

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AVAIL MEDSYSTEMS, INC.,
Petitioner,

v.

TELADOC HEALTH, INC.,
Patent Owner.

IPR2022-00444
Patent 10,887,545 B2

Before LYNNE H. BROWNE, PATRICK R. SCANLON, and
FREDERICK C. LANEY, *Administrative Patent Judges*.

LANEY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Avail Medsystems, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 10,887,545 B2 (Ex. 1001, “the ’545 patent”). Teladoc Health, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, Petitioner also filed a Preliminary Reply and Patent Owner filed a Preliminary Sur-reply. Paper 8; Paper 9.

We have jurisdiction under 35 U.S.C. § 314. Under § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). The Board determines whether to institute a trial on behalf of the Director. 37 C.F.R. § 42.4(a). A decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition.” *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018).

For the reasons set forth below, we determine that Petitioner has not demonstrated that there is a reasonable likelihood that at least one of the challenged claims is unpatentable. Accordingly, we do not institute an *inter partes* review of the challenged claims in the Petition.

B. *Real Parties-in-Interest*

Petitioner identifies itself as the sole real party-in-interest. Pet. 115. And Patent Owner identifies itself, as well as, InTouch Technologies, Inc. to be the real parties-in-interest. Paper 5, 1.

C. Related Matters

Petitioner and Patent Owner both identify *Teladoc Health, Inc. v. Avail Medsystems, Inc.*, No. 1:21-cv-00820 (D. Del.), which is patent infringement litigation filed by Patent Owner against Petitioner asserting the '545 patent, as a related matter. Pet. 2; Paper 5, 1. Patent Owner further notes that U.S. Patent No. 8,849,679 and U.S. Patent No. 9,160,783 are also being asserted in the litigation between the parties and that those patents are the subject matter of IPR2022-00445 and IPR2022-00554, respectively. Paper 5, 1.

D. The '545 Patent

The '545 patent, titled "Remote Presence System Including a Cart That Supports a Robot Face and an Overhead Camera," describes a tele-presence system that provides video conferencing and overhead camera capabilities that may be selectively placed adjacent to and/or inside of a sterile field occupied by a surgeon. Ex. 1001, codes [54], [57]. The tele-presence system includes a cart having "a camera(s) 50, a monitor 52, a microphone(s) 54 and a speaker(s) 56," which the '545 Patent collectively terms a "face 16" or a "robot face 16," as shown in FIG. 2, reproduced below

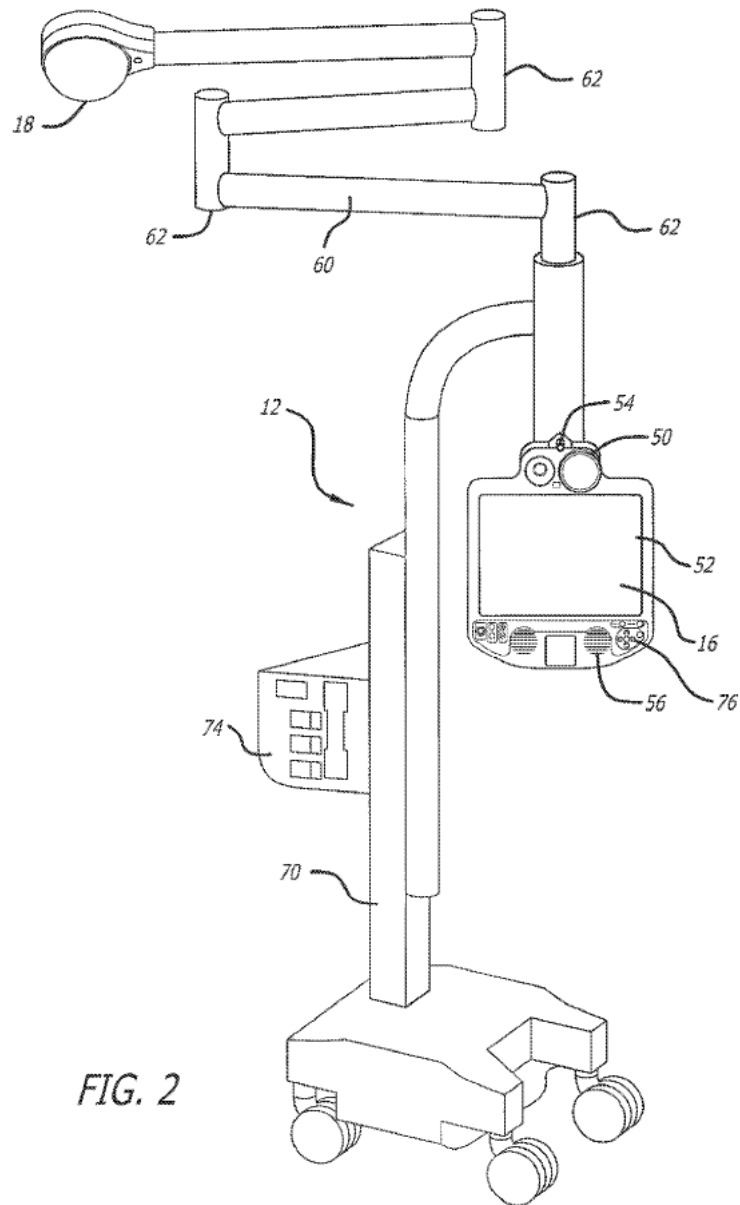


FIG. 2

Id. at 2:16–18, 2:47–49, Fig. 2. Figure 2 is “a perspective view of a cart” configured for the disclosed tele-presence system. *Id.* at 1:53. The ’545 patent describes that the cart further includes an “overhead camera 18 . . . coupled to a boom 60” and that the boom includes “a number of joints 62” that enable the boom to be extended and otherwise positioned to locate the overhead camera. *Id.* at 2:57–58, 2:65–67.

The '545 patent explains that when “the cart 12 . . . [is] used in an operating room,” this “face 16 may be placed adjacent to the sterile field.” Ex. 1001, 5:10–11, 5:14. “With such a configuration, personnel may conduct two-way video conferencing through the robot face 16.” *Id.* at 5:15–16. This would, for example, “allow a physician at the remote station to view the procedure and have a video conference to provide instructions, mentoring, etc. to personnel at the surgical site.” *Id.* at 5:19–22. The boom 60 enables overhead camera 18 at its end to be extended and positioned in an operating room above an operating table 200. *Id.* at 2:58, 2:65–67, 5:10–12. As a result, “[t]he overhead camera 18 may be located above a sterile field.” *Id.* at 5:12–14. Alternatively, “the overhead camera can be placed in a sterile field,” where, “for example[,] in an operating room, [a] handle 66 [of the boom] may be replaced with a sterile handle before each medical procedure to allow a surgeon within the sterile field to position the boom during a procedure.” *Id.* at code [57], 2:67–3:3. This selective placement of “[t]he overhead camera 18 may provide a more desirable view of the patient and operating procedure,” while providing the option of having the camera either adjacent to or inside to the sterile field. *Id.* at 5:17–19.

