NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

ROCHE DIAGNOSTICS OPERATIONS, INC. AND CORANGE INTERNATIONAL LIMITED,
Plaintiffs-Appellants,

v.

LIFESCAN INCORPORATED,
Defendant-Appellee,

and

NOVA BIOMEDICAL CORPORATION,
Defendant-Cross Appellant.

2010-1439, -1539

Appeal from the United States District Court for the District of Delaware in case no. 07-CV-0753, Judge Joseph J. Farnan, Jr.

Decided: January 25, 2012

GRANTLAND G. DRUTCHAS, McDonnell, Boehnen, Hulbert & Berghoff, LLP, of Chicago, Illinois, argued for plaintiffs-appellants. With him on the brief were DANIEL

A. BOEHNEN, SEAN M. SULLIVAN, RICHARD A. MACHONKIN, and PAULA S. FRITSCH. Of counsel on the brief was NANCY G. TINSLEY, Roche Diagnostics Operations, Inc., of Indianapolis, Indiana.

MARY W. BOURKE, Connolly Bove Lodge & Hutz LLP, of Wilmington, Delaware, argued for defendant-appellee. With her on the brief were R. ERIC HUTZ, KRISTEN HEALEY CRAMER, and GEOFFREY ZELLEY.

BRADFORD J. BADKE, Ropes & Gray LLP, of New York, New York, argued for defendant-cross appellant. With him on the brief were SONA DE and MICHAEL P. KAHN. Of counsel were JEANNE C. CURTIS and MATTHEW A. TRAUPMAN.

Before BRYSON, CLEVENGER, and PROST, *Circuit Judges*.

PROST, *Circuit Judge*.

Roche Diagnostics Operations, Inc. and Corange International Limited (collectively "Roche") appeal from a judgment of non-infringement that the district court entered in favor of Lifescan Incorporated ("Lifescan") and Nova Biomedical Corporation ("Nova"). Only two claim construction issues are before us with respect to the judgment of non-infringement: one raised by Roche, the other raised by Nova. Roche argues that the district court erred in construing the term "electrode" in the asserted patent claims and that the judgment of non-infringement should thus be vacated. Nova disagrees with Roche's argument, of course, but it also argues that in the alternative, the judgment of non-infringement could be affirmed on the ground that the district court's construction of the term "detecting" was erroneous. We see no error in the district court's construction of "detecting" and thus

reject Nova's argument. The argument raised by Roche regarding "electrode," however, has not been considered by the district court, and the record is not sufficiently developed for us to address it for the first time on appeal. We therefore *vacate* the judgment of non-infringement and *remand* for the district court for further proceedings consistent with this opinion.

Nova also cross-appeals, arguing that the district court and the jury erred in resolving Nova's various non-patent counterclaims in Roche's favor. We hold that the district court did not commit any reversible error, and that the jury verdict is supported by substantial evidence. We thus *affirm* the district court's and the jury's resolution of Nova's counterclaims.

I. BACKGROUND

A. Roche's Infringement Suit

Roche is the owner of U.S. Patent No. 7,276,146 ("'146 patent") and U.S. Patent No. 7,276,147 ("'147 patent"), (collectively, "patents in suit"). The patents in suit teach methods of determining the concentration of glucose in a blood sample. Roche brought suit in the district court, alleging that Nova's and Lifescan's glucose monitoring products ("accused devices") infringe the patents in suit. Although the patents in suit are directed at methods for measuring glucose, they recite a specific type of electrochemical sensor, also referred to as a "test strip." The structure and working-mechanism of the glucose sensor are the focus of the parties' claim construction dispute.

