United States Court of Appeals for the Federal Circuit

WARSAW ORTHOPEDIC, INC.,
Plaintiff/Counterclaim Defendant-Appellant

MEDTRONIC SOFAMOR DANEK USA, INC.,
Counterclaim Defendant-Appellant

MEDTRONIC PUERTO RICO OPERATIONS CO., MEDTRONIC SOFAMOR DANEK DEGGENDORF, GMBH,
Counterclaim Defendants

v.

NUVASIVE, INC.,
Defendant/Counterclaimant-Cross-Appellant

2013-1576, 2013-1577

Appeals from the United States District Court for the Southern District of California in No. 08-CV-1512, Judge Cathy Ann Bencivengo.

Decided: June 3, 2016

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Before LOURIE, DYK, and REYNA, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* DYK.

Concurring opinion filed by *Circuit Judge* REYNA.

DYK, *Circuit Judge*.

This case returns to this court on vacatur and remand from the Supreme Court, "for further consideration in light of *Commil USA, LLC v. Cisco Systems, Inc.*, [135 S. Ct. 1920 (2015)]." *Medtronic Sofamor Danek USA, Inc. v. NuVasive, Inc.*, 136 S. Ct. 893 (2016) (Mem.). On remand, we reaffirm the district court's judgment with respect to U.S. Patent No. 7,470,236 ("the '236 patent") and reinstate our earlier judgment in other respects.

BACKGROUND

The vacated decision, *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 778 F.3d 1365 (Fed. Cir. 2015), began as a patent infringement suit by Warsaw Orthopedic, Inc. and

a related company, Medtronic Sofamor Danek USA, Inc., ("MSD")[1] against NuVasive, Inc. ("NuVasive"). NuVasive counterclaimed for infringement of its patent, U.S. Patent No. 7,470,236 ("the '236 patent"). Only our decision with respect to the '236 patent is affected by the Supreme Court's remand. That aspect of our decision affirmed a jury verdict of infringement, holding that the asserted claims of NuVasive's '236 patent were directly infringed by users of MSD's "NIM-Eclipse" device and that MSD induced this infringement. *Id.* at 1369, 1373, 1379.

Our opinion issued on March 2, 2015. The Supreme Court decided *Commil* shortly thereafter, on May 26, 2015. 135 S. Ct. at 1920. MSD subsequently petitioned for certiorari in this case, requesting that the Court grant certiorari, vacate, and remand ("GVR") on the basis that our court did not correctly apply the test for induced infringement under 35 U.S.C. § 271(b) articulated in *Commil* and the Court's earlier decision in *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754 (2011). MSD contended that while the jury had been properly instructed as to the standard of induced infringement set out in *Commil*, NuVasive had failed to prove that MSD had the requisite knowledge to induce infringement. MSD did not raise any issue concerning a belief in patent invalidity, the Supreme Court in *Commil* having held that a belief in patent invalidity is not a defense to inducement. 135 S. Ct. at 1928. The Supreme Court granted certiorari and issued its GVR order on January 19, 2016.

We recalled our mandate and reopened the case on March 3, 2016. We requested supplemental briefing from

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[1] For simplicity, we refer to Warsaw Orthopedic, Inc. and Medtronic Sofamor Danek USA, Inc. collectively as "MSD."

MSD and NuVasive on "the question of what action this court should take on remand from the Supreme Court 'for further consideration in light of *Commil* . . . .'" March 2, 2016, Order, ECF No. 93. We now consider what action is appropriate in this case in light of the Supreme Court's remand.

DISCUSSION

I

The only question here is whether there was substantial evidence for the jury to conclude that MSD induced infringement of NuVasive's '236 patent. The Supreme Court's decision in *Commil* reaffirmed and clarified the Court's earlier decision in *Global-Tech* on the standard for inducement under § 271(b) but did not change the law. *See Commil*, 135 S. Ct. at 1927–28. *Commil*, like *Global-Tech*, held that proof of induced infringement requires not "only knowledge of the patent" but also "proof the defendant knew the [induced] acts were infringing." *Id.* at 1926, 1928. *Commil*, in reaffirming *Global-Tech*, also necessarily reaffirmed that willful blindness can satisfy the knowledge requirement for active inducement under § 271(b) (and for contributory infringement under § 271(c)), even in the absence of actual knowledge. *Global-Tech*, 131 S. Ct. at 2070.