The '545 patent describes further that the tele-presence system has remote control station 14 that connects to the cart 12 through a network 20,” such as “a packet switched network such as the Internet, or a circuit switched network . . . or other broadband system.” Ex. 1001, 2:18–23. The remote station includes “a monitor 24, a camera 26, a microphone 28 and a speaker 30.” *Id.* at 2:25–27. In operation, the cart camera 50 is connected to the remote monitor 24 to allow a user at the remote station 14 to view a video image captured by the robot camera 50” and the cart monitor 52 is

likewise connected to the remote camera 26 so that personnel at the surgical site may view the user of the remote station 14. *Id.* at 2:49–56.

Microphones 28 and 54, and speakers 30 and 56, provide an audible communication means between the system operator and the personnel at the surgical site. *Id.*

The '545 patent describes the remote station as having “a display user interface (‘DUI’) 120” to provide features for “a physician at the remote station to view the procedure and have a video conference to provide instructions, mentoring, etc. to personnel at the surgical site.” Ex. 1001, 3:34–40, 5:19–22. The DUI 120 has a “[remote] view field 122 that displays a video image captured by the robot camera and/or the overhead camera” of the cart and “a station view field 124 that displays a video image provided by the camera of the remote station 14,” which is illustrated in Figure 5 below. *Id.* at 3:34–40.

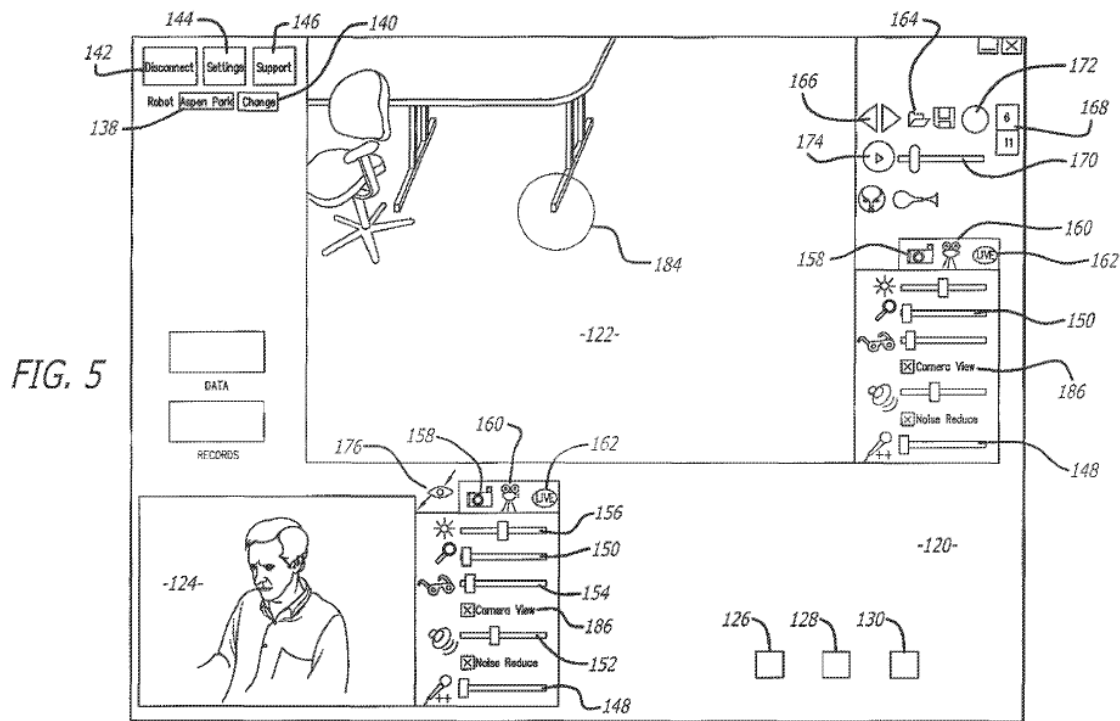


Figure 5 “shows a display user interface . . . that can be displayed at the remote station 14.” *Id.* at 3:34–35. The DUI has a plurality of graphic controls providing access to features that utilize the overhead camera and video conferencing capabilities of the tele-presence system, such as “a graphical switch 126 that allows the user to select between the video image provided by the robot camera [at the cart] and the video image provided by the overhead camera,” and “a graphical switch 128 that allows the user to select the simultaneous display of the video images from the robot and overhead cameras.” *Id.* at 3:43–49, Figs. 5, 6.

The ’545 patent teaches that the pan, tilt, and zoom of each of the overhead camera and face camera are independently controllable at the remote station. Ex. 1001, 3:52–56. For example, “[a] zoom or highlighting feature may be utilized by manipulating a cursor on either image,” and “[t]he system may also automatically pan a camera when the cursor is moved out of the displayed field of view.” *Id.* at 3:52–56. The ’545 patent suggest that this allows for a “more advantageous vantage point to view a procedure” provided by the overhead camera, as well as the view of the video conference conducted through the face. *Id.* at 2:7–11.

E. Illustrative Claim

The ’545 patent has 20 claims, with claims 1, 12, and 20 being the only independent claims. Ex. 1001, 5:33–67, 6:28–59, 7:14–8:24. Independent claim 1 is directed to a cart for use in a surgical mentoring system that is configured to be coupled to a remote station via a network. *Id.* at 5:33–67. Claims 2–11 depend, directly or indirectly, from claim 1. *Id.* at 6:1–27. Independent claims 12 and 20 are directed to methods for operating an apparatus like the one described in claim 1. *Id.* at 6:28–59, 7:14–8:24.

Claims 13–19 depend, directly or indirectly, from claim 12. *Id.* at 6:60–7:12.

Independent claim 1 is illustrative and is reproduced below with bracketed labels employed by Petitioner to facilitate analysis and discussion.

1. [1.pre] A cart for use in a surgical mentoring system, the cart comprising:

[1.a] a first camera; a second camera; a speaker; a microphone; and an input device;

[1.b] wherein the second camera is coupled to the cart via a boom that includes a plurality of joints configured to allow a distance between a first end of the boom and a second end of the boom to be varied,

[1.c] wherein the cart is configured to be coupled to a remote station via a network, the remote station including a camera, a monitor, and microphone, and a speaker,

[1.d] wherein the remote station is configured to display a user interface on the station monitor, the user interface includes a remote view field, a station view field, and a plurality of graphical controls,

[1.e] wherein the plurality of controls include one or more controls to selectively display video from the first camera or the second camera in the remote view field,

[1.f] one or more controls to display a still image captured by the first camera or the second camera in the remote view field

[1.g] one or more controls to transfer an image to the cart monitor for display,

[1.h] and one or more controls to annotate an image displayed on the cart monitor from the remote station,

[1.i] wherein the station view field displays an image captured by the station camera

[1.j] the station speaker reproduces a sound captured by the cart microphone, the station microphone captures a sound that is transmitted to and reproduced by the cart speaker, and

[1.k] wherein the orientation of the first camera and the orientation of the second camera can be independently controlled from the remote station.

Ex. 1001, 5:33–67; *see* Pet. 4–5.

F. Prior Art and Asserted Grounds

Petitioner asserts that one or more of the challenged claims would have been obvious on the following five grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 4–7, 10, 12, 15, 19, 20	103	Wang, ¹ King ²
1, 4–10, 12, 15–17, 19, 20	103	Wang, King, Wang-II ³
2, 3, 11, 13, 14, 18	103	Wang, King, Hennion ⁴
2, 3, 11, 13, 14, 16–18	103	Wang, King, Hennion, Wang II
1–20	103	King, Hennion, Ludwig ⁵

Pet. 4. Petitioner supports its challenge with the Declaration of Dr. Robert T. Stone (Ex. 1002).

II. ANALYSIS

Petitioner contends that we should institute an *inter partes* review of the '545 patent because claims 1–20 would have been obvious in view of (1) either King and Wang alone, or in view of various combinations of Wang II and/or Hennion; and (2) King, Hennion, and Ludwig. Patent Owner contends that discretionary denial of *inter partes* review is appropriate in this case either (1) under 35 U.S.C. § 325(d), because the asserted prior art is allegedly “substantially the same” as the prior art considered during prosecution; or (2) under 35 U.S.C. § 314(a), because of the alleged inefficiencies created by this proceeding in view of the parallel litigation. *See* Prelim. Resp. 63–67. And even if discretionary denial is not

¹ US 2007/0291109 A1, pub. Dec. 20, 2007 (Ex. 1010, “Wang”).

² US 2006/0119701 A1, pub. June 8, 2006 (Ex. 1011, “King”).

³ US 2005/0204438 A1, pub. Sept. 15, 2005 (Ex. 1012, “Wang-II”).

⁴ US 2003/0144768 A1, pub. July 31, 2003 (Ex. 1013, “Hennion”).

⁵ US 2004/0107255 A1, pub. June 3, 2004 (Ex. 1014, “Ludwig”).

appropriate, Patent Owner contends that we should deny *inter partes* review because Petitioner's grounds of unpatentability are deficient. *See id.* at 22–62.

After considering the contentions and evidence submitted by both parties, we agree with Patent Owner that the Petition is deficient because it fails to establish sufficiently that there is a reasonable likelihood Petitioner would prevail with respect to at least 1 of the claims challenged in the Petition. Therefore, because the deficiencies with the Petition are dispositive, Patent Owner's other arguments regarding the exercise of our discretion are moot.

A. Legal Standards

Petitioner has the burden of proof. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.”).

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that 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 to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when available, evidence such as commercial success, long felt but unsolved needs, and failure of

others.⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” 383 U.S. at 18.

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To support this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*; *see also Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265, 1273 (Fed. Cir. 2018) (“The question is not whether the various references separately taught components of the ’330 Patent formulation, but whether the prior art suggested the selection and combination achieved by the ’330 inventors.”).

⁶ Patent Owner does not direct us to any objective evidence of non-obviousness in its Preliminary Response.

In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, it is insufficient to simply conclude the combination would have been obvious without identifying any reason *why* a person of skill in the art would have made the combination. *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1366 (Fed. Cir. 2017). As factfinders, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 550 U.S. at 421.

Applying these general principles, we consider the evidence and arguments of the parties.

B. Level of Ordinary Skill in the Art

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). “This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.*

Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of workers active in the field. *Env’t Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to

determining the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima*, 261 F.3d at 1355.

Petitioner asserts that a person of ordinary skill in the art at the relevant time would have had a “[Bachelor of Science degree] in Computer Science, Electrical Engineering, or similar field and two years of research or work experience in designing or engineering teleconferencing systems, such as those used in telemedicine.” Pet. 15–16 (citing Ex. 1002 ¶¶ 14–17). Patent Owner asserts a skilled artisan would have had “a bachelor’s degree in computer science, electrical engineering, or a similar field, and at least two years of experience in robotics or telemedicine systems.” Prelim. Resp. 9–10 (citing Ex. 2001 ¶ 37).

Patent Owner notes both parties assert a similar educational background, but they differ on the kind of additional practical experience a skilled artisan would have had—i.e., two years of research or experience in teleconferencing systems versus two years of experience in robotics or telemedicine. *Id.* at 10. However, Patent Owner does not explain, in application, how the two years of research or experience in teleconferencing systems versus telemedicine affects the patentability analysis in this case. *See generally* Prelim. Resp. And Patent Owner argues that regardless of which level of skill is adopted the opinions of Petitioner’s expert, Dr. Stone, “should be given little or no weight because Dr. Stone does not have the requisite level of skill to testify from the perspective of a [skilled artisan].” *Id.* at 11–12.

For purposes of this Decision, we accept Petitioner’s contention regarding the level of skill that a skilled artisan would have had at the time of the invention because it is not evident that the difference between the two years of research or experience in teleconferencing systems versus telemedicine would have any meaningful effect on our determination of the issues presented. Regarding Patent Owner’s argument about whether the background of Petitioner’s expert qualifies him to offer testimony from the perspective of a skilled artisan, we address that issue below (*see infra* § II.D.1.a.3).

C. Claim Construction

We construe each claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b).” 37 C.F.R. § 42.100(b) (2019). Under this standard, claim terms are generally given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc) (“We have frequently stated that the words of a claim ‘are generally given their ordinary and customary meaning.’” (citations omitted)).

Petitioner contends that because “[t]he terms of the challenged claims are all understandable, ordinary English words, and have not been imparted any special meaning by the specification,” that “the claims need to be expressly construed, and they should be given their ordinary meaning to a [skilled artisan].” Pet. 16. “Patent Owner agrees with Petitioner that no formal claim constructions are necessary at this point [of the proceeding].” Prelim Resp. 12.

Claims are construed only to the extent necessary to resolve a dispute. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”). Therefore, because our determination does not turn on resolving any disputed claim language, we need not construe expressly any claim terms.

D. Sufficiency of the Petition to Show the Challenged Claims are Unpatentable

1. Independent Claims 1, 12, and 20

As noted above, the challenged claims include three independent claims (claims 1, 12, and 20), which Petitioner contends are unpatentable under 35 U.S.C. § 103 in view of King and Wang (Ground 1); King, Wang, and Wang II (Ground 2); and King, Hennion, and Ludwig (Ground 5). Pet. 4, 20–45, 48–50, 68–92, 95–97. For Grounds 1 and 2, Patent Owner argues that the Petition is deficient because Petitioner has failed to demonstrate sufficiently that a skilled artisan would have been motivated to modify the robot Wang discloses to have a second camera “coupled to the cart via a boom that includes a plurality of joints configured to allow a distance between a first end of the boom and a second end of the boom to be varied,” as Element [1.b] recites (which is similarly recited by claims 12 and 20). Prelim. Resp. 24–28. For Ground 5, Patent Owner argues that the Petition is deficient because Petitioner has failed to demonstrate sufficiently that a skilled artisan would have been motivated to modify the remote station Hennion discloses in view of Ludwig. *Id.* at 51–53.

Having studied the evidence and arguments presented by both parties, we find the deficiency issues raised by Patent Owner with the Petition to be collectively dispositive. As a result, our discussion below is focused on those issues. And for each issue, first, we provide a brief overview of the relevant prior art and, second, we evaluate the sufficiency of the Petition to make the necessary showing for this stage of the proceeding that the prior art renders independent claims 1, 12, and 20 unpatentable. For the following reasons, we find Petitioner has failed to do so and, as a result, all of Petitioner’s alleged grounds of unpatentability against the challenged claims are deficient to warrant institution of an *inter partes* review.

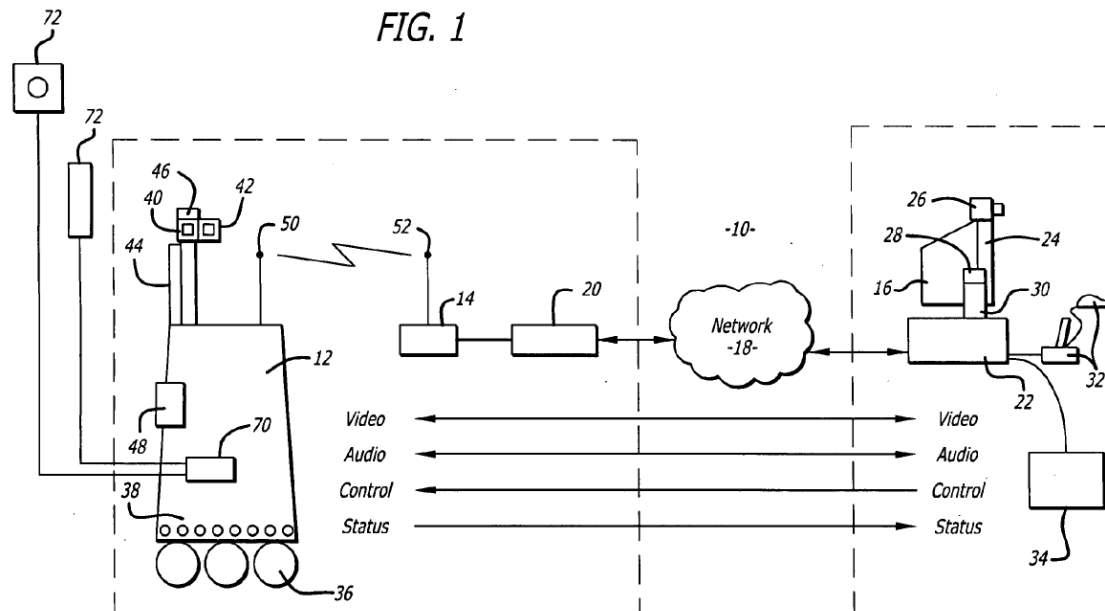
a) Whether the Petition Fails to Shows a Skilled Artisan Would Have Modified Wang’s Robot in View of King or Wang II to Include a Boom-Mounted Camera

Claims 1, 12, and 20 are directed to a surgical mentoring system having a cart that includes, among other things, a second camera that is “coupled to the cart via a boom that includes a plurality of joints configured to allow a distance between a first end of the boom and a second end of the boom to be varied,” which is represented by Element [1.b] in claim 1. Ex. 1001, 5:33–36, 5:40–43, 6:36–40, 7:25–8:4. Petitioner contends in the first ground that the combination of Wang and King alone disclose those limitations; in the second ground including Wang II, Petitioner still only relies on Wang and King alone to teach those limitations. *See* Pet. 29–32, 47–50, 57. Therefore, we provide a brief summary below of Wang and King only before addressing the merits of Petitioner’s contentions.

(1) Wang

Wang, titled “Remote Controlled Mobile Robot With Auxiliary Input Ports,” is directed to “[a] remote controlled robot system that includes a

mobile robot and a remote control station.” Ex. 1010, codes [54], [57].
Wang illustrates an example of such a system in Figure 1, reproduced below.



Wang describes Figure 1 as showing a mobile robot 12 that “includes a movement platform 36 that is attached to a robot housing 38,” which is configured to have a pair of cameras 40 and 42, a monitor 44, a microphone(s) 46, a speaker(s) 48, and an auxiliary port(s) 70 to allow for the connection of a video device(s) 72, such as an otoscope, a ceiling camera, and/or a video playback machine. *Id.* ¶¶ 15, 18, Fig. 1. Additionally, Figure 1 shows robot 12 as being configured to communicate over network 18 with a remote station 16 that includes a monitor 24, camera 26, microphone 28, speaker 30, and input device 32 such as joystick and/or a mouse and a keyboard 34. *Id.* ¶ 14.

Wang explains that, in operation, the mobile robot may be placed in a home, hospital, or residential care facility where one or more patients are to be monitored and that it “can be maneuvered through the home or a facility

by manipulating [an] input device . . . at a remote station” by transmitting commands through the broadband network 18. *Id.* ¶¶ 31–32, 38. “For example, commands to move the robot may be generated by moving the joystick 32,” where “[t]he robot 12 and remote station 16 transmit commands through the broadband network 18.” *Id.* ¶ 38. Wang explains further that the display user interface 220 at remote station 16 provides a robot view field 222 to display a video image received from one of the cameras 40, 42, or video device 72 at the robot 12 location, as well as, a station view field 224 for displaying a video image from the camera at remote station 16. *Id.* ¶ 28.

(2) *King*

King, titled Portable Pan-Tilt Camera and Lighting Unit for Videoimaging, Videoconferencing, Production And Recording, is directed to “a portable camera and lighting unit for standalone use in videography to create a high-resolution well-illuminated video feed from a vast array of camera angles and positions.” Ex. 1011 codes [54], [57]. King explains that “the unit may also be used as a satellite in combination with a primary video conferencing and production station (VVPR) for multi-camera production and teleconferencing capabilities.” *Id.* code [57]. King describes the portable camera and lighting unit as including “a portable base, a mast extending upward from the base, and an articulating boom that is fully-pivotable and extendable.” *Id.* In addition, mounted at the end of the boom for overhead images of healthcare procedures is a remote-control Pan-Tilt-Zoom camera with a beam light source for lighting. *Id.* “The mast is equipped with a color monitor coupled to the camera for operator previewing at the portable unit, and the remote control camera provides a

single video feed that can be teleconferenced, recorded, and even mixed with other cameras when used as a satellite adjunct to the primary VVPR.” *Id.*

King illustrates an exemplary embodiment of this portable camera and lighting unit for standalone use in Figure 1, which is reproduced below.

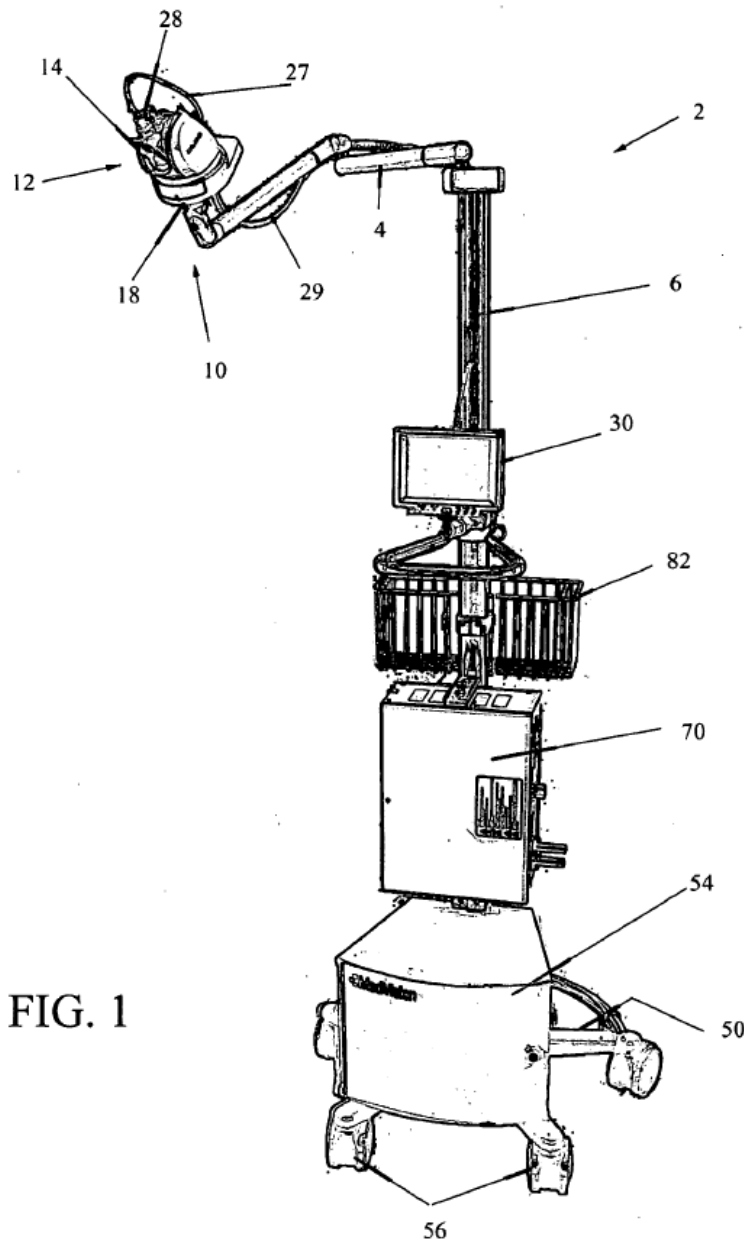


Figure 1 shows a “perspective view of the portable camera and lighting unit 2” that King describes. Ex. 1011 ¶ 21, Fig. 1. King explains further that the

wheeled mobile platform 50 comprises a unitary carriage with five protruding legs converging to a center point and “the mast 6 is inserted into a receptacle at the center point of platform 50 for proper balance, and the bottom of the mobile platform 50 is preferably counterweighted to prevent tipping over due to the weight of the extended boom 4.” *Id.* ¶ 41.

(3) *The Merits of Petitioner’s Contentions for Element [1.b], Coupling a Second Camera to the Cart Via a Boom*

Petitioner contends that Wang discloses the claimed first/second camera and identifies: (1) that mobile robot 12 has a pair of cameras 40 and 42 that are coupled to the robot monitor 24, which Wang describes as allowing them “move together in two degrees of freedom including pan and tilt directions” and (2) that mobile robot 12 has an auxiliary video port(s) 70 that can be connected to a video device, such as a ceiling camera and/or a video playback machine such as a VCR or DVD player. Pet. 28–29, 43 (citing Ex. 1010 ¶¶ 15, 18). Petitioner states the external video devices that are connected to the auxiliary port of the mobile robot 12 “capture video that is transmitted to the remote station 16 through the mobile robot 12,” and are also the claimed ‘second camera.’” *Id.* at 29 (citing Ex. 1010 ¶ 18, Claim 4). Petitioner states that a skilled artisan “would understand that the video devices connected to the auxiliary ports are additional cameras that would constitute the claimed first and/or second cameras.” *Id.* (citing Ex. 1002 ¶ 82).

For Element [1.b]—“wherein the second camera is coupled to the cart via a boom that includes a plurality of joints configured to allow a distance between a first end of the boom and a second end of the boom to be varied”—Petitioner reasons as follows. Petitioner contends the “portable

base, a mast extending upward from the base, and an articulating boom that is fully-pivotable and extendable” that King discloses shows “the claimed ‘second camera’ and multi-joint ‘boom.’” Pet. 29–30 (citing Ex. 1002 ¶ 83; Ex. 1011 ¶ 18, Figs. 1, 3). Petitioner points out King describes that “‘boom 4 will stretch 60 [inches] outward, with two lengths 40, and in a retracted position just 22 [inches]” and that “boom 4 is capable of articulating to any intermediate position.” *Id.* at 31 (citing Ex. 1011 ¶¶ 37, 18). According to Petitioner, therefore, those joints in the boom 4 of King “allow the distance between a first end of the boom and a second end of the boom to be varied.” *Id.* (citing Ex. 1002 ¶ 83). Petitioner concludes by contending that a skilled artisan would have found it obvious to incorporate King’s teachings into Wang because a POSITA would have been motivated by the utility and flexibility of a camera mounted on a boom arm, which have been in use for medical applications for many decades. *Id.* at 31 (citing Ex. 1002 ¶ 84). Furthermore, a skilled artisan “would have found it obvious to mount any of Wang’s cameras, including the external camera, using the boom arm disclosed in King.” *Id.* at 31–32 (citing Ex. 1002 ¶ 84).

Additionally, Petitioner contends that a skilled artisan “would have found it obvious to use Wang’s robot for the specific medical applications described by King . . . [and] incorporate King’s teachings of a boom arm.” Pet. 22 (citing Ex. 1002 ¶ 65). Petitioner contends that a skilled artisan would have been motivated to modify at least one of Wang’s cameras to be one that is mounted on a boom. *Id.* at 23 (citing Ex. 1002 ¶¶ 72–77). Petitioner contends that a skilled artisan would have been motivated to “modify Wang to include King’s remote-controlled pan[]-tilt-zoom camera” and “use . . . a boom-mounted camera [because it] was known to provide

benefits like flexibility of overhead camera placement to improve camera angles and provide a wider view of the patient.” *Id.* at 24 (citing Ex. 1002 ¶ 73). Petitioner identifies that King teaches that its boom-mounted camera provides benefits for a myriad of applications, such as in surgical procedures, and concludes that the applications “would have motivated a [skilled artisan] to mount one of Wang’s cameras on an articulating boom to allow for an overhead camera with flexible viewing angles.” *Id.* (citing Ex. 1011 ¶¶ 48, 15; Ex. 1016, 216; Ex. 1022 ¶ 20; Ex. 1002 ¶ 73).

Petitioner contends that a skilled artisan would have known this combination of Wang and King “would have been reasonably expected to succeed and yield predictable results”; “would have understood from King itself that a cart with a boom-mounted remote-controlled camera would have been mechanically and physically successful”; and “would further have understood that modifying Wang’s robot to include an articulating boom would have been a straightforward modification.” Pet. 26 (citing Ex. 1002 ¶ 77).

Patent Owner argues that Petitioner’s showing for Element [1.b] is deficient for several reasons. First, as noted above (*see supra* § II.B), Patent Owner argues that the expert testimony of Petitioner’s declarant Dr. Stone “should be given little or no weight” because he is not qualified to offer expert testimony from the perspective of a skilled artisan. Prelim. Resp. 12; *see also id.* at 11 (quoting *Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n*, 22 F.4th 1369, 1376-77 (Fed. Cir. 2022) (“[t]o offer expert testimony from the perspective of a skilled artisan in a patent case—like for claim construction, validity, or infringement—a witness must at least have

ordinary skill in the art. Without that skill, the witness' opinions are neither relevant nor reliable")). Dr. Stone is not qualified, Patent Owner asserts, because "numerous experiences with teleconferencing" and having "performed design reviews of telemedicine devices" does not demonstrate Dr. Stone has "two years of research or work experience in designing or engineering teleconferencing systems," which Petitioner proposes (and we have adopted for this Decision) is a necessary criteria to be a skilled artisan. Prelim. Resp. 12.

Second, Patent Owner argues that Petitioner fails to demonstrate sufficiently that the combination of Wang and King discloses "the second camera *is coupled to the cart via a boom*" and that a skilled artisan "would not have been motivated *to incorporate* a boom and boom mounted camera *into* the Wang mobile robot." Prelim. Resp. 37 (citing Ex. 2001 ¶ 91) (emphasis added). Patent Owner asserts that a skilled artisan would have viewed "the addition of a boom and boom-mounted camera [to] greatly complicate, and in many cases likely render inoperable, safe steering and mobility of the mobile robot." *Id.* at 25 (citing Ex. 2001 ¶ 73). As support, Patent Owner notes that the remote user steers Wang's mobile robot 12 based on the views provided by the cameras coupled thereto. *Id.* (citing 1010 ¶ 5). Patent Owner notes that the boom in King is neither motor actuated nor fitted with position sensors and asserts that a user could not use a camera on the boom to steer mobile robot 12 "because the remote operator would have no way of knowing the direction that the boom camera faced relative to the robot as a whole." *Id.* at 25–26 (citing Ex. 1011 ¶ 37, Fig. 3; Ex. 2001 ¶ 73). As a result, a remote user would have no awareness of or ability to control the position of the boom and, "when steering the mobile

robot about the facility to visit patients, the unknown position of the boom would present a continuous danger of impacting objects, including patients, as the robot moved from room to room.” *Id.* at 26 (citing Ex. 2001 ¶ 73).

Additionally, Patent Owner argues that “the added weight and extended position of the boom would exert a tipping force on the mobile robot,” which would create dangers to a patient’s safety by potentially causing “serious harm” to the patient from an unintended impact with the remote robot. Prelim. Resp. 26 (citing Ex. 2001 ¶ 74). Patent Owner supports this argument by noting King identifies this is a concern and “offers a solution of a mast 6 being placed into a receptacle at the centerpoint of wheeled platform 50, and the bottom of the platform 50 being counterweighted.” *Id.* (citing Ex. 1011 ¶ 41; Ex. 2001 ¶ 74). Patent Owner asserts that the Petition is deficient because Petitioner does not explain how mobile robot 12 in Wang could handle such an imbalance in an acceptable manner. *Id.* (citing Ex. 2001 ¶ 74).

Having studied the evidence and arguments presented by both parties, we find Patent Owner’s deficiency arguments meritorious. Regarding the weight given to Dr. Stone’s testimony from the perspective of a skilled artisan, we agree that it should be given no weight. In the *Kyocera* case, the Federal Circuit recently addressed whether an Administrative Law Judge (ALJ), in a proceeding before the International Trade Commission (ITC), abused their discretion by admitting any expert testimony from the perspective of a skilled artisan when the expert lacks the experience that defines the level of ordinary skill in the art. *Kyocera*, 22 F.4th at 1375–77. In that case, the skilled artisan was described to have a degree in mechanical engineering with a specific number of years of experience with in powered

nailer design or ten years of practical experience in powered nailer design. *Id.* at 1376. Kyocera offered an expert that had “advanced degrees in engineering and extensive experience in the design and manufacture of fastener driving tools,” but lacked specific experience in power nailer design. *Id.* The ALJ disregarded the expert’s testimony under the doctrine of equivalents because of this lack of experience, but still considered his testimony as to literal infringement. *Id.* The Federal Circuit held “the ALJ abused his discretion by admitting [the expert’s] testimony *on any issue that is analyzed through the lens of an ordinarily skilled artisan.*” *Id.* at 1377–78 (emphasis added). The court reasoned:

To offer expert testimony from the perspective of a skilled artisan in a patent case—like for claim construction, validity, or infringement—a witness must at least have ordinary skill in the art. Without that skill, the witness’ opinions are neither relevant nor reliable. The opinions would not be based on any specialized knowledge, training, or experience that would be helpful to the factfinder. In fact, “[a]dmitting testimony from a person ... with no skill in the pertinent art serves only to cause mischief and confuse the factfinder.” [*Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1362 (Fed. Cir. 2008)]. That testimony would “amount[] to nothing more than advocacy from the witness stand.” *Id.* at 1364–65.