The sensor comprises a capillary chamber and a pair of electrodes. The capillary chamber contains certain enzymes and other chemicals. When blood enters the

capillary chamber, the glucose in the blood mixes and reacts with the enzymes. As a result of the reaction, electric charges are released. Meanwhile, using the electrodes, an electric voltage is applied to the glucose-enzyme mixture. The electric charges that are released from the mixture thus flow from one electrode to the other, resulting in an electric current, which can then be measured. The more glucose exists in the blood, the higher the electric current measurement will be. By comparing the current in the test sample with the current in control samples (for which the glucose concentration is already known), the device determines the glucose concentration in the test sample. Claim 1 of the '146 patent is representative and recites,

> 1. A method of determining the concentration of glucose in a blood sample, comprising:
>
> providing a disposable biosensor test strip including a capillary chamber having a depth suitable for capillary flow of blood and holding a volume of between about 0.1 μl and about 1.0 μl of the blood sample, a working *electrode* and a counter or reference electrode disposed within the capillary chamber, and a reagent proximal to or in contact with at least the working electrode, the reagent including an enzyme and a mediator, the reagent reacting with glucose to produce an electroactive reaction product;
>
> applying a blood sample containing glucose into the capillary chamber, the capillary chamber directing capillary

> flow of the blood sample into contact with the reagent to cause the blood sample to at least partially solubilize or hydrate the reagent;
>
> *detecting* the blood sample in the capillary chamber;
>
> following said detecting, applying or controlling the voltage or current across the working and counter or reference electrodes;
>
> electrooxidizing or electroreducing the electroactive reaction product at the working electrode; and
>
> within 10 seconds after said detecting, determining and providing a readout of the glucose concentration in the blood sample, said determining comprising correlating the electrooxidized or electroreduced electroactive reaction product to the concentration of glucose in the blood sample.

'146 patent col.29 ll.38-67 (emphasis added).

Only two claim construction arguments are raised on appeal—one by Roche, and the other by Nova. The first (raised by Roche) concerns the construction of the term "electrode."[1] Indeed, the district court's judgment of non-

[1] The asserted independent claims recite a "working electrode" and a "counter or reference electrode." '146 patent col.29 ll.38-67. The claim construction dispute concerns the working electrode, to which we refer in this opinion as "the electrode."

infringement was based solely on the construction of that term, as the district court found that all the other limitations of the asserted patents exist in the accused devices. Initially, at the claim construction stage, Roche argued to the district court that the term "electrode" in the asserted patent claims includes both "micro" and "macro" electrodes. Roche asserted that micro-electrodes are up to approximately 100 μm wide, whereas macro-electrodes are up to 1,000 μm wide. Nova and Lifescan agreed with Roche's characterization of "micro" versus "macro" electrodes, but they contended that Roche's patent claims only cover micro-electrodes, not macro-electrodes. That is, they argued that the term "electrode" in the patents in suit covers widths up to approximately 100 μm, but not much more. The district court essentially agreed with Nova and Lifescan and construed the term "electrode" as "microelectrode having a width of 15 μm up to approximately 100 μm." J.A. 3.

The second claim construction dispute pertains to the term "detecting."[2] Nova and Lifescan argued to the district court that the specification of the patents in suit limits the patent claims by teaching that electric voltage

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[2] To be precise, we must note that Nova's claim construction argument is not entirely based on the construction of the word "detecting" (nor based on any other express language in the asserted claims, for that matter). Rather, Nova argues that a delay period "is inherent in the claimed steps to allow the claimed 'electroactive reaction product' to build up." Def.-Cross Appellant's Br. 45. According to Nova, "[t]he 'detecting' step starts this delay; the 'electroactive reaction product' is created during the delay; and 'applying or controlling the voltage or current' marks the end of the delay." *Id.* Our reference to the word "detecting" is thus simply a short hand for Nova's argument.

cannot be applied to the working electrode immediately after blood enters the capillary chamber. Rather, according to Nova and Lifescan, the sensor can only measure the electric current in the test sample after a small time-delay ("open circuit delay"), which is necessary to allow the glucose and the chemicals in the capillary chamber to mix well together. Nova and Lifescan argued that because the accused devices do not require an open circuit delay before measuring the glucose concentration, there could be no infringement. The district court rejected this theory, reasoning that it improperly imported a limitation from the specification into the claim terms, which did not expressly require an open circuit delay. Nonetheless, because it was undisputed that the accused devices use electrodes much wider than 100 μm, the district court's claim construction essentially foreclosed Roche's infringement suit.