Global-Tech also held that knowledge of infringement can be inferred from circumstantial evidence. *Id.* at 2071–72. In this respect, *Global-Tech* affirmed the Supreme Court's and our court's earlier precedents, which held that the "requisite intent to induce infringement may be inferred from all of the circumstances." *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 699 (Fed. Cir. 2008) (quoting *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 669 (Fed. Cir. 1988)); *see also MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936, 939–940 (2005) (applying the inducement standard of patent law in a copyright

context and holding that circumstantial evidence demonstrated an "unmistakable" "unlawful objective" to induce infringement); *Lucent Techs., Inc., v. Gateway, Inc.*, 580 F.3d 1301, 1322 (Fed. Cir. 2009) ("A plaintiff may . . . prove the intent element through circumstantial evidence, just as with direct infringement . . . ."); *Fuji Photo Film Co., Ltd. v. Jazz Photo Corp.*, 394 F.3d 1368, 1377 (Fed. Cir. 2005) ("A patentee may prove intent through circumstantial evidence."); *Water Techs.*, 850 F.2d at 660 ("While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice.").

II

The '236 patent is directed to a method for detecting the presence of and measuring distance to a nerve during surgery. *Warsaw*, 778 F.3d at 1372. The patented method requires sending a series of electrical pulses that gradually increase in strength until a pulse reaches sufficient strength to elicit a nerve response. *Id.* Proximity to the nearest nerve is proportional to the strength of the pulse that elicited the response. *Id.* NuVasive asserted claims 1, 5, and 9 of the '236 patent, of which claim 1 is representative. Claim 1 is reproduced in full in our earlier opinion, *id.*, but only one limitation, the "stopping" step, is relevant to this case on remand. The "stopping" step of claim 1 is step (c), which requires "increasing the intensity level of said stimulus signal until said predetermined neuro-muscular response is elicited by said stimulus pulse and stopping the emission of said stimulus signal immediately after said predetermined neuro-muscular response is detected." '236 patent col. 17 ll. 56–60. In the earlier appeal we held that substantial evidence supported the jury's finding of direct infringement of claim 1 of the '236 patent by surgeons using MSD's device, the "NIM-Eclipse." *Id.* at 1373. That determination is not reopened by the Supreme Court's remand.

The district court concluded that the "stopping" step—specifically, the claim term, "stopping the emission of said stimulus signal immediately after said predetermined neuro-muscular response is detected"—did not need to be construed and consequently did not provide the jury with any construction (although the court did construe the embedded term "stimulus signal," as discussed below). In determining whether the NIM-Eclipse met the "stopping" step, the jury was required to apply the "plain meaning to a person of ordinary skill in the art at the time of the invention." J.A. 206.

There is no dispute that the jury was correctly instructed as to the standard for induced infringement under *Global-Tech* (and *Commil*). The jury was instructed that it was NuVasive's burden to prove that "the alleged infringer knew or was willfully blind to the fact that the induced acts constituted patent infringement of at least one patent claim," in addition to the other elements of induced infringement. J.A. 213. MSD does not dispute that the jury was correctly instructed as to the relevant claim limitations of the '236 patent and as to NuVasive's burden to prove infringement by a preponderance of the evidence.

Thus, the question before us now is a limited one: whether the jury was presented with substantial evidence that MSD knew (or was willfully blind to the fact) that it was instructing doctors to infringe the '236 patent. MSD acknowledges that its "challenge is to the *sufficiency of the evidence* that it indirectly infringed." Appellants' Supp. Br. at 14. In the earlier appeal we did not address that question explicitly, stating only that "[t]here was evidence that MSD was aware of the patent prior to the litigation and that MSD specifically taught doctors to use the product during the surgical procedures in an infringing manner." *Warsaw*, 778 F.3d at 1373. We now address the question. We must sustain the jury's verdict if there was

substantial evidence before the jury to support an inference that MSD knew (or was willfully blind to the fact) that doctors' use of its device infringed the '236 patent.

