

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC. AND LG ELECTRONICS U.S.A., INC.,
Petitioner,

v.

GESTURE TECHNOLOGY PARTNERS, LLC,
Patent Owner.

IPR2021-01255
Patent 7,804,530 B2

Before PATRICK R. SCANLON, GREGG I. ANDERSON, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Petitioner, LG Electronics, Inc. and LG Electronics U.S.A., Inc., requests that we institute an *inter partes* review to challenge the patentability of claims 1–23 (the “challenged claims”) of U.S. Patent 7,804,530 B2 (Ex. 1001, “the ’530 patent”). Paper 2 (“Petition” or “Pet.”). Patent Owner, Gesture Technology Partners, LLC, argues that Petitioner’s request is deficient and should not be granted. Paper 6 (“Preliminary Response” or “Prelim. Resp.”).

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we deny institution of an *inter partes* review.¹

B. *Related Matters*

The parties identify these related matters: *Gesture Technology Partners, LLC v. Huawei Device Co., Ltd.*, No. 2:21-cv-00040 (E.D. Tex.); *Gesture Technology Partners, LLC v. Samsung Electronics Co.*, No. 2:21-cv-00041 (E.D. Tex.); *Gesture Technology Partners, LLC v. Apple Inc.*, No. 6:21-cv-00121 (W.D. Tex.); *Gesture Technology Partners, LLC v. Lenovo Group Ltd.*, No. 6:21-cv-00122 (W.D. Tex.); and *Gesture Technology Partners, LLC v. LG Electronics, Inc.*, No. 6:21-cv-00123 (W.D. Tex.). Paper 4, 1; Pet. 1. Patent Owner identifies these related Board proceedings: IPR2021-00917; IPR2021-00920; IPR2021-00921; IPR2021-00922; and IPR2021-00923. Paper 4, 2.

¹ Our findings and conclusions at this stage are preliminary, and thus, no final determinations are made.

C. The '530 Patent

The '530 patent is entitled “Picture Taking Method and Apparatus.” Ex. 1001, code (54). The '530 patent describes that a “goal of the invention” is “to provide a method for taking pictures when certain poses of objects, sequences of poses, motions of objects, or any other states or relationships of objects are represented.” *Id.* at 2:66–3:2. For example, “one can use the system to automatically ‘shoot’ pictures” based on a determination of “the position and orientation” of:

1. Subject in a certain pose.
2. Subject in a sequence of poses.
3. Portion of Subject in a sequence of poses (e.g. gestures.).
4. Subject or portion(s) in a specific location or orientation.
5. Subject in position relative to another object or person. For example, this could be bride and groom kissing in a wedding, boy with respect to cake on birthday, and sports events sequences of every description (where the camera can even track the object datums in the field and if desired adjust shutter speed based on relative velocity of camera to subject).
6. Ditto all of above with respect to both persons in certain poses or gesture situations.
7. When a subject undertakes a particular signal comprising a position or gesture—i.e. a silent command to take the picture. (this could be programmed, for example to correspond to raising ones right hand).

Id. at 6:39–59.

The '530 patent teaches that a pose analysis software or hardware module can analyze “processed image data . . . from the computer 220” to determine “when a certain pose for example has been seen.” *Id.* at 7:16–23. Then, “[w]hen this occurs, a signal is sent to the camera control module 255 to hold the last frame taken by camera 202, and to display it to the

photographer, digitally store it, or transmit it—to someone else, or another data store or display.” *Id.* at 7:23–27. An example of this can be seen in Figure 3, reproduced below.

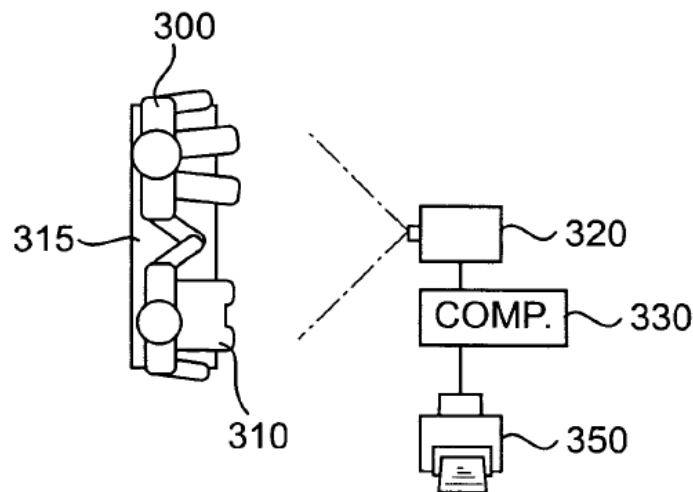


FIG. 3

Figure 3 illustrates “two sweethearts 300 and 310 . . . on a bench 315 in front of the digital or other camera 320.” *Id.* at 9:16–19. A computer 330 and printer 350 are also shown. *Id.* at 9:21, 39. The ’530 patent states that “[w]hen the computer 330 detects from processing the image (or images) . . . that their faces are in close proximity (for example using the centroid of mass of their head as the position indicator, or even facial features . . . , the computer then instructs the camera to record the picture.” *Id.* at 9:19–25.

D. Illustrative Claim

Petitioner challenges claims 1–23 of the ’530 patent. Claim 1 is the sole independent claim and is illustrative:

1. A method for photographing a person, comprising the steps of:
providing at least one digital camera, a computer, and an image processing software,

positioning said camera to view said person including a face of the person and thus so that the camera is positioned separate from said person,
acquiring an image of said person with said at least one digital camera,
processing of said image with the computer,
determining from said processed image a state of said person,
comparing with the computer said state of said person to a desired state, and
recording by the computer, if the result of said comparison is that said state of said person is the desired state, of the image so as to be viewable later as a photograph.

Ex. 1001, 16:22–38.

II. ANALYSIS

A. Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 7), supported by the declaration of Henry H. Houh, Ph.D. (Ex. 1003):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 6–9, 13–19, 21, 23	103(a) ²	Kumar, ³ Nguyen, ⁴ Kojima ⁵
2–4	103(a)	Kumar, Nguyen, Kojima Mihara ⁶
2, 4	103(a)	Kumar, Nguyen, Kojima, Amir ⁷

² The challenged patent was filed before the effective date of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revising 35 U.S.C. § 103.

³ U.S. Patent 6,514,083 B1, issued Feb. 4, 2003 (“Kumar”) (Ex. 1004).

⁴ U.S. Patent 6,072,494, issued June 6, 2000 (“Nguyen”) (Ex. 1005).

⁵ Japanese Patent Application Publication H10-23319, published Jan. 23, 1998 (“Kojima”) (Ex. 1011).

⁶ U.S. Patent 6,504,944 B2, issued Jan. 7, 2003 (“Mihara”) (Ex. 1006).

⁷ U.S. Patent 6,539,100 B1, issued Mar. 25, 2003 (“Amir”) (Ex. 1007).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
2, 5	103(a)	Kumar, Nguyen, Kojima, Flickner ⁸
20, 21	103(a)	Kumar, Nguyen, Kojima, Nonaka ⁹
10–12	103(a)	Kumar, Nguyen, Kojima, Doi ¹⁰
22	103(a)	Kumar, Nguyen, Kojima, Katayama ¹¹

1. Legal Standards for Unpatentability

Petitioner bears the burden to demonstrate unpatentability. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this preliminary stage, we determine whether the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been unpatentable. *See* 35 U.S.C. § 314(a).

A claim is unpatentable as obvious under 35 U.S.C. § 103 if “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) (quoting 35 U.S.C. § 103(a)). We resolve the question of obviousness based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the prior art and the claims; (3) the level of skill in the art; and (4) when in evidence,

⁸ U.S. Patent 6,577,329 B1, issued June 10, 2003 (“Flickner”) (Ex. 1014).

⁹ Japanese Patent Application Publication H04-73631, published Mar. 9, 1992 (“Nonaka”) (Ex. 1009).

¹⁰ U.S. Patent 6,266,061 B1, issued July 24, 2001 (“Doi”) (Ex. 1010).

¹¹ U.S. Patent 5,947,742, issued Sept. 7, 1999 (“Katayama”) (Ex. 1012).

objective indicia of nonobviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We apply these principles to the Petition’s challenges.

2. *Level of Ordinary Skill in the Art*

Petitioner asserts that “a Person of Ordinary Skill in the Art (‘POSITA’) at the time [of the invention] would have had a bachelor’s degree in electrical engineering, computer engineering, computer science or similar field, and two to three years of experience in image and video capture, or the equivalent” and that “a person with more technical education but less experience, would also meet the relevant standard for POSITAs.” Pet. 6 (citing Ex. 1003 ¶¶ 23–25). Patent Owner does not dispute Petitioner’s level of ordinary skill in the art. Prelim. Resp. 4.

We are persuaded, on the present record, that Petitioner’s declarant’s statement is consistent with the problems and solutions in the ’530 patent and prior art of record. We adopt this definition for the purposes of this Decision.

3. *Claim Construction*

In *inter partes* review, we construe claims 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), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2021).

Neither party provides any express claim constructions. *See* Pet. 6; Prelim. Resp. 4. We agree that no terms require express construction at this stage. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms that are in

controversy, and only to the extent necessary to resolve the controversy.”) (internal quotation omitted).

4. *Obviousness over Kumar, Nguyen, and Kojima*

Petitioner argues that the combination of Kumar, Nguyen, and Kojima would have rendered obvious claims 1, 6–9, 13–19, 21, and 23. Pet. 9–42.

We first give an overview of the asserted prior art, Kumar, Nguyen, and Kojima. This is followed by a discussion of Petitioner’s positions and Patent Owner’s argument that the combined references do not teach recording an image as required by claim 1 (Prelim. Resp. 5–9), where we conclude that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to at least one claim.

a) *Kumar*

Kumar “relates generally to multimedia entertainment systems, and more particularly to karaoke systems.” Ex. 1004, 1:29–30. Kumar describes a “karaoke processor system . . . coupled to” a camera “to create extracted images of the at least one karaoke performer from the series of video frames” and to display the karaoke performer in a video environment. *Id.* at Abstract. For example, images of the performer can be “composited into the musical video presentation” on a TV monitor and the performer can “make gestures which to cause the images on the TV monitor to change.” *Id.* at 2:42–46, 49–50. An example of Kumar’s interactive karaoke entertainment system can be seen in Figure 1, reproduced below.

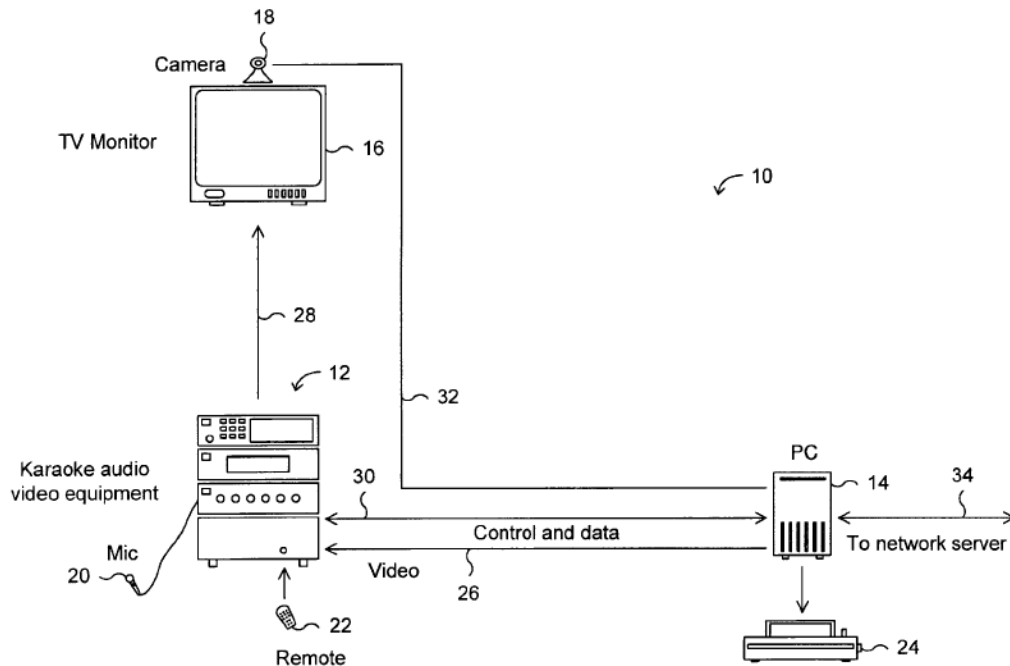
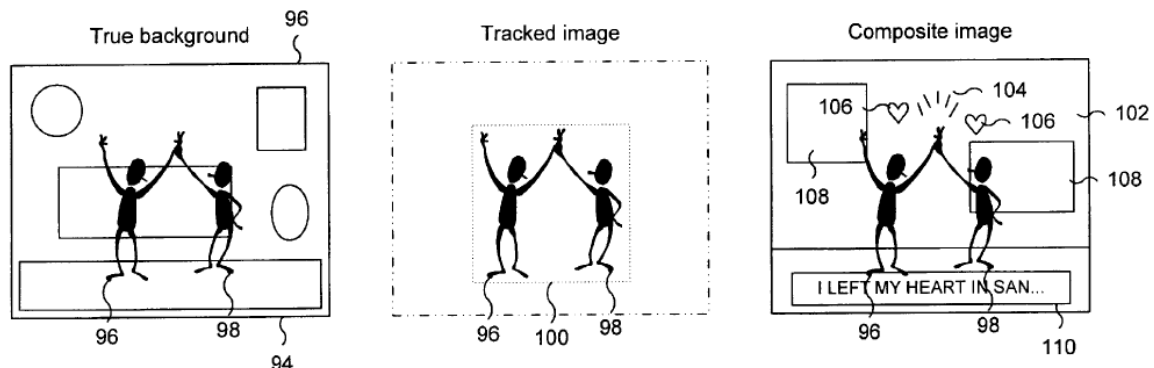


Figure 1

“In FIG. 1, an interactive karaoke entertainment system 10 . . . includes karaoke audio and video equipment 12, a personal computer (PC) 14, a TV monitor 16, and a video camera 18.” *Id.* at 3:66–4:2. A “microphone 20 and a remote control 22,” as well as “[a]n optional photo-printer 24” can be associated with the system. *Id.* at 4:2–4:5.

Kumar describes obtaining a frame from the video camera and replacing the background in the frame while karaoke is being performed to create composited content. *Id.* at 5:15–16, 21–24, 41–44. This is shown in Figure 4A, reproduced below.



As shown in Figure 4, an image 94 from the video of the karaoke performers 96, 98 can be modified to extract the karaoke performers 96, 98 from the background and form a new composite image with the karaoke performers 96, 98 in an interactive environment 102. *Id.* at 5:50–65.

It is further taught that gestures and body positions of the karaoke performer can control aspects of the interactive environment created with the composited content. *Id.* at 5:66–6:9. For example:

[W]hen karaoke customer 96 raises her hands above her head, animated sparks 104 can be caused to fly from her fingertips. As another example, the grasping of the hand of the karaoke customer 96 by the karaoke customer 98 can be used a gesture which produces the images of hearts 106 in the interactive environment 102.

Id. at 5:66–6:6.

b) Nguyen

Nguyen is related to gesture recognition within a field of view of a camera. Ex. 1005, Abstract. In particular, Nguyen describes “a gesture recognition system for recognizing gestures made by a moving subject within an image and performing an operation based on the semantic meaning of the gesture.” *Id.*

c) Kojima

Kojima “relates to an image capturing device . . . that obviates the conscious act of releasing a shutter.” Ex. 1011, Abstract. *Kojima* describes:

An image capturing device comprising: a video camera unit for capturing a subject; an event recognition unit for recognizing a specific event in the outside world by analyzing a video from the video camera unit; an event pattern memory unit for storing patterns of events to be discriminated by the event recognition unit; and an image recording unit for recording video from the video camera unit as still images if an event recognized by the

event recognition unit is the same as that memorized in the event pattern memory unit.

Id.

d) Claim 1

Petitioner relies on the combination of Kumar, Nguyen, and Kojima for teaching or suggesting all of the elements of claim 1. Pet. 13–32. In general, the Petition argues that Kumar’s karaoke system teaches most the features of claim 1. *Id.* at 20–27. The Petition relies on the combination of Kumar and Nguyen for teaching gesture recognition and performing a function in response to gesture recognition. *Id.* at 13–15, 27–30. Finally, the Petition further relies on Kojima in combination with Kumar and Nguyen for the teaching that the performed function can be taking a photograph (i.e., recording an image as a photograph). *Id.* at 15–20, 30–32.

Among other features, claim 1 requires:

acquiring an image . . . with said at least one digital camera,
processing of said image with the computer,

. . .

recording by the computer . . . of the image so as to be viewable later as a photograph.

Ex. 1001, 16:29–38.

With respect to “acquiring an image,” the Petition argues that Kumar teaches this when it acquires an image from the video of the karaoke performers. Pet. 24–25 (citing Ex. 1004, 5:21–23, 5:54–59, 2:42–46, Figure 4). The Petition argues that Kumar teaches processing the image, for example when “a background subtraction is performed . . . a tracking analysis 82 is performed and the results are placed in a tracking buffer of the PC 14 and an operation 84.” *Id.* at 26 (quoting Ex. 1004, 5:21–29). The

Petition also reproduces the middle portion of Kumar's Figure 4A to show the "tracked image" showing karaoke performers 96, 98 with the background removed. *Id.* at 27.

Concerning recording the image, so as to be viewable later as a photograph, Petitioner argues that Kumar teaches the "capture of images that are displayed on the TV monitor" to "be printed as photographs." *Id.* at 31–32; *see also id.* at 19 (arguing that Kumar teaches "[a] method for photographing a person," because it teaches capturing and printing images as photographs that are displayed on the TV monitor). Petitioner further argues that Kojima teaches recording video as still images. *Id.* at 31. The Petition then alleges that "[a] POSITA would have recognized a benefit in capturing images as taught by *Kojima* in the *Kumar/Nguyen* combination. *Kumar* acknowledges that users may wish to 'capture [] images that are displayed on the TV monitor that can be printed as photographs'" and "*Kojima* provides a method of capturing such images." *Id.* at 16–17 (quoting Ex. 1004, 4:26–32) (brackets in original).

Patent Owner argues that this showing by Petitioner is insufficient because the recorded image in the combination is not the original image, but the composite image with the added interactive environment, having the background removed. Prelim. Resp. 5–9. We agree.

Patent Owner argues that claim 1 "recites two different images: (1) 'an image' that is acquired by the digital camera and (2) a 'processed image.'" *Id.* at 5. Claim 1, with underlining added by Patent Owner, states:

1. A method for photographing a person, comprising the steps of:
providing at least one digital camera, a computer, and an image
processing software,

positioning said camera to view said person including a face of the person and thus so that the camera is positioned separate from said person,
acquiring an image of said person with said at least one digital camera,
processing of said image with the computer,
determining from said processed image a state of said person,
comparing with the computer said state of said person to a desired state, and
recording by the computer, if the result of said comparison is that said state of said person is the desired state, of the image so as to be viewable later as a photograph.

Id. at 6 (quoting Ex. 1001, 16:22–38).

Patent Owner argues that “[c]laim 1 uses the term ‘image,’ without a modifier when referring to the image acquired by the digital camera” and “the term ‘processed image’ when referring to the image that results from ‘processing of said image with the computer.’” *Id.* at 7. Thus, Patent Owner argues that based on the language of the claim, “[t]he ‘image’ acquired by the digital camera, not the processed image, is recorded by the computer.”

Id. at 6.

We agree with Patent Owner that “[t]he language of the claim [on this point] is clear and unambiguous.” *Id.* at 7. And that based on a plain reading of the claim, “the image” in the step of “recording by the computer, . . . , of the image,” refers back to and has antecedent support from “an image” in the step of “acquiring an image . . . with said at least one digital camera,” as opposed to the “processed image” also discussed in the claim.

Based on this understanding of the claim, Patent Owner argues that “[t]he Petition is fatally flawed because it contends that limitation [1.7] [(“recording by the computer, . . . , of the image”)] is met by Kumar

recording the ‘processed image,’ rather than the ‘image,’ as is required by claim 1.” *Id.*

As noted above, the Petition relies on Kumar for teaching the capturing of images displayed on the TV monitor, which are the processed images with the background removed and the karaoke performers inserted into a virtual environment. Pet. 19, 31–32. The Petition further relies on Kojima to teach recording video as still images and argues that “*Kojima* provides a method of capturing [Kumar’s] images.” *Id.* at 16–17, 31. Thus, as set forth in the Petition, the combined teachings are used to show how it would have been obvious for one of skill in the art to record Kumar’s processed images as photographs, but the Petition does not teach why one of skill would have recorded the original image, which is required by the claim.

For this reason, and on this record, the Petition fails to show how all claim elements of claim 1 are taught or suggested by Kumar, Nguyen, and Kojima. Thus, we are not persuaded that Petitioner has shown a reasonable likelihood that claim 1 would have been obvious over Kumar, Nguyen, and Kojima.

e) Claims 6–9, 13–19, 21, 23

Petitioner argues that the combination of Kumar, Nguyen, and Kojima renders obvious dependent claims 6–9, 13–19, 21, and 23. Pet. 32–42. Patent Owner does not present additional argument concerning these claims at this stage. *See* Prelim. Resp. 17–22. We determine that Petitioner has not shown a reasonable likelihood of establishing that dependent claims 6–9, 13–19, 21, and 23 are unpatentable over Kumar, Nguyen, and Kojima for at least the same reasons as independent claim 1.

5. *Obviousness over Kumar, Nguyen, Kojima and Additional References*

Petitioner argues that the combination of Kumar, Nguyen, Kojima, and one of Mihara, Amir, Flickner, Nonaka, Doi, and Katayama renders obvious claims 2–5, 10–12, and 20–22 which depend from claim 1. Pet. 42–64. Patent Owner does not present additional argument addressed to these grounds. *See* Prelim. Resp. 22–24.

We determine that Petitioner has not shown a reasonable likelihood of establishing that dependent claims 2–5, 10–12, and 20–22 are unpatentable over Kumar, Nguyen, Kojima, and one of Mihara, Amir, Flickner, Nonaka, Doi, and Katayama as none of the combinations address the shortcomings identified respect to independent claim 1.

III. CONCLUSION

For the foregoing reasons, we have determined that there is not a reasonable likelihood that the Petitioner would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, the Petition is denied, and no trial is instituted.

IV. ORDER

It is hereby:

ORDERED that the Petition is *denied* and that no trial is instituted.

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Patent 7,804,530 B2

FOR PETITIONER:

David McCombs
Gregory Huh
Raghav Bajaj
HAYNES AND BOONE, LLP
David.Mccombs.ipr@haynesboone.com
Gregory.huh.ipr@haynesboone.com
Raghav.bajaj.ipr@haynesboone.com

FOR PATENT OWNER:

Todd Landis
John Wittensellner
WILLIAMS SIMONS & LANDIS PLLC
tlandis@wsltrial.com
johnw@wsltrial.com