Roche moved the district court for reconsideration, positing a different claim construction theory. This time, Roche conceded that the asserted claims only read on micro-electrodes, but it argued that micro-electrodes may indeed be up to 1,000 μm wide. Roche also submitted new extrinsic evidence to support its motion for reconsideration. At the hearing for the motion for reconsideration, the district court remarked that Roche's new claim construction argument raised "a great point." J.A. 35. Nonetheless, the district court did not address the issue. Rather, the district court stated that "it will be interesting to see what [the Federal Circuit has to] say [about the argument]," and then summarily denied the motion for reconsideration. *Id.* This appeal ensued.

B. Nova's Non-Patent Counterclaims

Once sued for infringement, Nova brought multiple counterclaims against Roche. The counterclaim allegations arise out of failed negotiations between Nova and Roche for the development of Nova's glucose-monitoring technology. To encourage Roche to enter into a join-venture to develop and market its test-strips, Nova permitted one of Roche's executives to view Nova's confidential information that related to the glucose sensor technology. In preparation for the negotiations, Nova and Roche executed a confidentiality agreement ("Agreement"), according to which Roche agreed not to disclose any information it would learn to third parties or otherwise use the information to Nova's detriment. In the counterclaims, Nova essentially alleges that Roche stole the idea from Nova during these negotiations and then declined Nova's join-venture offer. Instead, according to Nova, Roche "misused Nova's information to spur its own patent filings and redirect its R&D program." Def.-Cross Appellant's Br. 70.

Nova's counterclaims set out various theories of liability: breach of contract, misappropriation of trade secrets, conversion, and unfair competition. The district court found that as a matter of law, Swiss law (applied through a choice of law provision in the Agreement) barred Nova's trade secret misappropriation and conversion counterclaims. A jury trial was held on the remaining counterclaims, and the jury returned a verdict (of no liability) in Roche's favor. Nova now cross-appeals various determinations by the district court as well as the jury's ultimate finding of non-liability. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

As we explain below, Roche's claim construction argument regarding the term "electrode" has not been addressed by the district court, and, in our view, the particular facts of this case make it inappropriate for us to consider it for the first time on appeal. We therefore remand the matter to the district court on that narrow ground. As to the remaining issues raised by the parties, we affirm.

A. Roche's Infringement Suit

1. Electrode

Claim construction is a question of law, and thus we review de novo a district court's claim construction. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454–55 (Fed. Cir. 1998) (en banc). Nonetheless, this court is a court of appellate jurisdiction, and "[n]o matter how independent an appellate court's review of an issue may be, it is still no more than that—a review." *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1426 (Fed. Cir. 1997); *see also Metro. Life Ins. Co. v. Bancorp Servs., LLC*, 527 F.3d 1330, 1336 (Fed. Cir. 2008) (declining to consider a claim construction issue that the district court did not "expressly" address and remanding to the district court for further proceedings). The procedural posture of this case, however, deprives us of the district court's resolution (and illumination) of the issues that are raised with respect to the construction of the term "electrode." Roche raised its current claim construction argument to the district court in a motion for reconsideration, which the district court denied. The district court did not address whether reconsideration was procedurally appropriate, and, if so, whether Roche's argument has merit. Nova

and Lifescan do not dispute on appeal, however, that Roche's argument should be addressed on the merits. Thus, in effect, we are called on to address the substance of a claim construction issue that has never been considered by the district court. We do not opine, as a general matter, whether and under what circumstances this court may address new claim construction arguments on appeal if urged to do so by the parties. As we explain below, however, the specific nature of this case makes it imprudent for us to address Roche's claim construction argument for the first time on appeal.