III

MSD argues that no reasonable jury could have inferred from the evidence before it that MSD had knowledge of (or was willfully blind to) its customers' infringement of the '236 patent. However, here we conclude that there was substantial evidence that MSD's infringement position was objectively unreasonable and that the jury, based on this evidence, could reasonably have concluded that MSD had knowledge (or was willfully blind to the fact) that it was infringing.

The central premise of MSD's non-infringement position is that it reasonably construed narrowly the "stopping" limitation of the claims of the '236 patent to require a complete termination of emission of any and all electrical pulses. "Stopping the *emission* of the signal thus means the electrode – i.e., *the device* – must stop emitting any signal, which indisputably is *not* what occurs when a NIM-Eclipse device detects a nerve." Appellants' Supp. Br. at 10. After the NIM-Eclipse emits a stimulus signal that detects a nerve, it continues emitting electrical pulses at a lower energy rather than stopping emission of all electrical signals. MSD argues that this property of the NIM-Eclipse led MSD to believe that the device did not infringe the '236 patent.

But on its face, claim 1 of the '236 patent says something different. Claim 1 requires "stopping the emission of said stimulus signal immediately after said predetermined neuro-muscular response is detected." '236 patent col. 17 ll. 58–60. That is, claim 1 requires stopping a particular kind of signal, "said stimulus signal," and does not require stopping any and all electrical signals emitted by the device.

At the district court, both parties agreed that "a stimulus signal" is a signal able to elicit a neuromuscular response (i.e., a nerve response). MSD asked the district court to construe "stimulus signal" to mean "a signal that can stimulate." J.A. 1871 (MSD's Responsive Claim Construction Brief). MSD expressly explained that, under its construction, a stimulus signal is one capable of stimulating a nerve. "Per Medtronic's construction, 'a signal that can stimulate,' a stimulus signal is able to elicit a response to detect nerve proximity, but does not cease being a 'stimulus signal' merely because it is not currently eliciting a response . . . ." J.A. 1871 (emphasis added). NuVasive requested a similar construction, "an electrical signal for eliciting a neuromuscular response," which the district court adopted. J.A. 21–22 (District Court's Markman Order). MSD's Responsive Claim Construction Brief emphasized its agreement that a "stimulus signal" is a signal capable of eliciting a nerve response. "In NuVasive's words, 'not every signal is an electrical signal . . . and not every stimulation can cause a neuromuscular response.' Medtronic agrees, and its construction of this term does not contradict these assertions." J.A. 1871 (quoting NuVasive's Opening Claim Construction Brief). The jury was properly instructed to construe "stimulus signal" according to the district court's construction to mean "an electrical signal for eliciting a neuromuscular response." J.A. 208.

The language of claim 1 clearly requires stopping the emission not of any or all stimulus signals but of one particular stimulus signal: "said stimulus signal," the signal that triggered a response from the nerve being probed. As MSD itself put it, "[t]he claim language 'said' means that the 'stimulus signal' and 'predetermined neuromuscular response' elements modified by 'said' are the *same* signal and response referenced earlier in the claim." J.A. 1872 (MSD's Responsive Claim Construction

Brief). In MSD's words, under "the very clear language of claim 1," "the steps contemplate emission of *one* signal to elicit *one* neuro-muscular response, with that same signal stopping upon the detection of that response." *Id.*

MSD's claim is that the "stopping" limitation requires total cessation of any and all electrical stimulus pulses emitted by the nerve-monitoring device. It insists that "[s]topping the *emission* of the signal thus means the electrode – i.e., *the device* – must stop emitting any signal." Appellants' Supp. Br. at 10. This theory is clearly inconsistent with the construction of "said stimulus signal" that MSD itself propounded.

