

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2024-00717
Patent 11,223,757 B2

Before TERRENCE W. McMILLIN, KEVIN C. TROCK, and
JASON W. MELVIN, *Administrative Patent Judges*.

TROCK, *Administrative Patent Judge*.

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

I. INTRODUCTION

Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (collectively, “Petitioner”) filed a Petition, Paper 1 (“Pet.” or “Petition”), to institute an *inter partes* review of claims 1–11 (the “challenged claims”) of U.S. Patent No. 11,223,757 B2 (Ex. 1001, “the ’757 patent”). Maxell, Ltd. (“Patent Owner”) timely filed a Preliminary Response, Paper 7 (“Prelim. Resp.”).

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). Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has shown a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we institute an *inter partes* review.

II. BACKGROUND

A. *Real Party in Interest*

Petitioner identifies Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. as the real parties in interest. Pet. 95. Patent Owner identifies itself as the real party in interest. Paper 4, 1.

B. *Related Proceedings*

According to the parties, the ’757 patent is the subject of the following action: *Maxell, Ltd. v. Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc.*, No. 5:23-cv-00092-RWS (E.D. Tex.). Pet. 95; Paper 4, 1.

C. The '757 Patent (Ex. 1001)

The '757 patent relates to “a video recording device including a plurality of imaging units and a camera function control program.” Ex. 1001, 1:6–8. Figure 4 of the '757 patent is reproduced below.

F I G. 4

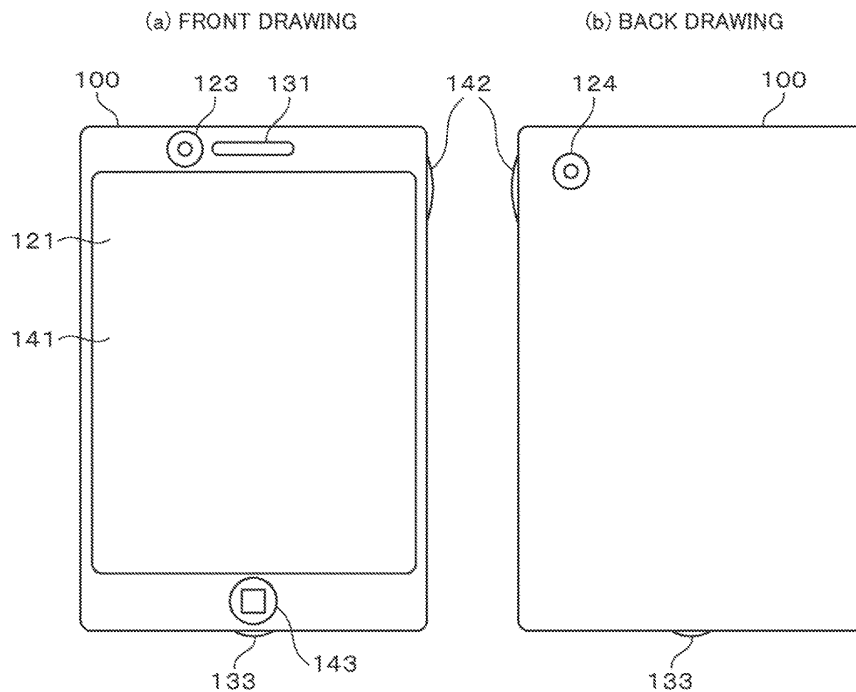


Figure 4, above, depicts a video recording device 100, such as a smartphone, having a front face (a) and a rear face (b). *Id.* at 7:49–54. A display unit 121 and a first imaging unit (camera unit) 123 are arranged on the front face side of the video recording device 100, while a second imaging unit (camera unit) 124 is arranged on the rear face of the video recording device 100. *Id.* at 7:54–60. The '757 patent refers to “the first imaging unit 123 arranged on the same face as that of the display unit 121” as an “in camera,” and “the

second imaging unit 124 arranged on the side opposite to the display unit 121” as an “out camera.” *Id.* at 7:60–64.

According to the '757 patent, “a subject located in front of a user is photographed using the . . . out camera,” while the in camera is used to photograph a self-image of the user. Ex. 1001, 2:6–15. According to the '757 patent, “in a case where a voice recognition function is applied to an information terminal device (video recording device) including two cameras of the out camera and the in camera, in order to photograph a subject in a natural pose, it is necessary to adjust photographing timing depending on which camera is used.” *Id.* at 2:32–37. The '757 patent notes that

in a case where a self-image is photographed using the in camera, when voice recognition is made, and immediately the photographing process is started, there is a problem in that the user is photographed with the form of his mouth to be in a state immediately after the utterance of the command voice. In order to avoid this, it is necessary to delay the start of the photographing process after the voice recognition by a predetermined time.

Id. at 2:23–31.

Figure 9 of the '757 patent is reproduced below.

F I G. 9

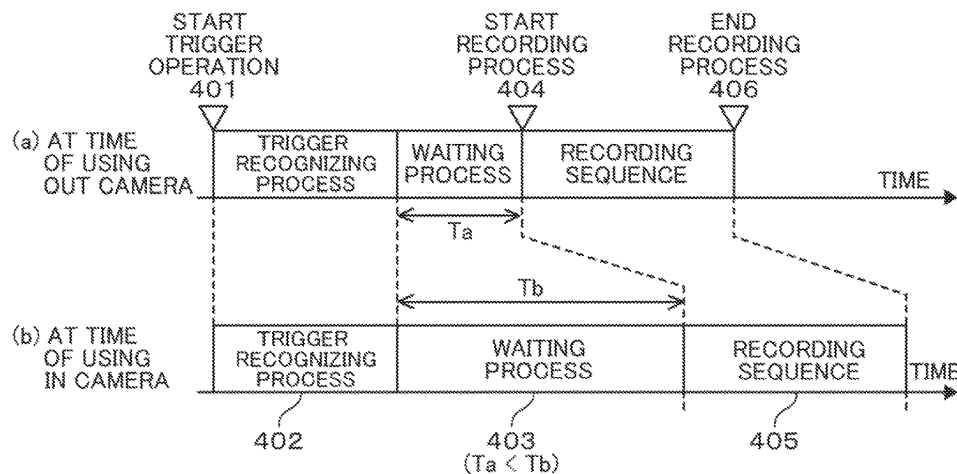


Figure 9, above, depicts “a process of controlling switching between recording start delay times . . . in accordance with which one of the two cameras is used.” Ex. 1001, 9:42–47. In the process, “a standby process 403 of a predetermined time” is performed after “a trigger operation start 401 (an input of a command voice)” and “a trigger recognition process 402 (a process of recognizing a command voice)” and before “a recording process start 404.” *Id.* at 9:48–53. As shown in Figure 9(a), when the out camera 124 is used to photograph a subject, a standby process 403 of a standby time T_a is performed. *Id.* at 9:56–58. On the other hand, as shown in Figure 9(b), when the in camera 123 is used to photograph a subject, a standby process 403 of a standby time T_b is performed. *Id.* at 9:58–61. The ’757 patent explains that “the standby time T_b is set to be longer than the standby time T_a ($T_a < T_b$),” such that “a delay time until the recording process start 404 from the trigger operation start 401 is longer at the time of using the in camera illustrated in (b) than at the time of using the out camera illustrated in (a).” *Id.* at 9:62–10:1.

D. Challenged Claims

Petitioner challenges claims 1–11 of the ’757 patent. Pet. 1. Claims 1 and 11 are independent. Claim 1 is directed to “[a]n image recording device configured to execute a plurality of different photographing processes,” and claim 11 is directed to “[a]n image recording method of an image recording device.” Ex. 1001, 16:8–9, 17:34–35. Claim 1 is generally illustrative and reproduced below.

[1pre]¹ An image recording device configured to execute a plurality of different photographing processes, comprising:

¹ Alpha-numerical designation adopted by Petitioner. *See* Pet. vii–ix.

- [1a] an audio input interface configured to receive a command voice;
- [1b] a touch display arranged on a first surface of the image recording device and configured to display an image signal and receive a touch operation instruction;
- [1c] a first camera arranged on a same side of the touch display and configured to photograph an object and acquire a first image signal;
- [1d] a second camera arranged on an opposite side of the touch display and configured to photograph an object and acquire a second image signal;
- [1e] a recorder configured to record at least one of the first image signal or the second image signal on a storage; and
- [1f] a controller,
- [1g] wherein the controller is configured to:
control such that, when the audio input interface receives the command voice giving a first instruction to start a recording of an image signal, the recorder starts a recording of the first image signal acquired by the first camera on the storage in response to the first instruction,
- [1h] control such that, when the touch display receives the touch operation instruction giving a second instruction to start a recording of an image signal, the recorder starts a recording of the second image signal acquired by the second camera on the storage in response to the second instruction, and
- [1i] control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled,
- [1j] wherein the first standby time is a time from a recognition of the first instruction to a start of the recording of the first image signal acquired by the first camera, and the second standby time is a time from a recognition of the second instruction to a start of the recording of the second image signal acquired by the second camera.