As we already stated, the judgment of non-infringement was entered solely on the basis that the term "electrode" in the asserted claims does not cover electrodes that are wider than approximately 100 μm.[3] To properly construe "electrode," of course, we must first and foremost look to the words of the asserted claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). But the claim terms are not themselves helpful here because they do not recite a width for the electrode. Even Roche agrees, however, that the claims do not cover all electrodes of all widths. And, Roche now concedes that the term "electrode" only covers micro-electrodes, not macro-electrodes. The only issue is whether the micro-electrodes in the claimed invention cover widths up to 1,000 μm (as urged by Roche), or whether they only cover widths less than approximately 100 μm (as argued by Nova and Lifescan).

[3] There is no dispute that the width of the electrodes in the accused products is larger than 100 μm but smaller than 1,000 μm.

To aid in answering that inquiry, the parties direct our attention to the specification of the asserted claims. In our view, however, the specification is also unhelpful by itself because, as the following summary of the parties' arguments shows, none of the theories advanced by the parties is in itself complete and convincing. Nova and Lifescan begin by pointing out that the specification consistently teaches that the width of the micro-electrode is less than 100 μm. For example, the specification of the '146 patent states,

> Preferred dimensions for micro-electrodes can be, e.g., feature size or width of electrodes . . . in the range from 15 or 20 or 25 μm, up to about 100 μm, more preferably from greater than or about 25 or 30 μm to about 50 μm.

'146 patent col.3 ll.9-13; *see also* '147 patent col.3, ll.9-12. Roche counters (rather persuasively, in our view) that this statement, like other similar statements in the specification, is merely a non-limiting description of a preferred embodiment of the claimed invention.

Nova and Lifescan next argue that the following passage in the specification demonstrates that the width of the electrode in the asserted patents is less than 100 μm:

> Micro-electrodes, as distinguished from other electrodes generally, are understood in the electronic and biosensor arts. In analyzing a liquid sample using electrodes and electronic equipment and techniques, the size and spacing of electrodes can affect whether diffusion of an analyte through the sample to an electrode occurs

> by a planar or non-planar path. Micro-electrode arrays are of a size and spacing such that in detecting chemical species of a solution, the species will diffuse toward or approach an electrode of the micro-electrode array in a non-planar fashion, e.g., in a curved or hemispherical path of diffusion. In contrast, non-microclectrodes, i.e., "macro-electrodes," cause diffusion of an analyte through a solute according to a substantially planar path. It is also understood that some electrode configurations can cause diffusion to take place by a mix of planar and non-planar paths, in which case the electrodes can be considered a micro-electrode array, especially if the diffusion occurs predominantly (e.g., greater than 50%) according to a non-planar path, or if the size of the electrodes is less than 100 µm, e.g., less than 50 µm.

'146 patent col.4 ll.29-48; *see also* '147 patent col.4 ll.10-29 (same).

This passage is indeed promising at first glance, in that it sets out to explain the difference between electrodes in general and micro-electrodes, which Roche now concedes are the only kind of electrode that the asserted claims cover. It essentially explains that the size of the electrode affects the diffusion pattern of the glucose-enzyme mixture. Micro-electrodes facilitate non-planar diffusion; macro-electrodes enable planar diffusion. These statements are not helpful on their own, however, because the district court has not determined what degree of non-planar diffusion justifies characterizing an electrode as a micro-electrode, and because the parties have offered us

too little on that point to enable us to make that determination for the first time on appeal. We leave it to the discretion of the district court to permit the parties to supplement the record and their arguments with further guidance as to how this passage should be interpreted.

