousness based on the evidence presented at trial. We address each of these contentions in turn.

1. The ARPA Report as Prior Art

As a threshold matter, ISCO accuses the district court of having erred in denying its motion for JMOL by allegedly imposing on ISCO the burden of proving that the ARPA report was not prior art. While unfortunate, any mischaracterization of the burden of proof in an opinion, by itself, does not warrant reversal. See Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1540 (Fed. Cir. 1983) (“We sit to review judgments, not opinions.”). “[I]f the district court failed to properly place the burden of proof, this court will do so.” Union Carbide Corp. v. Am. Can Co., 724 F.2d 1567, 1573 (Fed. Cir. 1984). In order to prevail, the appellant must therefore show that “the result, as opposed to the reasoning, is erroneous as a matter of law.” Id. at 1573-74.

Claiming a conception date no later than December 1994, ISCO insists that the ARPA report, which was first publicly presented in February 1995, was not prior art. In

¹ Advanced Research Projects Agency (“ARPA”), “HTSC Dual Use Applications Survey—Final Report: HTS Filter Applications: Cellular Telephone Base Station Equipment,” presented Feb. 7, 1995. (J.A. 5142-5235).

support of this contention, ISCO refers to various drafts of a December 1994 proposal, entitled “Cryo-REACH™ Base Station Prototype,” that were prepared by ISCO’s predecessor and which allegedly disclosed the device of claim 10.

We agree with the trial court that the ARPA report was prior art because the December 1994 drafts did not evidence a conception of the claimed invention. “Conception is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.” Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376 (Fed. Cir. 1986) (internal quotation marks omitted) (emphases added). The record reflects that ISCO’s predecessor did not have a “definite and permanent idea” of the “complete” invention defined in claim 10 at a time antedating the ARPA report. Specifically, the December 1994 drafts indicate that ISCO’s predecessor did not recognize or appreciate the automatic bypass circuit as being part of the invention then conceived. “It is well-settled that conception . . . cannot be established nunc pro tunc. There must be contemporaneous recognition and appreciation of the invention represented by the [claims].” Breen v. Henshaw, 472 F.2d 1398, 1401 (CCPA 1973). Because ISCO’s predecessor failed to appreciate certain inventive features at the time of the alleged conception, ISCO cannot rely on a later recognition of those features to retroactively cure an incomplete conception.

That ISCO’s contentions effectively amount to an argument for nunc pro tunc conception is apparent upon reviewing a December 14, 1994 draft marked “Plaintiff Trial Exhibit: PTX-362” (J.A. 1725-1729), which declares:

The REACH™ receiver proposed herein is unique in that it involves:

- (1) fully integrated thin film superconducting components,
- (2) ferroelectrically-tuned filter and receiver components,
- (3) integrated, GaAs cryo-amplifiers,
- (4) low noise oscillator, mixer, downconverter,
- (5) frequency-hopping capability, and
- (6) compact cryo-packaging.

PTX-362 at 3 (J.A. 1726) (emphases added). Whereas the filters, amplifiers, and cryogenic cooler required by claim 10 are duly listed as “unique” features, the automatic bypass circuit is conspicuously absent. Rather, that feature is listed elsewhere:

The [Technology Reinvestment Program] proposal will be to build and test the 2 GHz “cold front end” components, integrate the components into complete sub-system [sic], add lightning protection and automatic bypass circuitry as needed to meet PCS service provider requirements, perform the system integration, address manufacturing issues, and design system control hardware/software.

Id. at 4 (J.A. 1727) (emphasis added). Here, the drafter of the proposal apparently did not view the automatic bypass circuit to be an essential component, as it was to be added only “as needed,” just like “lightning protection.” The lack of appreciation for the bypass feature as an inventive element is further revealed where, in a list of “product engineering issues” to be resolved, the entry specifically describing the bypass—i.e., “(5) bypass circuitry that automatically routes signal flow around the REACH™ receiver if either the electronics or the compressor fails”—is crossed out in its entirety and is replaced with an entry for “24 V power supply circuitry” in subsequent drafts, such as the one dated December 19, 1994 marked “Plaintiff Trial Exhibit: PTX-299.” Compare PTX-362 at 4-5 (J.A. 1727-28) with PTX-299 at 10-11 (J.A. 1542-43). Given that the most detailed—albeit short—description of the automatic bypass circuit could not survive an editorial revision, that feature can hardly be considered part of a “definite and permanent” conception of the invention of claim 10.

In subsequent drafts of the December 1994 proposal, the most substantive description of the automatic bypass circuit that remains is the previously-noted cursory mention that a bypass can be added “as needed,” but that provides an insufficient basis for extrapolating therefrom the detailed limitations in claim 10 pertaining to the specific operational modes of the bypass, its sensors, and the signal path. See Singh v. Brake, 317 F.3d 1334, 1340 (Fed. Cir. 2002) (“A conception must encompass all limitations of the claimed invention . . .”).