Id. at 16:8–48.

E. Evidence

Petitioner relies upon the following evidence:

- (1) U.S. Patent Application Publication No. US 2014/0247368 A1, filed March 4, 2013, published September 4, 2014 (“Chinn”) (Ex. 1004);
- (2) Japanese Unexamined Patent Application Publication No. P2001-305642A, published November 2, 2001 (“Takahashi”) (Ex. 1005);
- (3) U.S. Patent Application Publication No. US 2010/0137026 A1, published June 3, 2010 (“Kim”) (Ex. 1008);
- (4) U.S. Patent Application Publication No. US 2010/0026815 A1, published February 4, 2010 (“Yamamoto”) (Ex. 1009);
- (5) CASIO EXILIM Digital Camera EX-V7 User’s Guide (“EX-V7”) (Ex. 1014);
- (6) U.S. Patent Application Publication No. US 2009/0167881 A1, published July 2, 2009 (“Thorn”) (Ex. 1011); and
- (7) Declaration of R. Michael Guidash (Ex. 1003).

F. Asserted Grounds of Unpatentability

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–8, 10, 11	103 ²	Chinn, Takahashi, EX-V7
9	103	Chinn, Takahashi, EX-V7, Kim
1–3, 7–10	103	Kim, Yamamoto, Thorn
4–6, 11	103	Kim, Yamamoto, Thorn, Chinn

Pet. 1.

III. ANALYSIS

A. 35 U.S.C § 314(a)

Patent Owner contends that “[t]he Petition should be denied pursuant to 35 U.S.C. § 314(a) and the factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020).” Prelim. Resp. 2. Patent Owner argues that “[e]very factor considered in relation to efficiency, fairness, and the merits supports denial.” *Id.* at 3. Patent Owner provides arguments regarding the factors set forth in *Fintiv* in relation to parallel district court litigation, *Maxell, Ltd. v. Samsung Elecs. Co. Ltd. et al.*, Case No. 5:23-cv-00092 (E.D. Tex.) (the “District Court Litigation”). *Id.* at 3–8.

The Board’s precedential decision in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”),

² According to Petitioner, the ’757 patent claims priority through several applications to App. No. PCT/JP2013/074728, filed on September 9, 2013, after the March 16, 2013, effective date of the § 103 provisions in the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29. Pet. 5. Patent Owner does not appear to contest this. Accordingly, we cite to post-AIA § 103.

identifies a non-exclusive list of factors the Board considers when addressing whether a related, parallel district court action provides a basis for discretionary denial under 35 U.S.C. § 314(a). *Fintiv*, Paper 11 at 5–16.

Those factors include:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. at 5–6.

On June 21, 2022, the Director of the United States Patent and Trademark Office issued an *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation* (“Guidance Memo”)³ to clarify “the [Board’s] current application of *Fintiv* to discretionary institutions where there is parallel litigation” and to “confirm[] that the precedential import of *Fintiv* is limited to the facts of that case.” Guidance Memo 2. In particular, the Memorandum states that the Board

will not deny institution of an IPR or PGR under *Fintiv* (i) when a petition presents compelling evidence of

³ Available at:

https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

unpatentability; (ii) when a request for denial under *Fintiv* is based on a parallel ITC proceeding; **or (iii) where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.**

Id. at 9 (emphasis added).

On September 12, 2024, with the Board’s authorization, Petitioner filed such a stipulation. Paper 8. Petitioner’s stipulation reads:

In accordance with the Board’s precedential decision in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18-19 (PTAB Dec. 1, 2020), Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (Petitioners) stipulate that if the Board institutes *inter partes* review in this proceeding, IPR2024-00717, then Petitioners will not pursue in the parallel district court proceeding, *Maxell Ltd. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.*, Case No. 5:23-cv-00092-RWS, the same grounds as in the petition or any grounds that could have reasonably been raised in the petition..

Id.

Given that the language of Petitioner’s stipulation substantively tracks the stipulation language set out in the Guidance Memo, we decline to exercise discretion under 35 U.S.C. § 314(a) to deny institution.

B. Level of Ordinary Skill

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner describes a person of ordinary skill in the art as a person having “a Bachelors’ degree in electrical or computer engineering or a comparable field of study, plus approximately two to three years of professional experience with camera technology.” Pet. 5. Petitioner’s declarant, Mr. Guidash, provides supporting testimony as to the level of ordinary skill in the art. Ex. 1003 ¶¶ 27–30. Patent Owner does not contest Petitioner’s description of a person of ordinary skill in the art at this stage of the proceeding. Prelim. Resp. 14.

Petitioner’s description of a person of ordinary skill appears to be consistent with the subject matter of the ’757 patent. We, therefore, adopt Petitioner’s assessment of a person of ordinary skill for purposes of this Decision.

C. Claim Construction

For this *inter partes* review, the Board applies the same claim construction standard as that applied in federal courts. *See* 37 C.F.R. § 42.100(b) (2023). Under this standard, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations omitted). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Because the meaning of a claim term as understood by persons of skill in the art may not be immediately apparent, we may look to “those sources

available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). These sources may include extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. However, such extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (citation omitted).

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner asserts that it adopts Patent Owner’s apparent construction in the district court litigation of “first camera arranged on a same side of the touch display” (claim 1) / “first camera being arranged on the same face side of a touch display” (claim 11) as “including a first/front camera that is ‘arranged on a same face (front face) [of the image recording device] as that of the display unit’ as discussed in the ’757 patent” Pet. 6 (citing Ex. 1001, 7:56–58, 2:55–57; Ex. 1012, 64–66, 402–403) (first alteration in original).

Petitioner also asserts that it adopts Patent Owner’s apparent construction in the district court litigation of “second camera arranged on an opposite side of the touch display” (claim 1) / “second camera being arranged on an opposite side of the touch display” (claim 11) as “including a second/rear camera that is ‘arranged on a face (rear face) [of the image recording device] opposite to the display unit’ as discussed in the ’757

patent” Pet. 7 (citing Ex. 1001, 7:58–59, 2:58–59; Ex. 1012, 81–83, 402–403) (first alteration in original).

Petitioner contends that other claim terms should be construed in accordance with their plain and ordinary meaning. Pet. 6.

In response, Patent Owner argues that “[t]he intrinsic evidence makes clear that no construction is necessary and that the plain and ordinary meaning of these claim terms is abundantly clear.” Prelim. Resp. 18. Patent Owner asserts that “both the claims and specification make clear that the plain and ordinary meaning is an arrangement of two cameras such that one camera is on a same side of the touch display and the second camera is arranged on an opposite side of the touch display,” and “[n]o further construction is necessary.” *Id.* at 19.

For purposes of this Decision and based on this preliminary record, we determine that no claim term requires express construction at this stage of the proceeding.

D. Patentability Challenges

Petitioner presents four grounds challenging the patentability of particular claims of the ’757 patent under 35 U.S.C. § 103. Petitioner challenges (Ground 1) claims 1–8, 10, and 11 based on the combined teachings of Chinn, Takahashi, and EX-V7; (Ground 2) claim 9 based on the combined teachings of Chinn, Takahashi, EX-V7, and Kim; (Ground 3) claims 1–3 and 7–10 based on the combined teachings of Kim, Yamamoto,

and Thorn; and (Ground 4) claims 4–6 and 11 based on the combined teachings of Kim, Yamamoto, Thorn, and Chinn. Pet. 1.

1. Principles of Law

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham*, 383 U.S. at 17–18. At this stage, neither party has presented evidence on the fourth *Graham* factor.

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007). 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. Reaching this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing 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.*

2. Relevant Prior Art

a. Chinn (Ex. 1004)

Chinn is a U.S. Patent Application Publication that published on September 4, 2014, based on an application filed on March 4, 2013, which was before the earliest priority date of the '757 patent. Ex. 1001, code (63); Ex. 1004, codes (43), (22). Petitioner asserts that Chinn is prior art under post-AIA 35 U.S.C. § 102(a)(2). Pet. 7.

Chinn discloses technologies relating to “ready click” camera control, wherein “[t]he camera control system may be configured to provide any of a variety of voice-interactive features, such as a voice-activated shutter, a voice-activated timer, a voice-activated flash” Ex. 1004 ¶ 2.

Chinn’s Figure 1 is reproduced below:

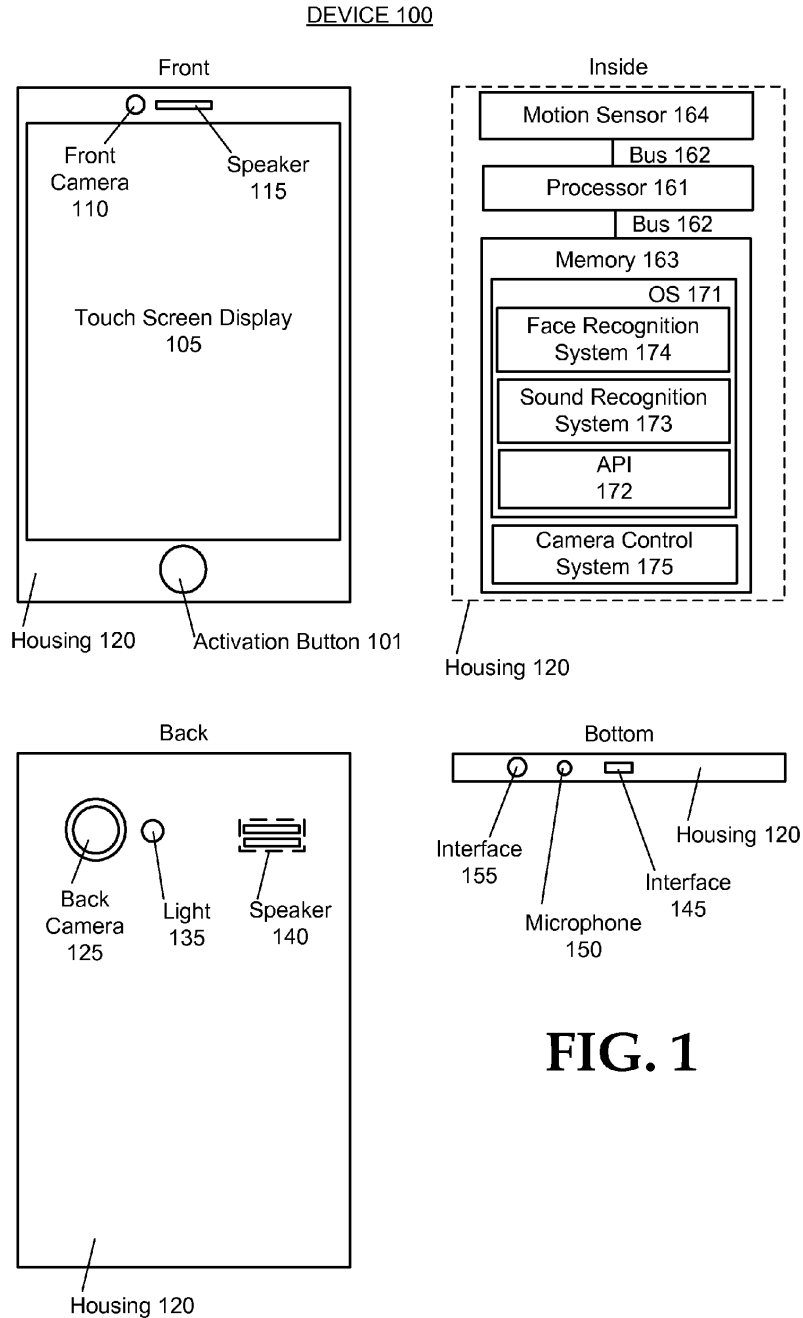


FIG. 1

Chinn's Figure 1, above, depicts a front view, back view, bottom view, and inside view of a device 100, which may be mobile device such as a smart phone. Ex. 1004 ¶ 16. The device 100 includes, *inter alia*, touch screen display 105, front camera 110, back camera 125, microphone 150, sound recognition system 173, and camera control system 175. *Id.* Chinn discloses that the camera control system 175 may be configured to produce

User Interface (UI) on the display 105. *Id.* ¶ 17; *see also id.* ¶ 22, Fig. 2. Chinn also discloses that the sound recognition system 173 may be configured to recognize a predetermined camera activation sound pattern, such as the words “ready click,” in sound data received via microphone 150, and the camera control system 175 may be configured to activate camera 110 and/or camera 125 in response. *Id.* ¶ 23. According to Chinn, the camera control system 175 may respond to “a variety of other voice commands, such as a ‘set timer’ command, a ‘set flash’ command, a ‘set focus’ command” *Id.* ¶ 25.

Chinn’s Figure 3 is reproduced below:

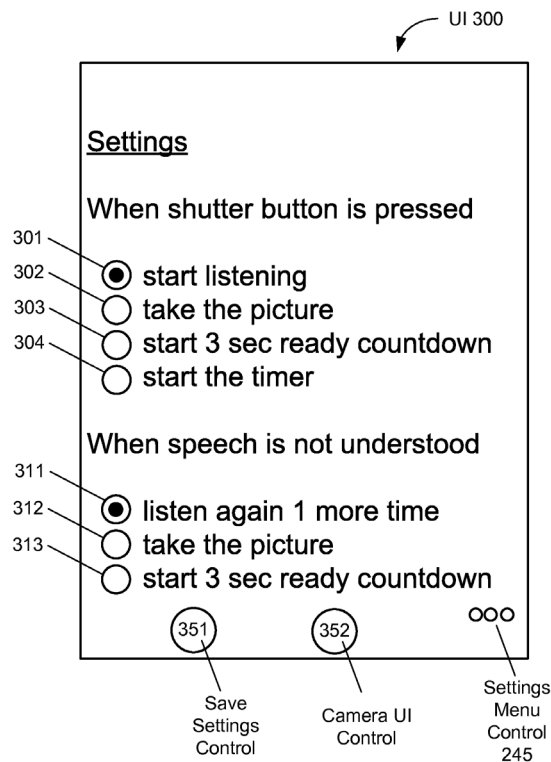


FIG. 3

Chinn’s Figure 3, above, depicts an example of a settings menu UI 300 that the camera control system 175 may be configured to present on a display such as touch screen display 105. Ex. 1004 ¶ 35. According to Chinn, the

settings menu includes a menu category that provides controls for selecting actions by camera control system 175 when a shutter control is pressed. *Id.* ¶ 36. For example, when the “start 3 sec ready countdown” control 303 is selected, “the camera control system 175 starts a countdown (such as a three second countdown or any other countdown duration) and then takes a picture/initiates video recording in response to user selection of shutter control” *Id.* ¶ 39. Chinn also discloses that when the “start the timer” control 304 is selected, “in response to user selection of shutter control 233, camera control system 175 starts a timer and then takes a picture/initiates video recording after the time period specified for the timer elapses.” *Id.* ¶ 40.

Chinn’s Figure 4 is reproduced below.

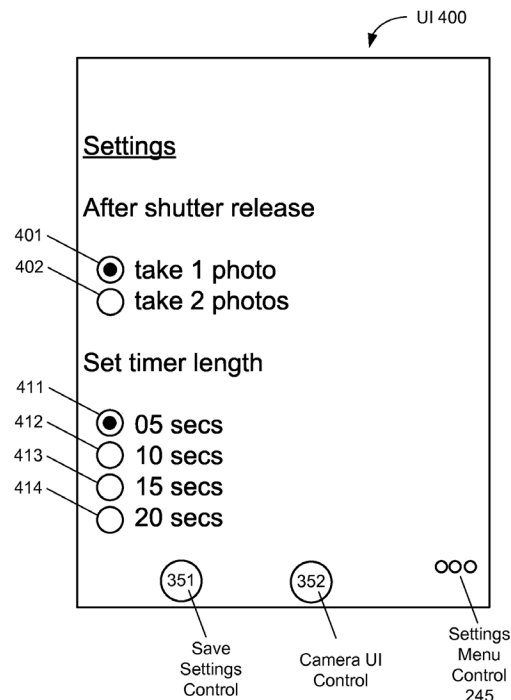


FIG. 4

Chinn’s Figure 4, above, depicts another example of a settings menu UI 400, which the camera control system 175 may be configured to present on a

display such as touch screen display 105. Ex. 1004 ¶ 45. According to Chinn, the settings menu includes a menu category that provides controls 411, 412, 413, and 414 for selecting timer length settings. *Id.* ¶ 48. Chinn explains that the “[c]amera control system 175 may be configured to apply a selected timer length setting in response to user activation of timer initiation control . . . , and/or in connection with shutter control . . . when control 304 is selected, as described in connection with FIG. 3.” *Id.*

b. Takahashi (Ex. 1005)

Takahashi is a Japanese Unexamined Patent Application Publication that published on November 2, 2001, more than one year before the earliest priority date of the ’757 patent. Ex. 1001, code (63); Ex. 1005, codes (43). Petitioner asserts that Takahashi is prior art under post-AIA 35 U.S.C. §§ 102(a)(1), (a)(2). Pet. 7.