Next, Roche points to examples 3, 4, and 5 in the '146 patent, which teach using micro-electrodes as wide as 1,000 μm. *See, e.g.*, '146 patent col.26 ll.33-35.[4] It argues that because the examples expressly teach using electrodes up to 1,000 μm wide, the district court erred in limiting the asserted claims to electrodes that are narrower than approximately 100 μm. [5] But then Nova and Lifescan respond that examples 3, 4, and 5 are unclaimed embodiments that cannot help define the scope of the asserted claims. They argue that although the asserted claims are undisputedly limited to blood-testing, the test conditions described in examples 3, 4, and 5 are not suitable for blood-testing. The reason is, according to Nova and Lifescan, that the three examples disclose using a test strip with specific capillary depths that are not suitable for fast testing of blood samples.

Again, on the record before us, we decline to determine whether Nova's and Lifescan's arguments should

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[4] Example 3 teaches using an electrode with "a surface area of 1 mm^2 (1 mm x 1 mm)." '146 patent col.26 l.34. One millimeter (mm) is a thousand micrometers (μm).

[5] The '147 patent does not include the equivalent of the three examples in the '146 patent. We leave it to the district court to determine whether the claim construction of the '146 patent should affect the claim construction of the '147.

prevail, or whether the three examples in the '146 patent control. Nova and Lifescan correctly point out that the three examples use capillaries that are less than 100 μm deep. They also correctly suggest that the specification of the '146 patent teaches that a capillary depth of less than 100 μm is not suitable for the "fast fill" of blood:

> Capillaries with depths of greater than or equal to 100 μm have been found to allow fast fill of blood with hematocrits from 20 to 70% to reliably flow into the chamber. Capillary depths of less than 100 microns to 25 microns can be used for other biological fluids such as serum, plasma, interstitial fluid, and the like.

'146 patent col.19 ll.44-50. There is also no dispute that the patents in suit generally aim to facilitate faster measurements (compared to the prior art) of glucose concentrations in small blood samples. But it is unclear whether the asserted claims are limited to the "fast fill" of blood. The parties have not sufficiently explained what "fast fill" means, and whether it is simply synonymous with the concept that the claimed invention is faster than the prior art, or whether the phrase has some other (perhaps specific) meaning. There is also another wrinkle: dependent claim 48 in the '146 patent recites using capillary depths of 25 to 200 μm for testing a blood sample, indicating that the asserted claims cover capillary depth ranges beyond what may be appropriate for the fast-fill of blood. *See* '146 patent col.32 ll.40-41. To avoid this problem, Nova and Lifescan suggest that claim 48 is also not enabled. Rather, they suggest that claim 48 is improperly left-over from the original claims that covered test-samples other than blood. In our view, the district court is in a better position to address this argument in the first

instance. Indeed, the parties have not fully developed their prosecution history arguments. For example, the parties have not sufficiently answered the following questions: 1) when did Roche limit the asserted claims of the '146 patent from testing serum and blood to blood only, 2) was this change reflected in the dependent claims too? (and if not, should it have been?), 3) when did dependent claim 48 first appear in the '146 patent?[6] In this light, we deem it imprudent to address the parties' prosecution history arguments for the first time on appeal.

Finally, Roche invites us to review certain extrinsic evidence that was not even before the district court during claim construction. We leave it to the district court to determine if and to what extent any of the additional evidence should be admitted into evidence.

In sum, we decline to address the claim construction issue raised by Roche because it has never been addressed by the district court. Accordingly, we remand the case to the district court for the purpose of construing the term "electrode" and any subsequent proceeding that might be necessary once the court construes that term. As we noted, we also leave it to the discretion of the district

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[6] Nova's brief cites the prosecution history of the '147 patent in order to show that dependent claims 48 of the '146 patent and claim 53 of the '147 patent are not enabled. *See* Def.-Cross Appellant's Br. 34 (citing J.A. 1793-96). We leave it to the district court to determine whether the prosecution history of the '147 patent is relevant to the scope of the claim terms in the '146 patent at all, and whether the referenced prosecution history—or any other evidence that the district court may admit into evidence in its discretion—can establish that examples 3, 4, and 5, as well as independent claim 48 in the '146 patent are not enabled and thus should not shed light on the scope of the asserted claims.

court whether and to what extent each party should be allowed to supplement the record with additional briefing and evidence to support its claim construction argument on remand.