MSD also argues that the prosecution history of the '236 patent, which was before the jury, supports MSD's interpretation of the "stopping" step and its theory that the jury could not have found the knowledge (or willful blindness) necessary for induced infringement. The prosecution history here does not help MSD. The prosecution history shows that NuVasive amended the claims of the application that became the '236 patent to overcome the examiner's obviousness rejection over a prior art reference, U.S. Patent No. 5,284,153 ("Raymond '153"), by adding the "stopping" limitation. Raymond '153 describes a method of probing a nerve at a constant level of stimulation, thereby eliciting multiple neuromuscular responses from the same nerve. Raymond '153 col. 3 ll. 29–35. NuVasive argued that its method, with the "stopping" step, provided increased safety compared to Raymond '153 because NuVasive's method avoided overstimulation of the nerve:

> Claim 15 [which became claim 1 of the '236 patent] has also been amended to reflect that the emission of the stimulus signal is immediately stopped after the predetermined neuro-muscular response is detected. This is a safety mechanism designed to re-

> move the stimulation of the spinal nerve during the processing time required to communicate the intensity level to a user . . . . This avoids the unnecessary stimulation found, for example, in the Raymond '153 reference. . . . [Raymond '153] does not stop the stimulation altogether, as found in claim 15, and thus subjects the nerve to unnecessary stimulation that may result in irritation and/or damage over time.

J.A. 2895 (NuVasive's Amendment and Remarks of October 12, 2007). Contrary to MSD's argument, the prosecution history thus demonstrates that "stopping" refers to stoppage of the stimulus signal capable of eliciting a neuromuscular response, not necessarily stoppage of any and all electrical stimulus.

In short, there is no support in the language of claim 1 of the '236 patent or its prosecution history to support MSD's position that infringement of the "stopping" limitation requires complete termination of any and all electrical stimulus pulses from a nerve-probing device. Claim 1 recites "stopping the emission of said stimulus signal," not stopping the emission of all electrical signals.

In any event, MSD's effort at this late stage amounts to a request for a revised claim construction that it never sought. That is improper, as we previously ruled in our earlier opinion. *Warsaw*, 778 F.3d at 1373 (citing *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1321 (Fed. Cir. 2003)). Moreover, claim construction is, of course, ultimately a question of law that must be left to the court, not the jury. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015). We have previously held that it is improper for juries to hear conflicting expert testimony on the correctness of a claim construction, given the risk of confusion. *CytoLogix Corp. v. Ventana Med. Sys., Inc.*, 424 F.3d 1168, 1172 (Fed. Cir. 2005); *see*

also Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356, 1364 n.6 (Fed. Cir. 2009).

IV

Turning to the issue that is properly before us, undisputed evidence before the jury showed that, immediately after nerve stimulation, the NIM-Eclipse reduced the strength of the electrical stimulus pulses it emitted to a level that was not capable of stimulating the nerve that had provided the neuromuscular response. In other words, the "said stimulus signal" emitted by the NIM-Eclipse was stopped immediately after the neuromuscular response was detected.

MSD does not dispute that whenever the NIM-Eclipse device emits a "stimulus signal" at the threshold intensity sufficient to elicit a nerve response, the next pulse is emitted at lower intensity. As such, the record shows that "said stimulus signal" as construed by the court—the electrical signal for eliciting a neuromuscular response, capable of stimulating the nerve being probed—"stops" immediately after the response is detected, just as the claims of the '236 patent require. This evidence was before the jury, and the jury could reasonably have concluded that MSD had the requisite knowledge of infringement.

Given the strength of the evidence NuVasive presented, a reasonable jury could have concluded that MSD must have known that its NIM-Eclipse device "stopped" emitting "said stimulus signal" immediately after that signal elicited a neuromuscular response. MSD's knowledge of the '236 patent is undisputed. As such, under these circumstances, a reasonable jury could have concluded that MSD's non-infringement position was objectively unreasonable and that MSD must have known that NIM-Eclipse meets the limitations of the claims of the '236 patent. A reasonable jury could therefore have

inferred that MSD must have known, or was willfully blind to the fact, that doctors using the device infringe those claims.[2]

CONCLUSION

We again affirm the district court's judgment of January 26, 2012, with respect to direct and indirect infringement of the '236 patent. In view of that judgment, we also affirm the district court's June 10, 2013, award of an ongoing royalty to be paid by MSD to NuVasive for post-verdict sales of the NIM-Eclipse device. We reinstate our earlier judgment with respect to NuVasive's infringement of MSD's patents, which was unaffected by the Supreme Court's GVR order. *Warsaw*, 778 F.3d at 1379.

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

COSTS

Costs to NuVasive.

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[2] The concurrence expresses concern that the majority opinion could be read to suggest "that any time a defendant's products are found to directly infringe, the plaintiff has sufficiently established the defendant's intent to induce infringement." Concurrence at 4. To be clear, we do not suggest that inducement liability is that broad. To show the intent to induce infringement, it is sufficient that the plaintiff establish that a defendant's asserted belief in non-infringement was unreasonable.

United States Court of Appeals for the Federal Circuit

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2013-1576, -1577

Appeals from the United States District Court for the Southern District of California in No. 08-CV-1512, Judge Cathy Ann Bencivengo.

REYNA, *Circuit Judge*, concurring.

While I concur in the result reached by this court, I write to express several concerns regarding how the result was reached and its future implications. First, I am concerned about Section III of the opinion, which addresses the reasonableness of MSD's infringement position. This section concludes that "there is no support in the language of claim 1 of the '236 patent or its prosecution history to support" MSD's reading of the claims. Op. at 10. MSD's petition for certiorari argued that, because this court's prior opinion did not discuss whether MSD's reading of the claims was reasonable, the Supreme Court should grant, vacate, and remand in light of *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920 (2015). *Petition for Writ of Certiorari, Medtronic Sofamor Danek USA, Inc. v. NuVasive, Inc.*, 2015 WL 4397393, at *i.[1]

While the Supreme Court in *Commil* stated that a defendant lacks the intent for induced infringement where his reading of the claims is both different from the plaintiff's and reasonable, I do not believe *Commil* opens the door for this court to assess the reasonableness of a defendant's non-infringement position that is based on a claim construction that a defendant failed to raise, or that was not before the jury.[2] In this case, MSD proposed no construction for the "stopping" limitation, arguing that the limitation has a plain meaning to one of ordinary skill in the art. I would resolve this case on this basis. Where

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[1] In *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 778 F.3d 1365, 1373 (Fed. Cir. 2015), this court found that MSD was precluded from raising on appeal its construction of the "stopping limitation," because it was raised too late in the proceeding and was therefore waived.

[2] *See supra* note 1.

a defendant proposes no construction of a claim term, this court is speculating to determine what the defendant's reading of the claims is. We should not be in the business of creating claim constructions for defendants in induced infringement actions so that we may then assess whether the claim constructions are reasonable.

Second, if the question before us is whether the jury had sufficient evidence to find that MSD induced infringement, such as circumstantial evidence showing that MSD was willfully blind, our analysis should discuss that evidence. But, the only evidence the opinion cites as showing MSD's *intent* to induce infringement is evidence that MSD's device itself directly infringed. Op. at 11. Thus, the opinion's analysis is suspect. *Commil* indicated that a defendant's reliance on a claim construction under which it did not infringe, while incorrect or wrong, could still suffice to show that the defendant lacked the intent to induce infringement as long as the construction was reasonable. 135 S. Ct. at 1928. Because the jury was not instructed on this, I find it difficult at best to say that the jury necessarily decided that MSD's "claim construction" was unreasonable, as the opinion seems to do. Of note, the jury was not presented with the claim construction briefing that the court here relies on in its analysis criticizing MSD's "claim construction."

Third, the opinion concludes by stating that "[g]iven the strength of the evidence NuVasive presented, a reasonable jury could have concluded that MSD must have known" its device infringed under the claim constructions adopted by the district court and now affirmed by this court. Op. at 12. It is not clear what evidence leads to this conclusion, let alone that the evidence is so strong that it shows MSD "must have known" it was infringing. In *Global-Tech*, the Supreme Court cited evidence that the accused infringer had intentionally withheld key information from its patent attorney when seeking a

right-to-use opinion. *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 131 S. Ct. 2060, 2071 (2011). In *Global-Tech*, the evidence demonstrated the defendant's willful blindness. The opinion here cites no similar evidence. The opinion's analysis suggests that any time a defendant's products are found to directly infringe, the plaintiff has sufficiently established the defendant's intent to induce infringement. This proposition conflicts with *Global-Tech*, *Commil*, and our caselaw.