Kyocera, 22 F.4th at 1376–77. We find substantially the same fact pattern presents itself in this case. In particular, the definition of a skilled artisan we have adopted for this Decision, which was proposed by Petitioner and Dr. Stone, requires at least two years of research or work experience in designing or engineering teleconferencing systems, such as those used in telemedicine (*see supra* § II.B). Although Dr. Stone has advanced degrees in electrical engineering and extensive experience with medical devices (*see*

Ex. 1002 ¶¶ 3–12; Ex. 1003, 1–4, 8–11), he lacks specific experience researching or engineering teleconferencing systems, such as those used in telemedicine. We agree with Patent Owner that Dr. Stone’s vague reference to “numerous *experiences with teleconferencing*” and to having performed “design reviews of telemedicine *devices*” (Ex. 1002 ¶ 13 (emphasis added)) falls short of establishing two years of research or work experience in designing or engineering teleconferencing systems. Therefore, it would be inappropriate for us to consider any testimony by Dr. Stone on any issue that is analyzed through the lens of an ordinarily skilled artisan.⁷

A point of clarification is appropriate at this point. In reviewing Dr. Stone’s testimony, we still may consider his opinions on the issues for which he is qualified to offer testimony, compare his opinions to the disclosures of the prior art references and the challenged patent, and the entirety of the evidence of record to weigh each part of his relative opinion testimony separately. *See Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1358 (Fed. Cir. 2018) (“The [Patent Trial and Appeal Board (‘PTAB’)] [i]s entitled to weigh the credibility of the witnesses.” (citation omitted)); *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1041 (Fed. Cir. 2017) (“To the extent [a party] challenges the PTAB’s factual findings . . . the PTAB is permitted to weigh expert testimony and other record evidence and, in so doing, rely on certain portions of an expert’s

⁷ We note that this case does not present, and neither party suggests, a situation in which a person of ordinary skill in the art need only have access to others with two years of research or work experience in designing or engineering teleconferencing systems to reaching conclusions as to unpatentability. Although even if it did, there is no evidence Dr. Stone spoke to anyone with such work or research experience.

declaration while disregarding others.”). “The Board has broad discretion to assign weight to be accorded expert testimony.” Patent Trial and Appeal Board Consolidated Trial Practice Guide 35 (available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>). Although we do not give any weight to Dr. Stone’s testimony from the perspective of a skilled artisan, we find him qualified (*see* Ex. 1003 (Dr. Stone’s Curriculum Vitae); Ex. 1002, 1–4) to opine about the technology itself that is the subject matter of the ’545 patent and the asserted prior art. In other words, we may consider Dr. Stone’s opinions about the structures and operations included in the disclosed systems, but we cannot give any weight to his opinions regarding what a skilled artisan would have understood and/or derived from the disclosed technology because the latter is necessarily from the perspective of a skilled artisan.

Regarding the disclosure of Wang and King, the Petition is deficient because it fails to establish sufficiently why a skilled artisan would have known to modify the mobile robot 12 of Wang in the manner claimed by Element [1.b] by having the second camera *coupled to the cart via a boom*. At most, Petitioner has shown through King that a skilled artisan would have known to mount a camera on an articulating boom, but that fact begs the question of whether a skilled artisan would have known to couple a second camera mounted on an articulating boom to the mobile robot 12 itself using the boom as the coupler. Although a few vague references to the pair of cameras 40 and 42 coupled to mobile robot 12 are made in the Petition, the Petition only clearly identifies a reliance on Wang’s disclosure of the video devices connected to the mobile robot 12 through the auxiliary video port 70 as disclosing the claimed second camera (*see* Pet. 29–30), and King teaches

a camera mounted on an articulating boom that connects to a VVPR teleconferencing system through a port connection (*see* Ex. 1011 ¶¶ 3, 10, 14, 19, 27, 30).

The evidence from King that Petitioner cites may reasonably support a finding that a skilled artisan would have known to use the auxiliary video port 70 of mobile robot 12 to connect King's boom-mounted video camera (*see* Ex. 1010 ¶ 18; Ex. 1011 ¶¶ 3, 14), but it fails to demonstrate with any particularity a reason why a skilled artisan would have selected an articulating boom *to couple a second camera to the mobile robot 12* of Wang. In fact, we do not find anywhere in the Petition a clear statement why a skilled artisan would do so; rather, the Petition focuses on why a skilled artisan would have known to couple a camera to an articulating boom. *See* Pet. 24, 29–32.

In addition, regarding whether a skilled artisan would have had a reasonable expectation of success combining Wang and King in a manner recited by Element [1.b], Petitioner relies solely on the conclusory statements of Dr. Stone that a skilled artisan “would have understood from King itself that a cart with a boom-mounted remote-controlled camera would have been mechanically and physically successful, and would further have understood that modifying Wang's robot to include an articulating boom would have been a straightforward modification.” Pet. 26. As an initial matter, conclusory statements, even from a qualified expert, provide little, if any, evidentiary support. And even setting aside for a moment that Dr. Stone's testimony cannot be relied upon to support that statement, Dr. Stone's declaration does not provide any technical reasoning or evidentiary support to back-up the conclusion. Dr. Stone's declaration is simply a

“carbon-copy” of what is stated in the Petition. *See* Ex. 1002 ¶ 77. Neither Petitioner nor Dr. Stone explain why or how King’s disclosure of coupling a camera to the cart that King discloses, which is a manual-push cart, via an articulating boom demonstrates a skilled artisan would have had an expectation of success by doing the same with a mobile robot that is remotely controlled to travel through a patient’s home or through a medical facility (i.e., a principle operation of Wang’s mobile robot 12). As Patent Owner points out, coupling a camera to a mobile robot 12 using an articulating boom would at least complicate the safe steering, mobility, and stability of the mobile robot; all of which Petitioner fails to take any account.

The Petition can best be described as asserting that a skilled artisan, once presented with Wang and King, would have understood that they *could be* combined, which is not enough to demonstrate a rationale for combining the references in the manner claimed because it does not imply a motivation to select the articulating boom King discloses to couple a second camera to the mobile robot 12 Wang discloses. *See Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017) (holding that the Board’s reasoning that “a person of ordinary skill in the art reading Woodhill and Stefik would have understood that the combination of Woodhill and Stefik would have allowed for the selective access features of Stefik to be used with Woodhill’s content-dependent identifiers feature” to be deficient to establish a motivation because it “say[s] no more than that a skilled artisan, once presented with the two references, would have understood that they could be combined. And that is not enough: it does not imply a motivation to pick out those two references and combine them to arrive at the claimed invention”).

Therefore, for the foregoing reasons Petitioner has not demonstrated, in the Petition, that the prior art discloses each and every element recited. There is, accordingly, not a reasonable likelihood of success by the Petitioner to establish that independent claims 1, 12, and 20 of the '545 patent would have been obvious in view of either the combination of Wang and King or the combination of Wang, King, and Wang II.

b) The Petition Fails to Provide a Reason That a Skilled Artisan Would Have Modified Hennion in View of Ludwig in the Manner Recited by the Independent Claims

Petitioner contends in the fifth ground that independent claims 1, 12, and 20 are unpatentable as being obvious in view of the combined disclosures of King, Hennion, and Ludwig. *See* Pet. 4, 68–92, 95–99. Patent Owner argues that this ground is deficient because it relies on modifying the “remote station” Hennion discloses in view of Ludwig to include several claimed elements that are not disclosed by Hennion, “but fails to provide any rationale for doing so.” Prelim. Resp. 51–52. As an example, Patent Owner identifies that the Petition contends:

Ludwig discloses the claimed user interface having “a station view field” and “a plurality of graphical controls” (part of what the Petition refers to as claim element “1.d”), and that “a [skilled artisan] would have been motivated to modify Hennion according to the teachings of Ludwig to include the display of the patient (the ‘station view field’) and the ‘plurality of graphical controls.’”

Id. at 52 (citing Pet. 80–81). Although the Petition acknowledges the Hennion video screen is being modified in view of Ludwig to add a station view field and a plurality of graphic controls, Patent Owner argues that the Petition is devoid of any contentions explaining why a skilled artisan would have been motivated to modify Hennion’s video screen in this manner. *Id.*

Patent Owner argues that the same deficiency exists with Elements [1.i], [1.f], [1.g], and [1.h]. *Id.* at 52–53 (citing Pet. 83–86). As a result, Patent Owner concludes “the Petition has not established a *prima facie* case of obviousness.” *Id.* at 53.

Having studied the evidence and arguments presented in the Petition, we agree Petitioner has failed to establish a *prima facie* case that independent claims 1, 12, and 20 are unpatentable as being obvious in view of King, Hennion, and Ludwig. As an initial matter, we note ground five of the Petition depends heavily on the declaration of Dr. Stone to provide the perspective of how a skilled artisan would view King, Hennion, and Ludwig to disclose each of the claim elements recited by those claims. *See* Pet. 68–92 (citing Ex. 1002 ¶¶ 180–214). This alone is a fatal flaw because, for the reasons discussed above (*see supra* § II.D.1.a.3), Dr. Stone’s testimony cannot be relied upon properly on any issue that is analyzed through the lens of an ordinarily skilled artisan because he lacks the research or work experience in designing or engineering teleconferencing systems necessary to qualify as a skilled artisan. And for this reason alone, the Petition is defective because it fails to provide sufficient evidentiary support to establish a *prima facie* case that independent claims 1, 12, and 20 are unpatentable as being obvious in view of King, Hennion, and Ludwig.

Nevertheless, even if we considered Dr. Stone’s declaration, we agree with Patent Owner that ground five in the Petition is fatally defective because Petitioner failed to set forth any motivating reason a skilled artisan would have modified Hennion in view of Ludwig in the manner claimed. For example, the Petition states: “*As discussed above*, a [skilled artisan] would have been motivated to modify Hennion according to the teachings of

Ludwig to include the display of the patient (the ‘station view field’) and the ‘plurality of graphical controls.’” Pet. 80–81 (citing Ex. 1002 ¶ 198). The problem is that paragraph 198 of Dr. Stone’s declaration (Ex. 1002) adds nothing because it is again a “carbon copy” of the Petition and there is no discussion above in the Petition explaining why a skilled artisan would have modified Hennion in view of Ludwig in the manner recited by Element [1.d] (or Elements [1.i], [1.f], [1.g], and [1.h]). In addition to studying those portions of the Petition discussing Ludwig regarding specific claim elements (Pet. 80–88), we studied the portion of the Petition titled “Rationale to Combine” (Pet. 68–70), but we were unable to find anywhere Petitioner sets forth with sufficient particularity a reason for modifying Hennion in view of Ludwig. The Petition does refer to modifying King to have the graphic controls described in Ludwig in the “Rationale to Combine” section, but the Petition does not rely on King in view of Hennion for Element [1.d]. *Id.* at 69–70, 80–82. The Petition instead relies solely on Hennion modified in view of Ludwig, which is not discussed at all in the “Rationale to Combine” section. The Petition is defective also because it fails to set forth with sufficient clarity a reason why a skilled artisan would have been motivated to modify Hennion in view of Ludwig.

Therefore, for the foregoing reasons, Petitioner has not demonstrated, in the Petition, that the prior art discloses each and every element recited (e.g., Elements [1.d], [1.f], [1.g], [1.h], [1.i]) by the independent claims. There is accordingly not a reasonable likelihood of success by the Petitioner to establish that claims 1, 12, and 20 of the ’545 patent would have been obvious in view of King, Hennion, and Ludwig.

2. *Dependent Claims 2–11 and 13–19*

Petitioner’s various grounds challenging the patentability of dependent claims 2–11 and 13–19 must necessarily fail also for the same reasons discussed in the section immediately above because those grounds incorporate the same deficiencies found to exist with their respective parent claim. Therefore, we likewise determine Petitioner has not established a reasonable likelihood of prevailing in establishing that any of the dependent claims would have been unpatentable in view of the asserted prior art.

III. CONCLUSION

Our review of the Petition under 35 U.S.C. § 314 is not to determine whether an individual asserted fact is indisputable or whether a preponderance of the evidence supports Petitioner. Our review is to determine whether the totality of the information presented in the Petition and Preliminary Response shows that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition.

For the above reasons, we determine Petitioner has not established a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim of the ’545 patent. Therefore, we deny institution of review on the merits. *See* 35 U.S.C. § 314(a).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), institution of *inter partes* review of the ’545 patent is denied.

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