2. "Detecting"

Nova argues that regardless of the width of the electrodes, the asserted claims require an open circuit delay. According to Nova, this limitation is implied in the term "detecting" and certain other terms in the asserted claims. There is no dispute that such a limitation does not exist in the accused products. Nova thus urges us to affirm the judgment of non-infringement based on that alternative ground. We have reviewed the parties' arguments and the record, however, and we agree with the district court that the asserted claims do not necessarily require an open circuit delay. In particular, we agree with the district court that Nova's argument amounts to an invitation to inappropriately read a limitation from the specification into the claim terms. Therefore, we reject Nova's alternative claim construction argument.

B. Nova's Non-Patent Counterclaims

We also affirm the district court's resolution of Nova's non-patent counterclaims, as well as the jury's ultimate verdict of no-liability in Roche's favor. Nova's cross-appeal presents three arguments. First, Nova argues that the district court erred in finding that a Swiss choice of law provision in the Agreement barred Nova's trade secret misappropriation and conversion counterclaims. We disagree. The choice of law provision unambiguously provides that the parties' relationships under the Agreement "shall be governed *in all respects* by the laws of Switzerland." J.A. 23647, ¶ 6 (emphasis added). Nova's

breach of contract and tort claims all arise out of the same transaction—the negotiations between Nova and Roche regarding a joint-venture to develop Nova's test-strip technology. Nova's argument that Swiss law governs its breach of contract claim and not its tort claims thus stands in unacceptable contrast with the clear language of the Agreement. Since there is no dispute that Swiss law does not recognize Nova's trade secret misappropriation and conversion counterclaims, the district court did not err in rejecting those claims as a matter of law.

Second, Nova argues that the district court abused its discretion in not allowing Nova to disclose to the jury that Roche had sued Nova for infringement and lost. We disagree. The district court was well within its discretion to find that the probative value of disclosing the infringement suit to the jury was substantially outweighed by the risk of prejudice or waste of time. *See* Fed. R. Evid. 403; *United States v. Long*, 574 F.2d 761, 767 (3d Cir. 1978) (noting that when reviewing a district court's Rule 403 analysis, an appellate court ought to be highly deferential). We see no abuse of discretion in the district court's evidentiary ruling.

Third, and finally, Nova argues that the jury's verdict cannot stand. Again, we disagree. It is true that Nova's evidence shows that Roche's executive, who had learned of Nova's technology, discussed some aspects of Nova's invention with Roche's inventors. It is also true that the evidence shows that Roche decided to patent its invention almost immediately after learning of Nova's test-strips, even though Roche claims that it had invented the technology long before. Nonetheless, we must review the record in the light most favorable to the jury's verdict, and we cannot disturb the verdict unless we determine that "'there is insufficient evidence from which a jury

reasonably could find'" for Roche. *Cordance Corp. v. Amazon.com, Inc.*, 658 F.3d 1330, 1333 (Fed. Cir. 2011) (quoting *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153, 1166 (3d Cir. 1993)). Nova's counterclaims are based on circumstantial evidence, and the jury heard testimony from both sides on the events that transpired during and after negotiations between Nova and Roche. We have reviewed the evidence that the parties presented to the jury, and we hold that it was within the jury's purview to find that Roche was not liable. We thus affirm the jury's verdict in Roche's favor.

CONCLUSION

We affirm the district court's construction of the term "detecting," and its determination that the asserted claims do not require an open circuit delay. We also affirm the district court's resolution of all issues and the jury's verdict of no-liability regarding Nova's counterclaims. We vacate the judgment of non-infringement, however, and remand to the district court to consider the parties' arguments that pertain to the scope of the term "electrode."

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED