

**United States Court of Appeals
for the Federal Circuit**

AURIS HEALTH, INC.,
Appellant

v.

INTUITIVE SURGICAL OPERATIONS, INC.,
Appellee

2021-1732

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2019-01533.

Decided: April 29, 2022

RYAN C. MORRIS, Sidley Austin LLP, Washington, DC, argued for appellant. Also represented by THOMAS ANTHONY BROUGHAN, III; CHING-LEE FUKUDA, New York, NY; PAUL J. ROGERSON, Chicago, IL.

BENJAMIN AARON SAIDMAN, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Atlanta, GA, argued for appellee. Also represented by JACOB ADAM SCHROEDER, Palo Alto, CA; DANIEL C. TUCKER, Reston, VA.

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

2 AURIS HEALTH, INC. v. INTUITIVE SURGICAL OPERATIONS

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

Dissenting opinion filed by *Circuit Judge* REYNA.

PROST, *Circuit Judge*.

Auris Health, Inc. (“Auris”) petitioned for inter partes review of all five claims of Intuitive Surgical Operations, Inc.’s (“Intuitive”) U.S. Patent No. 8,142,447 (“the ’447 patent”). In its final written decision, the Patent Trial and Appeal Board (“Board”) determined that Auris failed to demonstrate that the claims were unpatentable as obvious. *Auris Health, Inc. v. Intuitive Surgical Operations, Inc.*, No. IPR2019-01533, Paper 45, 2021 WL 826396 (P.T.A.B. Mar. 3, 2021) (“*Final Written Decision*”). Although the Board agreed with Auris that its combination of two references disclosed every limitation of the challenged claims, the Board concluded that a skilled artisan wouldn’t have been motivated to combine those references. Auris appeals. Because the Board impermissibly rested its motivation-to-combine finding on evidence of general skepticism about the field of invention, we vacate and remand.

BACKGROUND

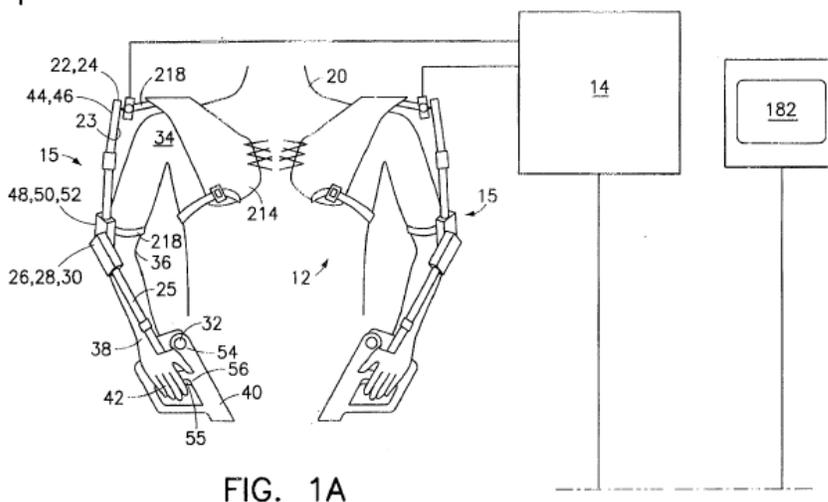
The ’447 patent relates to robotic surgery systems. Specifically, the ’447 patent describes an improvement over Intuitive’s earlier robotic surgery systems, which allow surgeons to remotely manipulate surgical tools using a controller. ’447 patent col. 1 ll. 42–52. Surgery often requires a variety of surgical instruments like scissors, scalpels, and graspers, and clinicians must swap out instruments as they move from one surgical task to the next. Instrument swapping can prove tricky in a robotic surgical system where space is limited, different ranges of motion must be calibrated for different surgical instruments, and time is needed to interchange those instruments. The invention embodied by the ’447 patent attempts to address such difficulties via a robotic system with a servo-pulley mechanism, which allows clinicians to more quickly swap out

surgical instruments and thereby reduce surgery time, improve safety, and increase reliability of the system. *Id.* at col. 2 ll. 50–57.

The Board determined that Auris’s asserted prior-art combination—Smith and Faraz—disclosed each limitation of the challenged claims. See U.S. Patent No. 5,624,398 (“Smith”); U.S. Patent No. 5,824,007 (“Faraz”). The only issue that remained was whether a skilled artisan would have been motivated to combine Smith and Faraz. *Final Written Decision*, 2021 WL 826396, at *8.

Smith discloses a robotic surgical system that uses an exoskeleton controller, worn by a clinician, to remotely manipulate a pair of robotic arms, each of which holds a surgical instrument. Smith Abstract, Fig. 1A. Smith teaches using a servo-pulley system to mimic the clinician’s movements in the robotic arms. *Id.* at col. 6 ll. 46–67. However, Smith also provides that the clinician “may direct [an]

FIG. 1A
 FIG. 1B
 FIG. 1



assistant to relocate the robot[ic] arms” as necessary. *Id.* at col. 8 ll. 48–51.

Faraz discloses an adjustable support stand that holds surgical instruments. Faraz Abstract, Fig. 1. Faraz’s stand can be adjusted either manually or robotically. *Id.* at col. 6 ll. 23–29. Faraz provides that its stand “may enable a surgeon to perform surgery with fewer assistants” because its stand “can support multiple surgical implements while [they] are being moved” and “can also provide support for a surgeon’s arms during long or complicated surgery.” *Id.* at col. 6 ll. 30–43.

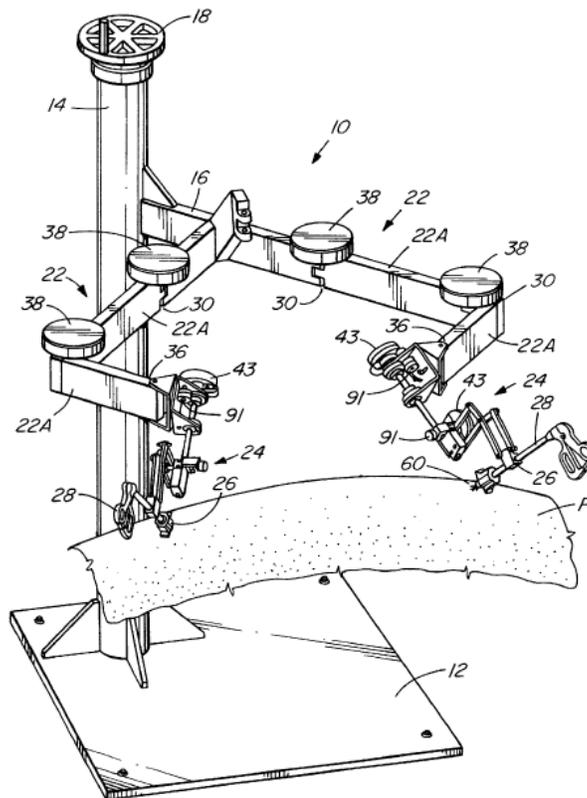


FIG. 1

Before the Board, Auris argued that a skilled artisan would be motivated to combine Smith and Faraz to decrease the number of assistants needed during surgery by roboticizing some of their tasks. Intuitive responded that a skilled artisan wouldn't have been motivated to combine the references because "surgeons were skeptical about performing robotic surgery in the first place, [so] there would have been no reason to further complicate Smith's already complex robotic surgical system with [Faraz's] roboticized surgical stand." *Final Written Decision*, 2021 WL 826396, at *7–8.

The Board agreed with Intuitive and concluded that "the evidence . . . supports the position [that] there is no motivation to complicate Smith's system when there is skepticism at the time of the invention for using robotic systems during surgery in the first place." *Id.* at *9. On appeal, Auris challenges the Board's reliance on general skepticism about the field of robotic surgery to find a lack of motivation to combine. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

The motivation-to-combine inquiry asks whether a skilled artisan "not only could have made but would have been motivated to make the combinations . . . of prior art to arrive at the claimed invention." *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (emphasis omitted). As to the "would have" question, "any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). It follows that generic industry skepticism cannot, standing alone, preclude a finding of motivation to combine.

To be sure, evidence of industry skepticism may play a role in an obviousness inquiry—but as a secondary consideration in a significantly different context. *See WBIP*,

LLC v. Kohler Co., 829 F.3d 1317, 1335–36 (Fed. Cir. 2016). Yet even then, the evidence of skepticism must be specific to the invention, not generic to the field. *Id.* Although Intuitive suggests that the Board may consider generic industry skepticism in a motivation-to-combine analysis to “place [itself] in the minds of” skilled artisans, Appellee’s Br. 40–41 (citing *Interconnect Plan. Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985)), it offers no case law to suggest that the Board can rely on generic industry skepticism to find a lack of motivation to combine. And while *specific* evidence of industry skepticism related to a *specific* combination of references *might* contribute to finding a lack of motivation to combine, that’s not what we have here.

Here, the Board almost exclusively relied on evidence of general skepticism about the field of robotic surgery to find a lack of motivation to combine Smith and Faraz. In doing so, it credited Intuitive’s vague expert testimony that “there was great skepticism for performing telesurgery” at the time of the invention and, as a result, a skilled artisan “would not have been compelled to complicate Smith’s system further.” *Final Written Decision*, 2021 WL 826396, at *8. This is insufficient.

It’s unclear how the Board would parse its impermissible reliance on general industry skepticism from the rest of the record evidence on motivation to combine. The Board recited Auris’s evidence that combining Smith and Faraz would reduce the number of assistants but also Intuitive’s evidence that such a combination would come at the expense of precision required for surgery. It would be inappropriate for this court to weigh that evidence in the first instance on appeal. We therefore remand this case to the Board to examine the sufficiency of the record evidence to establish that there was a motivation to combine utilizing the correct criteria.

AURIS HEALTH, INC. v. INTUITIVE SURGICAL OPERATIONS

7

CONCLUSION

We have considered the parties' remaining arguments but find them unpersuasive. For the foregoing reasons, we vacate the Board's Final Written Decision and remand for further consideration of the parties' motivation-to-combine evidence.

VACATED AND REMANDED

COSTS

No costs.

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REYNA, *Circuit Judge*, dissenting.

I respectfully dissent. In my view, the Board’s determination that Auris failed to show a motivation to combine is adequately supported by substantial evidence and was not contrary to our law on obviousness. *See In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1373 (Fed. Cir. 2016) (“We review the Board’s legal conclusion of obviousness *de novo*, and underlying factual findings for substantial evidence.”); *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938) (Substantial evidence “means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.”).

I agree with the majority that skilled artisans’ general skepticism toward robotic surgery, by itself, could be

insufficient to negate a motivation to combine. But I disagree that it could never support a finding of no motivation to combine. In any event, the Board here relied on more than just general skepticism to find no motivation to combine. In fact, the Board dedicated several pages to explaining multiple reasons why Auris's proffered motivation to combine was inadequate.

First, the Board credited Dr. Choset's testimony, supported by evidence, that "there was great skepticism for performing telesurgery, and *because of this skepticism* one of ordinary skill in the art at the time of the invention *would not have been compelled to complicate Smith's system further* by including a robotic surgical stand." *Auris Health, Inc. v. Intuitive Surgical Operations, Inc.*, No. IPR2019-01533, 2021 WL 826396, at *8 (P.T.A.B. Mar. 3, 2021) (emphases added). Second, the Board found that the petitioner failed to "articulate how one would have combined Smith and Faraz to achieve the stated goal of reducing the number of assistants," given that "Smith's exoskeleton has no remaining input degrees of freedom to control Faraz's stand." *Id.* at *9. Third, the Board credited Dr. Choset's testimony that the combination would be unacceptable because it "would have limited a physician's ability to manipulate Smith's servo-pulley tray and related components." *Id.* Fourth, the Board credited Dr. Choset's *unrebutted* testimony that adding joints to the system to achieve Auris's proposed combination would "make[] it more difficult for the mechanical components in each joint to work with the amount of precision that is required for surgery" and would "create[] an effect known as 'slop,' which makes it increasingly difficult to track the position of each joint, as joint components and linkages bend or gear components experience backlash." *Id.* The Board's determination was therefore supported on multiple grounds and did not solely rest on a vague "general skepticism" of robotic surgery.

I am also concerned that the majority opinion may reasonably be understood to announce an inflexible and rigid rule, namely that it is “impermissible” for the Board to consider evidence of artisans’ skepticism toward robotic surgery in determining motivation to combine. I find no authority for this assertion, and indeed it appears in tension, at a minimum, with the central thrust of *KSR*. See *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007) (rejecting the “rigid approach of the Court of Appeals” and articulating an “expansive and flexible approach” of determining obviousness). This is particularly true when considering art in fields of endeavor that are inherently dangerous or risky. Indeed, in past cases, this court has accounted for the attitudes of medical professionals toward certain types of procedures when determining whether a motivation to combine has been adequately demonstrated. See, e.g., *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012) (finding no motivation to combine where “doctors were not using the disclosed devices and methods to heal wounds with negative pressure because they did not believe that these devices were capable of such healing”). We have also considered whether, as in this case, added complexity would have dissuaded a person of ordinary skill in the art from combining references. See, e.g., *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019) (affirming the Board’s finding of no motivation to combine where the Board “credited Frymaster’s expert’s testimony that following Iwaguchi’s method of diverting and cooling the oil in Kauffman’s system would introduce ‘additional plumbing and complexity’”). These exemplary cases call into question the majority’s holding that it was “impermissible” for the Board to rely on Dr. Choset’s testimony that (i) physicians were skeptical of robotic surgery at the time of invention, and (ii) this skepticism would have dissuaded a skilled artisan from adding complexity by making the proposed combination.

I recognize that the majority states that skepticism “may play a role in an obviousness inquiry—but as a secondary consideration.” Maj. Op. 5. But this assertion suggests, to some extent, that objective indicia are less important or less probative of obviousness or non-obviousness than the other *Graham* factors. The majority cites no case in which this court has endorsed that view, and in fact that view appears inconsistent with a number of our opinions. *See, e.g., Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (“A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.”); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996) (“It is the secondary considerations that are often most probative and determinative of the ultimate conclusion of obviousness or nonobviousness. The district court did not provide reasons for apparently discounting Pro-Mold’s evidence of secondary considerations; that was error as a matter of law.”); *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378 (Fed. Cir. 2012) (“These objective guideposts are powerful tools for courts faced with the difficult task of avoiding subconscious reliance on hindsight.”).

In sum, the majority overlooks multiple reasons why the Board found the proffered motivation to combine insufficient. It also announces a new legal principle that I believe conflicts with *KSR* and its progeny. For these reasons, I dissent.