In short, the deletion of details pertaining to, and the cursory mention of, the automatic bypass circuit in the draft proposals are inconsistent with the argument that the conception to be proven by those drafts included that element as an inventive feature. Substantial evidence thus supports the jury’s implicit finding, see Perkin-Elmer Corp., 732 F.2d at 893 (noting that “the law presumes the existence of findings necessary to support the verdict the jury reached”), that the December 1994 draft proposals fail to establish the conception date for claim 10, such that the ARPA report was prior art.

2. Obviousness

Even if the ARPA report was prior art, ISCO contends that it is not an invalidating reference that could have supported the jury’s finding of obviousness because the record allegedly lacks evidence of a motivation to modify its teachings to obtain the device of claim 10. For similar reasons, ISCO disputes the evidentiary significance of another prior art reference presented at trial, the Robertson article,² which it deems to

² Mark A. Robertson, “Two applications of HTS technology on an airborne platform,” in Proceedings of the International Society for Optical Engineering (SPIE): High-T_c Microwave Superconductors and Applications, Jan. 1994. (J.A. 5257-5264).

be non-analogous art that was not entitled to consideration by the jury in its obviousness inquiry. We disagree; the record shows that the jury could have reasonably considered these references to be invalidating prior art.

Regarding the alleged deficiencies of the ARPA report, ISCO insists that it does not suggest the use of cryogenically-cooled amplifiers as required by claim 10, and that it fails to teach the use of an automatic bypass circuit. However, the suggestion or motivation to modify a reference may be derived from the knowledge of those skilled in the art or from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996). Considerable evidence was presented at trial of the knowledge of a skilled artisan in the relevant art and the nature of the problem, from which the jury could have reasonably discerned a motivation to modify the ARPA report to obtain the invention of claim 10.

Specifically, the jury was presented with prior art references showing that cooled amplifiers, automatic bypass circuitry, and their benefits were well-known in the art at the time of invention—e.g., the Robertson article mentions the noise-reducing effect of using cryogenically-cooled amplifiers. (J.A. 5257). The jury also heard testimony from at least two expert witnesses who explained how a skilled artisan reading the ARPA report would have found it obvious to modify its teachings to include cooled amplifiers and an automatic bypass. The ARPA report itself focuses on the problem of cryocooler reliability and suggests a switchable bypass as a possible solution. (J.A. 5232). Given the knowledge in the art presented at trial and the nature of the problem to be solved as articulated in the ARPA report, the jury's conclusion that claim 10 would have been

obvious in view of the modified teachings of the ARPA report was supported by substantial evidence.

Turning to the Robertson article, ISCO argues that it is non-analogous art because it is directed to military—not cellular—applications. We find this basis for disqualifying the Robertson article to be without merit in view of the fact that the December 1994 draft proposals, on which ISCO has attempted to establish a conception date for claim 10, are directed to a project for developing “front end hardware for application to civilian wireless communications and military EW and mobile communications systems.” See, e.g., PTX-299 at 1 (J.A. 1533) (emphases added). As for its role in the obviousness inquiry, the Robertson article teaches all the key limitations of the device of claim 10: the simultaneous cooling of filters and amplifiers, and the addition of a bypass relay to safeguard the system in the event of a cooling failure. While ISCO disputes whether the bypass relay disclosed in the Robertson article is necessarily automatic in operation, the jury could have reasonably concluded, based on the context provided by the evidence presented at trial of the knowledge in the art, that the Robertson article would have rendered claim 10 obvious, either alone or in combination with the ARPA report.

In sum, our review of the record under the substantial evidence standard accorded to the jury’s conclusions provides us with no grounds for disturbing the verdict of invalidity.

B. Other Issues

Because we are affirming the judgment of invalidity, the issue of infringement has been rendered moot. Lough v. Brunswick Corp., 86 F.3d 1113, 1123 (Fed. Cir. 1996)

("No further public interest is served by our resolving an infringement question after a determination that the patent is invalid."). Nor do we reach the inequitable conduct issue in light of the district court's denial of the defendants' request for attorney fees. Cf. Buildex, Inc. v. Kason Industries, Inc., 849 F.2d 1461, 1466 (Fed. Cir. 1988) (remanding case, after holding patent invalid, in order to allow district court to decide whether case is exceptional for purpose of fee award). As the effect of unenforceability on a patent held invalid is only meaningful as a basis for the award of attorney fees, the denial of which is not herein appealed, the issue is moot.

As for the defendants' cross-appeal, we affirm the district court's grant of JMOL on the unfair competition claim for reasons set forth in its detailed opinion, in particular, that the defendants did not prove bad faith in the enforcement of the patent. Moreover, ISCO, as a later assignee of the patent, was not a party to the alleged inequitable conduct.

We have considered the parties' other arguments and conclude that they are either unpersuasive or unnecessary for resolution of this appeal.

CONCLUSION

For the foregoing reasons, we conclude that the district court did not reversibly err, and accordingly affirm.