Takahashi relates to performing photography of a subject, where the photographer is the subject, using voice audio input. Ex. 1005, code (57). Takahashi notes that with the conventional technologies, where photographic functions and operations are controlled via voice audio input through a microphone provided on the rear surface of the camera, photography via voice audio input is difficult if the photographer is the subject. *Id.* ¶ 7; *see also id.* ¶ 8.

Figure 1 of Takahashi is reproduced below.

【図1】

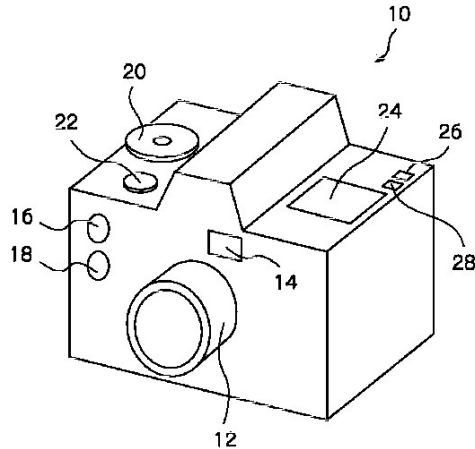


Figure 1 of Takahashi, above, depicts an image capturing device having a camera body 10, a lens barrel 12, a forward directional microphone 16 for inputting voice audio from the subject, a light-emitting diode (LED) 18, a mode dial 20, a shutter release button 22, and a liquid crystal display 24. Ex. 1005 ¶¶ 16–17.

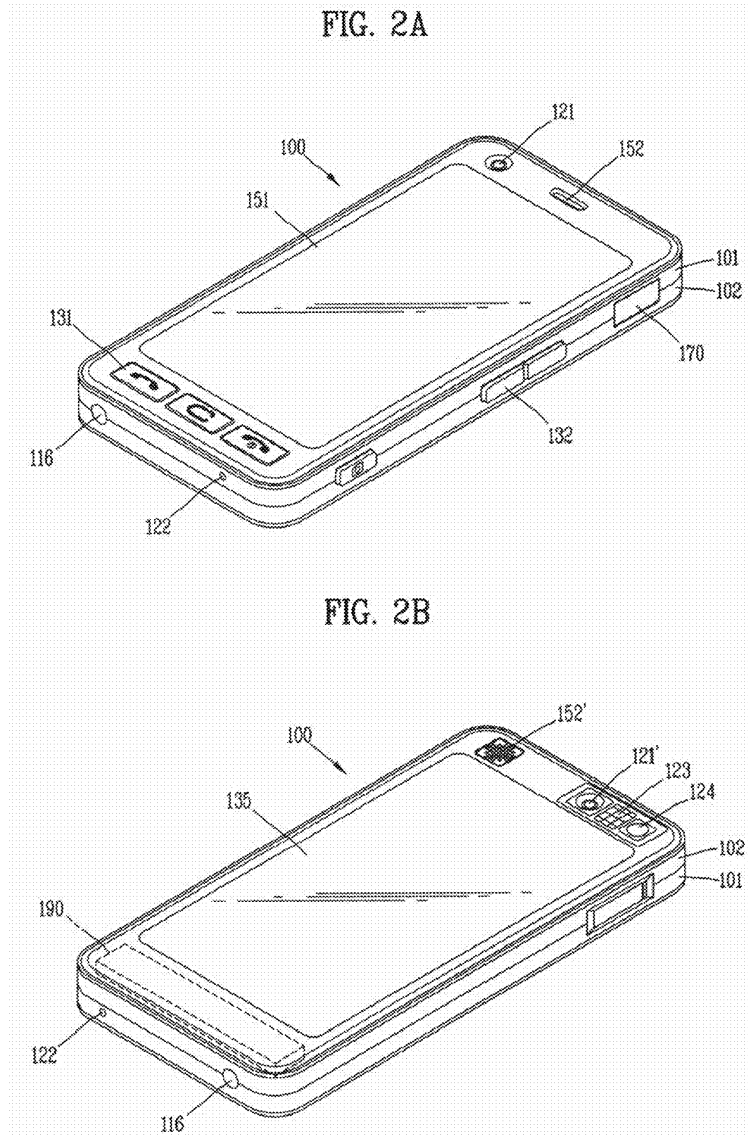
According to Takahashi, the mode dial 20 is used to set a voice audio registration mode, and a first voice audio pattern for focus adjustment and a second voice audio pattern for shutter release are registered in response to voice audio input using the microphone 16. Ex. 1005, code (57). Takahashi describes that when voice audio photography mode is set, a voice audio recognition process is performed on voice audio input using the microphone 16. *Id.* According to Takahashi, the light-emitting diode 18 provided on the front of the camera body 10 blinks during voice audio recognition, “letting the photographer know whether or not the voice audio has been recognized, enabling the photographer to continuously operate the camera using voice audio input without moving from that location.” *Id.* ¶ 41. Takahashi explains that it is “possible to accurately focus on the photographer, who is acting as the subject, by means of the photographer speaking the first voice

audio pattern in the location to be photographed, and take the picture.” *Id.* Takahashi further explains that “[r]ecognition of the second voice audio pattern launches the timer circuit . . . and releases the shutter after a prescribed amount of time has elapsed, giving the photographer time to adjust his or her facial expression and pose during that time” and “mak[ing] it possible to be photographed accurately with the desired facial expression and while not in the middle of speaking.” *Id.*

c. Kim (Ex. 1008)

Kim is a U.S. Patent Application Publication that published on June 3, 2010, more than one year before the earliest priority date of the ’757 patent. Ex. 1001, code (63); Ex. 1008, code (43). Petitioner asserts that Kim is prior art under post-AIA 35 U.S.C. §§ 102(a)(1), (a)(2). Pet. 8.

Kim relates to “a mobile terminal and a method of controlling a display of the mobile terminal.” Ex. 1008 ¶ 2. Figures 2A and 2B of Kim, depicting front and rear views of a mobile terminal, are reproduced below. *Id.* ¶¶ 13–14.



Kim's Figure 2A, above, depicts display 151, audio output unit 152, camera 121, and microphone 122 provided to the front case 101 of a mobile terminal 100. *Id.* ¶¶ 90–91. Kim's Figure 2B, above, depicts a camera 121' provided to the rear case 102 on the backside of the terminal body. *Id.* ¶ 94.

Kim also describes a mobile terminal 100 as including a memory to store various types of data to support the processing, control, and storage requirements of the mobile terminal 100. Ex. 1008 ¶¶ 44, 80. According to Kim, the memory may be of any type or combination of suitable volatile and non-volatile memory or storage devices. *Id.* ¶ 81. Kim further describes

that “[t]he mobile terminal 100 is able to operate in association with a web storage for performing a storage function of the memory . . . on Internet.”

Id.

d. Yamamoto (Ex. 1009)

Yamamoto is a U.S. Patent Application Publication that published on February 4, 2010, more than one year before the earliest priority date of the ’757 patent. Ex. 1001, code (63); Ex. 1009, code (43). Petitioner asserts that Yamamoto is prior art under post-AIA 35 U.S.C. §§ 102(a)(1), (a)(2). Pet. 8.

Yamamoto relates to “a technology for starting capturing of an image in response to a sound.” Ex. 1009 ¶ 2. Yamamoto seeks to solve the problems with the speech recognition shutter function of cameras by efficiently storing an image “that is captured at a time reflecting a time at which a certain sound is input and that is an image desired by a user” “in accordance with a single speech command.” *Id.* ¶¶ 4–8.

Figure 1 of Yamamoto is reproduced below.

FIG. 1

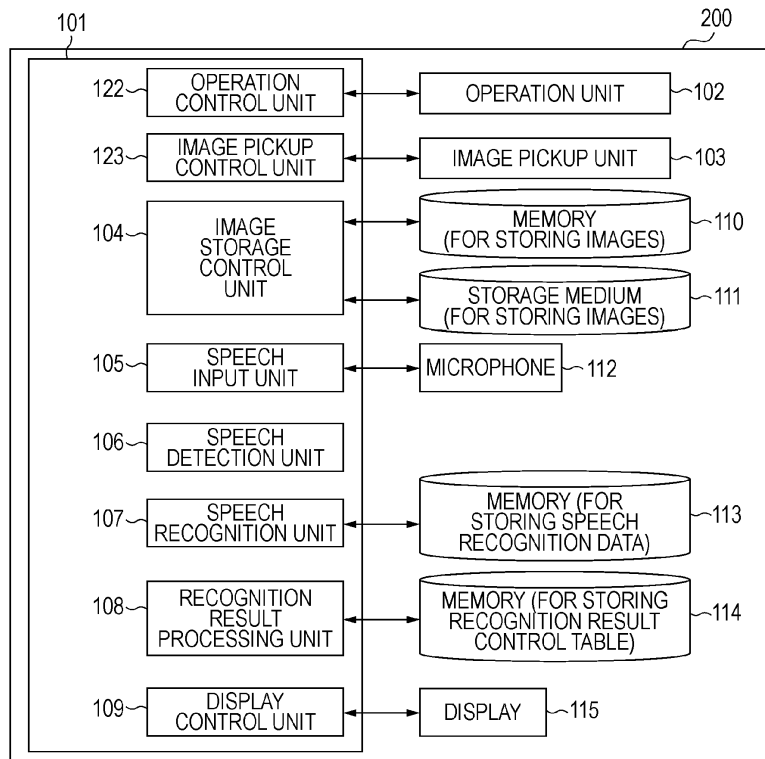


Figure 1 of Yamamoto, above, depicts a functional block diagram of a digital camera 200, which includes a control unit 101, an operation unit 102, an image pickup unit 103, a memory (for storing images) 110, a storage medium (for storing images) 111, a microphone 112, a memory (for storing speech recognition data) 113, a memory (for storing a recognition result control table) 114, and a display 115. Ex. 1009 ¶¶ 31–33.

Figure 10 of Yamamoto is reproduced below.

FIG. 10

COMMAND	PROCESSING
Shoot	HOLD IMAGE CAPTURED AT TIME OF START OF UTTERANCE
Go	HOLD IMAGE CAPTURED AT TIME OF START OF UTTERANCE
Cheese	HOLD IMAGE CAPTURED AT TIME OF END OF UTTERANCE
Say Cheese	HOLD IMAGE CAPTURED AT TIME AT WHICH CERTAIN PERIOD OF TIME HAS PASSED FROM TIME OF END OF UTTERANCE
Five Four Three	HOLD IMAGE CAPTURED AT TIME AT WHICH CERTAIN PERIOD OF TIME HAS PASSED FROM TIME OF START OF UTTERANCE
Spot Metering	ACTIVATE SPOT METERING
Center Metering	ACTIVATE CENTER-WEIGHTED METERING
Use a Flash	ACTIVATE STROBE LIGHT
No Fash	DEACTIVATE STROBE LIGHT

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Figure 10 of Yamamoto, above, shows an example of a recognition result control table, to which the recognition result processing unit 108 (shown in Figure 1 above) refers when determining camera control corresponding to a recognition result. Ex. 1009 ¶¶ 211, 213. According to Yamamoto, “‘Shoot’, ‘Go’, ‘Cheese’, ‘Say Cheese’, and ‘Five Four Three’ are speech commands for starting an image capturing operation” *Id.* ¶ 205.

Figures 6–8 of Yamamoto are reproduced below.

FIG. 6

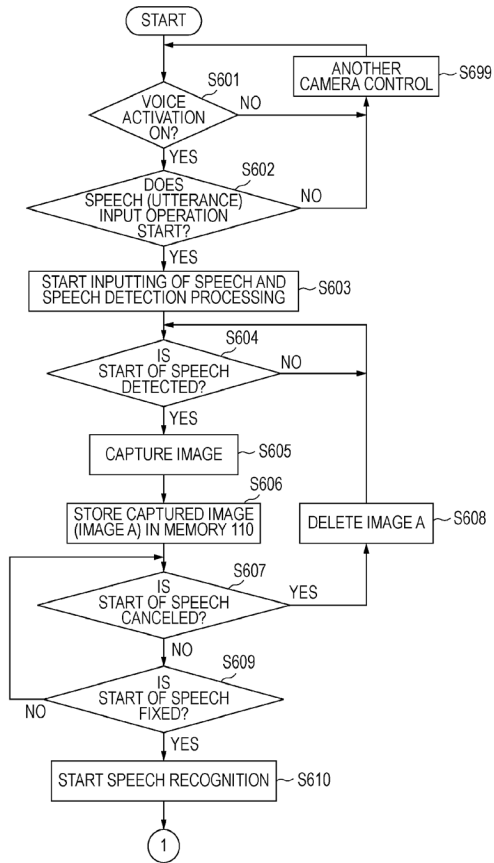


FIG. 7

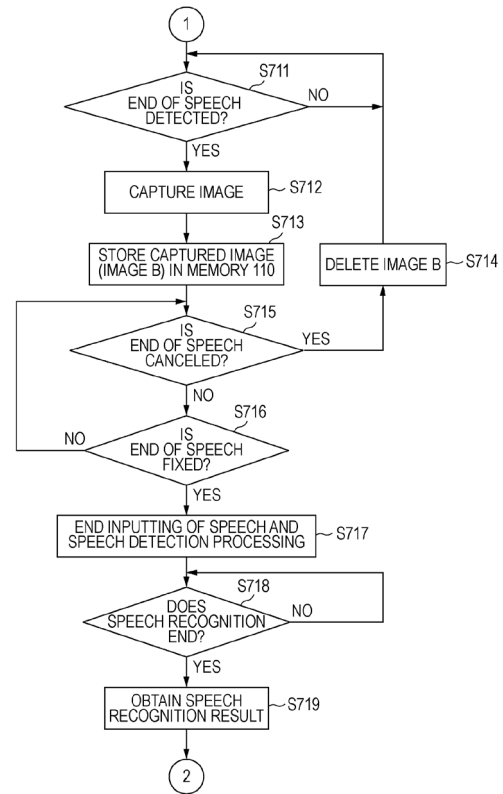
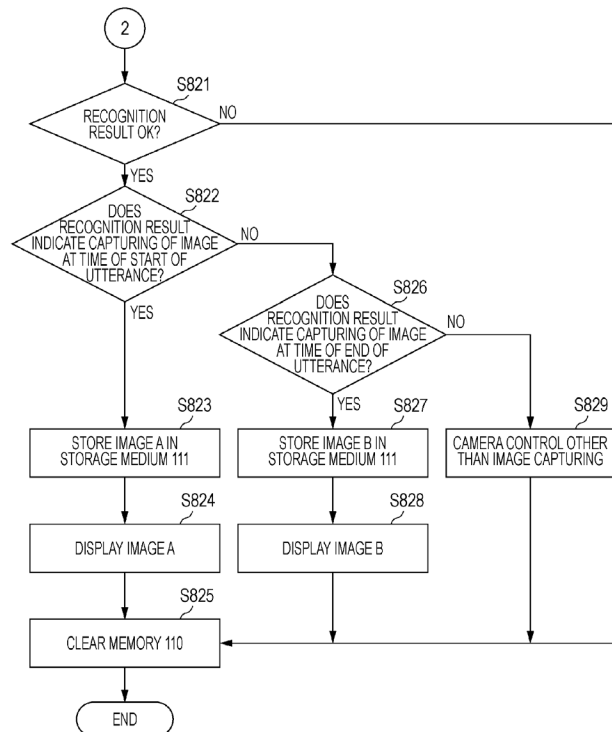


FIG. 8



Figures 6–8 of Yamamoto, above, depict flowcharts of processing performed by the digital camera 200 when capturing of an image is commanded by speech. Ex. 1009 ¶ 216. As shown in Figure 6, if a voice activation function is activated (YES in step S601) and if inputting of speech starts (YES in step S602), “the speech input unit 105 starts processing for receiving speech and the speech detection unit 106 starts speech detection processing in step S603.” *Id.* ¶¶ 218–219, 223. If the speech detection unit 106 detects the start of speech (YES in step S604), the image pickup unit 103 executes an image capturing operation in step S605 and the image storage control unit 104 stores the captured image (image A) in the memory 110 in step S606. *Id.* ¶¶ 231, 233–235.

As shown in Figure 7, if the speech detection unit 106 detects the end of speech (YES in step S711), the image pickup unit 103 captures an image in step S712 and the image storage control unit 104 stores the captured image (image B) in the memory 110 in step S713. Ex. 1009 ¶¶ 245, 247–248. Yamamoto describes a case in which “an image is captured after a certain period of time (for example, 0.5 seconds) passes after, in general, ‘Say Cheese’ or the like has uttered” and “the image pickup unit 103 captures an image after a predetermined delay time passes after the speech detection unit 106 has performed the detection operation for detecting the end of utterance ‘Say Cheese.’” *Id.* ¶¶ 249–250. After speech detection and speech recognition processing ends in steps S717 and S718, the recognition result processing unit 108 obtains a recognition result obtained by the speech recognition unit 107 in step S719. *Id.* ¶¶ 257, 259–260.

As shown in Figure 8, control of the digital camera 200 is determined based on the command included in the recognition result by referring to the recognition result control table in step S822. Ex. 1009 ¶ 264. According to

Yamamoto, if a recognized command is a word, such as “Shoot” or “Go,” that is a command for capturing an image at the time of the start of speech (YES in step S822), then the image storage control unit 104 stores image data of the image A on the storage medium 111 in step S823. *Id.* ¶ 265. If not, then it is determined whether the recognized command is a word, such as “Cheese,” that is a command for capturing an image at the time of the end of speech in step S826. *Id.* ¶ 268. If YES in step S826, then the image storage control unit 104 stores image data of the image B on the storage medium 111 in step S827. *Id.* ¶ 269.

e. EX-V7 (Ex. 1014)

EX-V7 is a user’s guide for CASIO EXILIM digital camera EX-V7. Ex. 1014, 1. Petitioner contends that EX-V7 was publicly available no later than October 10, 2008, and is therefore prior art under post-AIA 35 U.S.C. § 102(a)(1). Pet. 8 (citing Ex. 1010, 1, 2, 14, 19–294; Ex. 1014, 137, 199; Ex. 1003 ¶ 64; Ex. 1007, 2, 2:7–9), Patent Owner asserts that it “reserves the right to argue the prior art status of EX-V7 in the event these proceedings are instituted.” Prelim. Resp. 18.

EX-V7 describes a “self-timer” feature of the digital camera, wherein “pressing the shutter button starts a timer, and the shutter is released and the image is shot after a fixed amount of time.” Ex. 1014, 77. One of the self-timer types described by EX-V7 is “2-second self-timer” that can be used to “prevent blur due to hand movement” “[w]hen shooting under conditions that slow down the shutter speed.” *Id.*

f. Thorn (Ex. 1011)

Thorn is a U.S. Patent Application Publication that published on July 2, 2009, more than one year before the earliest priority date of the ’757

patent. Ex. 1001, code (63); Ex. 1011, code (43). Petitioner asserts that Thorn is prior art under post-AIA 35 U.S.C. §§ 102(a)(1), (a)(2). Pet. 9.

Thorn relates to “a system and method that monitors subjects in an image field and controls flash operation to minimize firing the flash while a subject is blinking.” Ex. 1011 ¶ 1. Noting that cameras rely on a flash in low light situations, Thorn observes that “if the flash is fired and image data for the photograph is captured while a person in the image field is blinking, then the resultant representation of the subject in the photograph will appear with his or her eye shut or partially shut.” *Id.* ¶ 3. Thorn describes “an improved blink detection and flash operation technique” to “improve the manner in which a photograph is taken in low light situations.” *Id.* ¶ 4. Thorn’s method includes the step of “delaying the firing of the flash and the capturing of the image data by an amount of time that is based on the statistical data to minimize firing the flash and capturing the image data during a blink of the one or more subjects.” *Id.* ¶ 5; *see also id.* ¶ 60 (“the process may be delayed a period of time to reduce the probability that one or more of the subjects will be blinking at the time that the flash 18 is fired and the sensor 16 captures image data for the photograph.”).

E. Obviousness over Chinn, Takahashi, EX-V7, and Kim (Grounds 1/2)

For Ground 1, Petitioner contends that claims 1–8, 10, and 11 are unpatentable under 35 U.S.C. § 103 as obvious over Chinn, Takahashi, and EX-V7. Pet. 10–47. For Ground 2, Petitioner contends that claim 9 is unpatentable under 35 U.S.C. § 103 as obvious over Chinn, Takahashi, EX-V7, and Kim. *Id.* at 47–52. Petitioner submits the testimony of Mr. Guidash in support of these contentions. Ex. 1003 ¶¶ 68–154. Patent Owner disputes certain aspects of Petitioner’s evidence and arguments. Prelim. Resp. 19–

30. We begin our analysis by considering Petitioner’s rationale for combining the teachings of Chinn, Takahashi, and EX-V7.

1. Rationale to Combine Chinn, Takahashi, and EX-V7

Petitioner contends that

[i]t would have been obvious to a POSITA to combine Chinn with Takahashi and EX-V7 by configuring a mobile phone with front and rear cameras as taught by Chinn to respond to a voice command to capture an image using the front camera after a first standby time as taught by Chinn and Takahashi, and to respond to a touch command to capture an image using the rear camera as taught by Chinn, with the first standby time being longer than a second standby time as taught by Chinn and EX-V7.

Pet. 10 (citing Ex. 1003 ¶ 68).

Petitioner asserts that “Chinn and Takahashi both relate to image capture devices (imaging devices) with manual and voice activated photographic processes” and that “EX-V7 also relates to an imaging device, and allows manual activation of a camera.” Pet. 10 (citing Ex. 1004 ¶¶ 4, 23, 30; Ex. 1005 ¶ 17; Ex. 1003 ¶ 69; Ex. 1014, 15–17). According to Petitioner, this makes “their devices particularly suitable for each other.” Pet. 10 (citing Ex. 1004 ¶¶ 16, 22, 23).

Petitioner explains that “both Chinn and Takahashi disclose delayed image capture after a voice command is given,” and therefore, a person of ordinary skill in the art “would have been motivated to look at Takahashi and EX-V7 to improve Chinn, and vice-versa.” Pet. 10–11 (citing Ex. 1004 ¶¶ 2, 25, and 51 (use of “pre-amble” before image taking in response to voice command); Ex. 1005 ¶¶ 39, 40 (use of a standby state before image taking in response to voice command); Ex. 1003 ¶ 69).

According to Petitioner, a person of ordinary skill in the art “would have understood that having a delay between the utterance of the voice command and the taking of the image would allow a user time to pose between speaking the command and taking the image.” Pet. 11 (citing Ex. 1003 ¶ 70). Petitioner points out that

Takahashi discloses that “even if the voice audio from the photography location is recognized by the camera, the shutter release operation would occur immediately, meaning the photographer would be photographed while speaking, making it impossible for him or her to be photographed with the desired facial expression or pose,” stating that this” is a problem.” Pet. 11 (citing Ex. 1005 ¶ 8).

Petitioner explains that “[t]o overcome this problem, Takahashi introduces a delay/standby from a recognition of a voice command to the start of the image capture.” Pet. 11 (citing Ex. 1005 ¶¶ 38–39). Takahashi explains that during this time, the photographer “adjusts his or her facial expression from having spoken the voice audio to a state ready to be photographed and waits for the camera shutter to be released.” Ex. 1005 ¶ 39.

Petitioner asserts that a person of ordinary skill in the art “would have found it obvious, and would have been motivated, to set a longer delay for a front-camera selfie than for a rear-camera, touch-initiated photograph.” Pet. 12. Petitioner also asserts that “Takahashi teaches that a delay considering facial movement is needed, and common sense dictates that it would be longer than a delay for a touch photo meant to capture the current scene.” Pet. 12–13. Petitioner argues that in light of the time delay disclosures of Chinn and EX-V7, a person of ordinary skill in the art

would have found it obvious to select a 10-second standby time for a front-camera 110, voice-activated selfie (to give the user

time after speaking the voice command to obtain a desired facial expression) and, e.g., a 2 second standby time for a rear-camera 125, touch-activated photo (to prevent blur due to hand movement).

Pet. 13 (citing Ex. 1003 ¶ 75).

Petitioner argues that “[a]dding such standby times would simply involve applying a known technique (i.e., a delay as disclosed by Takahashi and EX-V7) to a known device ready for improvement (Chinn’s two camera device) to yield predictable results (a selfie with desired facial features and photographs without blurred images).” Pet. 13 (citing Ex. 1003 ¶ 76).

Petitioner also asserts that a person of ordinary skill in the art would have had a reasonable expectation of success in combining Chinn, Takahashi and EX-V7 as Chinn had the technology to do so (e.g., voice activation, selection of the front camera, delay timer), and these modifications involved only routine skill. Pet. 14 (citing Ex. 1003 ¶ 77).

Patent Owner does not specifically contest Petitioner’s expressed evidence and arguments directed to a rationale to combine the teachings of Chinn, Takahashi, and EX-V7. *See* Prelim. Resp. 19–30. Instead, with respect to contested limitation [1i], Patent Owner criticizes Petitioner’s use of the Chinn reference by arguing that

[n]either Petitioner nor its expert provide any analysis on why [a person of ordinary skill in the art] would be motivated to change Chinn’s multiple-voice instruction and two-step process to a single instruction process when Chinn provides its own solution that repeatedly emphasizes a separation of tasks and voice instructions. Moreover, neither Petitioner nor its expert provide any rationale on why [a person of ordinary skill in the art] would be motivated to redesign OS 171, Camera Control System 175, and User Interfaces 200, 300, and 400 of Chinn to arrive at the claimed invention when Chinn has its own solution of providing a timer and then subsequent activation of the

camera based on a separate instruction. In short, modifying Chinn to arrive at the claimed invention would require a complete redesign of Chinn's system, and there is no rationale to do so beyond the hindsight driven analysis set forth by Petitioner.

Id. at 25.

Patent Owner's argument, however, is unavailing because it does not directly address Petitioner's stated rationale for combining the teachings of Chinn, Takahashi, and EX-V7 proffered by Petitioner. Instead, Patent Owner uses attorney argument to assert that Chinn's teachings are somehow restricted to a "multiple-voice instruction and two-step process" that would need to be redesigned in order to "arrive at the claimed invention."

We disagree with Patent Owner in part because Patent Owner's assertions are mere attorney argument, which have little evidentiary value, and the testimonial evidence of Mr. Guidash presently stands unrebutted. *See Icon Health & Fitness, Inc. v. Strava Inc.*, 849 F.3d 1034, 1046 (Fed. Cir. 2017) ("Attorney argument is not evidence or explanation in support of a conclusion."); *Invitrogen Corp. v. Clontech Lab., Inc.*, 429 F.3d 1052, 1068 (Fed. Cir. 2005) ("Unsubstantiated attorney argument regarding the meaning of technical evidence is no substitute for competent, substantiated expert testimony."); *In re Payne*, 606 F.2d 303, 315 (CCPA 1979) (citing *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972)) ("Arguments of counsel unsupported by competent factual evidence of record are entitled to little weight.").

Moreover, the test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Accordingly, one cannot show non-obviousness by attacking references individually where, as here, the

stated rationale for unpatentability is based on a combination of references. This is particularly relevant here, where Petitioner explains that its rationale to combine the teachings of Chinn, Takahashi, and EX-V7 derives, in part, from the teachings of the references themselves. *See, e.g.*, Pet. 10–11 (“Moreover, both Chinn and Takahashi disclose delayed image capture after a voice command is given,” and therefore, a person of ordinary skill in the art “would have been motivated to look at Takahashi and EX-V7 to improve Chinn, and vice-versa.”).

Based upon the current record, we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that a person of ordinary skill in the art at the relevant time period would have had a reasoned basis for combining the teachings of Chinn, Takahashi, and EX-V7 in the manner proffered and would have had a reasonable expectation of success in that endeavor.

2. Independent Claim 1

We now consider the evidence and arguments of the parties directed to claim 1. Petitioner contends that claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over the combined teachings of Chinn, Takahashi and EX-V7. *See* Pet. 10–47. Petitioner submits the testimony of Mr. Guidash in support of its contentions. *See* Ex. 1003 ¶¶ 68–143. Patent Owner disputes certain aspects of Petitioner’s evidence and arguments directed to these claims, in particular limitations [1g], [1i], and [1j]. *See* Prelim. Resp. 19–30. Patent Owner does not contest Petitioner’s evidence and arguments directed to any other limitations of claim 1. *See id.* We consider Petitioner’s evidence and arguments directed to claim 1, and we address in detail all of Patent Owner’s arguments directed to the contested limitations [1g], [1i], and [1j]. We start with disputed limitation [1i] first.

a. Contested Limitation [1i]

Limitation [1i] recites “*control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled.*”

Petitioner contends that “[t]he Chinn-Takahashi-EX-V7 combination renders obvious this limitation.” Pet. 29. Petitioner asserts that “Chinn discloses or renders obvious activating the front camera 110 (i.e., first camera) to output image signals when a voice command is received and the front camera is selected via, e.g., via the camera selection control 242.” Pet. 29 (citing Pet. § VI.A (motivation to combine Chinn with Takahashi and EX-V7); Ex. 1003 ¶ 100). According to Petitioner, a person of ordinary skill in the art “would have understood that the need to activate the front camera 110 means that it was previously disabled.” Pet. 29. Petitioner also asserts that a person of ordinary skill in the art “would have also understood that because only the front camera 110 is activated, the back camera 125 (i.e., second camera) would remain disabled.” Pet. 29 (citing Ex. 1003 ¶ 100).

Petitioner argues that “[t]o the extent not expressly disclosed in Chinn, [a person of ordinary skill in the art] would have found it obvious to configure Chinn’s camera control system 175 to keep rear camera 125 disabled while capturing an image using the front camera 110 and vice-versa.” Pet. 29. According to Petitioner, the “[b]enefits of doing so include reducing power consumption and increasing battery life.” Pet. 29 (citing Ex. 1003 ¶ 100).

“Likewise,” Petitioner explains, “Chinn discloses activating the back camera 125 (i.e., second camera) in response to the user selection of the camera activation control 233 on the touch panel 105/UI 200 when the back

camera is selected via the camera selection control 242.” Pet. 30 (citing Ex. 1003 ¶ 101). According to Petitioner, a person of ordinary skill in the art “would have understood that the need to activate the back camera 125 means that it was previously disabled,” and a person of ordinary skill in the art “would have also understood or at least found obvious that because only the back camera 125 is activated, the front camera 110 (i.e., first camera) remains disabled.” Pet. 30 (citing Ex. 1003 ¶ 101). The “[b]enefits of doing so,” Petitioner argues, “include reducing power consumption and increasing battery life.” Pet. 30.

Petitioner argues that a person of ordinary skill in the art would have found it obvious to configure the camera control system 175 in the Chinn-Takahashi-EX-V7 combination for a 10 second standby time after detecting a ‘set timer: 10 seconds’ voice command to capture selfie using the front camera as taught by Chinn (EX1004, ¶ 27) and for a 2 second standby time after detecting a touch command via camera activation control 233 when the rear camera has been selected via control 242 as taught by the combination of Chinn and EX-V7.

Pet. 30 (citing Ex. 1004 ¶ 48; Ex. 1014, 77; Ex. 1003 ¶ 102).

Patent Owner argues that “Petitioner never shows if the alleged prior art combination ties the alleged first standby time with the first camera being enabled with reference to specific evidence.” Prelim. Resp. 21. Patent Owner argues that “Petitioner points to a 10-second timer in Chinn as the first standby time,” and “in Chinn it is not until *after* the 10-second timer that the camera is enabled and thus Petitioner has not shown that the claim language “a first standby time of a case where the first camera is enabled” is met. *Id.* (citing Pet. 30; Ex. 1004 ¶ 27).

Patent Owner also argues that “Chinn discloses two separate voice instructions for two separate tasks. Chinn discloses ‘activating’ the camera

in response to ‘ready click,’ and separately setting a timer in response to the voice command ‘set timer.’” Prelim. Resp. 21 (citing Ex. 1004 ¶¶ 25, 27).

Patent Owner argues that “Chinn has designed a system with specific user interfaces and settings screen that emphasize this two-step two-instruction process that requires a separation between setting a timer and activating a camera.” Prelim. Resp. 22–23 (citing Ex. 1004, Figs. 2–4).

“Thus,” Patent Owner argues,

Chinn repeatedly discloses requiring the input of two different and separate instructions to set a timer and then to activate a camera, if desired by the user. Therefore, Chinn cannot disclose the relationship between two standby times because the claimed standby times are linked to the enabling and disabling of two separate cameras.

Id. at 24.

Patent Owner also argues that “there is no disclosure in Chinn of disabling a ‘second camera’ and disabling a ‘first camera,’ and associating such disabling to first and second standby times.” Prelim. Resp. 24.

We disagree with Patent Owner, in part because Patent Owner’s assertions are mere attorney argument, which have little evidentiary value. *See Icon Health & Fitness*, 849 F.3d at 1046 (“Attorney argument is not evidence or explanation in support of a conclusion.”); *Invitrogen Corp.*, 429 F.3d at 1068 (“Unsubstantiated attorney argument regarding the meaning of technical evidence is no substitute for competent, substantiated expert testimony.”); *In re Payne*, 606 F.2d at 315 (“Arguments of counsel unsupported by competent factual evidence of record are entitled to little weight.”).

Mr. Guidash testifies that Chinn teaches “voice activated photographic processes using the front and/or rear cameras.” Ex. 1003 ¶ 53

(citing Ex. 1004 ¶ 23 (“The camera control system 175 may be configured to activate the camera, which may be either or both of camera 110 [front camera] and/or camera 125 [back camera], to take a photograph or begin recording a video in response to the predetermined camera activation sound pattern.”)).

Chinn itself also explains that

[i]n some embodiments, immediately *activating the camera 125 to take a picture/initiate video recording may be subject to stabilization delay* as discussed in connection with control 507 and/or an audible notification as discussed in connection with control 501. Activating camera 125 after stabilization and/or an audible notification, without any countdown or waiting for a voice or other sound command, is understood herein to qualify as immediately activating the camera 125. *When the “start 3 sec ready countdown” control 303 is selected, the camera control system 175 may modify its response to user selection of shutter control 233, so that camera control system 175 starts a countdown (such as a three second countdown or any other countdown duration) and then takes a picture/initiates video recording in response to user selection of shutter control 233. The countdown may be audible and the camera activation may be preceded by a preamble phrase as described herein.* In some embodiments, the countdown activated by control 303 may comprise a fixed, minimal countdown of, e.g., 5 seconds or less, which is not user-configurable, unlike countdowns associated with control 232.

Id. ¶¶ 38–39 (emphasis added).

Based on these disclosures, Chinn clearly explains that its camera control system 175 may be configured to *activate either or both camera 110 (front camera) and/or camera 125 (back camera) to take a photograph or begin recording a video in response to a predetermined camera activation sound pattern, e.g. a voice command.* See Ex. 1004 ¶ 23. Chinn also explains that *activating camera 125 to take a picture/initiate video recording*

may be subject to a stabilization delay (i.e. a time delay), including a countdown of any duration that would precede camera activation. See id. ¶¶ 38–39. Chinn further explains that “in response to user selection of shutter control 233, camera control system 175 starts a timer and then takes a picture/initiates video recording after the time period specified for the timer elapses.” *Id.* ¶ 40 (emphasis added).

Moreover, we do not discern any particular language in claim 1, nor does Patent Owner point us to any such language, or to anything in the ’757 specification, that would preclude enabling a camera or starting a recording of an image signal *after* the expiration of a timer as Patent Owner seems to argue.

Based on the preliminary record before us, we determine that Petitioner has made a sufficient showing, for purposes of institution, that the combined teachings of Chinn, Takahashi and EX-V7 meet the subject matter recited in limitation [1i].

a. Contested Limitations [1g] and [1j]

Limitation [1g] recites, “*wherein the controller is configured to: control such that, when the audio input interface receives the command voice giving a first instruction to start a recording of an image signal, the recorder starts a recording of the first image signal acquired by the first camera on the storage in response to the first instruction.*”

Limitation [1j]⁴ recites “*wherein the first standby time is a time from a recognition of the first instruction to a start of the recording of the first*

⁴ For limitation [1j], Petitioner states that “[t]he Chinn-Takahashi-EX-V7 combination renders this limitation obvious.” Pet. 31 (citing Pet. §§ VI.B.10 (limitation [1i]), VI.A (Motivation to Combine Chinn with Takahashi and EX-V7); Ex. 1003 ¶ 103).

image signal acquired by the first camera, and the second standby time is a time from a recognition of the second instruction to a start of the recording of the second image signal acquired by the second camera.”

For limitation [1g], Petitioner asserts that “Chinn discloses or renders obvious this limitation.” Pet. 26 (citing Ex. 1003 ¶ 96). According to Petitioner,

Chinn discloses the camera control system 175 (i.e., controller) is configured to respond to a voice command (e.g., “set timer: 10 seconds” or “ready click”) received by the microphone 150 and detected by the sound recognition system 173 to activate the front camera 110 “to take a photograph ... in response to the predetermined camera activation sound pattern”. EX 1004, ¶23. Front camera 110 is the claimed “first camera.” See limitation [1c]; EX1003, ¶96. The portion of the camera control system 175 responsible for taking a photograph and/or recording a video is the claimed “recorder.”

Pet. 26–27 (citing Ex. 1003 ¶ 96).

Petitioner asserts that a person of ordinary skill in the art would have understood that the taking of a photograph or recording of a video with the front camera 110 (i.e., first camera) in response to a ‘set timer: 10 seconds’ voice command (i.e., the command voice giving a first instruction) would require storing an image signal (i.e., the claimed first image signal) in storage (e.g., memory 163 or graphics memory).

Pet. 27 (citing Ex. 1003 ¶ 96).

Patent Owner argues that “claim 1 dictates that Chinn record the first image signal acquired by a first camera in response to the same first instruction that also starts the first standby time ‘wherein the first standby time is a time from a recognition of the first instruction to a start of the recording of the first image signal acquired by the first camera.’” Prelim. Resp. 27. Petitioner argues that “Chinn explicitly discloses providing

separate instructions for setting a timer, activating a camera, and taking a picture.” *Id.* at 28 (citing Ex. 1004, Figs. 3, 4).

“Thus,” argues Patent Owner, “Chinn cannot disclose the claimed ‘first instruction’ that is required by claim elements 1[g] and 1[j] because even if an instruction of setting a timer begins a standby time in Chinn, Chinn does not disclose starting ‘a recording of the first image signal . . . on the storage in response to the first instruction.’” Prelim. Resp. 28–29 (alteration in original). According to Patent Owner, “Chinn requires a second separate instruction to activate a camera, let alone begin recording of an image signal by the camera.” *Id.* at 29.

We disagree with Patent Owner. Again, Patent Owner’s assertions are mere attorney argument. *See Icon Health & Fitness*, 849 F.3d at 1046; *Invitrogen Corp.*, 429 F.3d at 1068; *In re Payne*, 606 F.2d at 315. In contrast, Mr. Guidash testifies, and we agree, that “Chinn discloses that ‘multiple camera activation controls may include a listening initiation control 231, a timer initiation control 232, and a camera activation control 233.’” Ex. 1003 ¶ 52 (citing Ex. 1004 ¶ 22). Mr. Guidash also testifies that “Chinn discloses multiple photographic processes, including at least: voice activated photographic processes using the front and/or rear cameras,” and “shutter/non-voice activated photographic processes using the front and/or rear cameras.” *Id.* ¶ 53 (citing Ex. 1004 ¶¶ 23, 30, Figs. 1, 2).

Mr. Guidash further testifies that

Chinn discloses the *camera control system 175 (i.e., controller) is configured to respond to a voice command (e.g., “set timer: 10 seconds” or “ready click”) received by the microphone 150 and detected by the sound recognition system 173 to activate the front camera 110 “to take a photograph or begin recording a video in response to the predetermined camera activation sound pattern”*. EX1004, ¶23.1 Front camera 110 is the claimed

“first camera.” *See* limitation [1c]. The portion of the camera control system 175 responsible for taking a photograph and/or recording a video is the claimed “recorder.” *See* limitation [1e]. In my opinion, a POSITA would have understood that the taking of a photograph or recording of a video with the front camera 110 (i.e., first camera) in response to a “set timer: 10 seconds” voice command (i.e., the command voice giving a first instruction) would require storing an image signal (i.e., the claimed first image signal) in storage (e.g., memory 163 or graphics memory).

Ex. 1003 ¶ 96 (emphasis in italics added).

Chinn itself explains that “camera control system 175 may adapt its response to user selection of shutter control 233, so that, in response to user selection of shutter control 233, camera control system 175 starts a timer and then takes a picture/ initiates video recording after the time period specified for the timer elapses.” Ex. 1004 ¶ 40.

Based on the preliminary record before us, we determine that Petitioner has made a sufficient showing, for purposes of institution, that the combined teachings of Chinn, Takahashi and EX-V7 meet the subject matter recited in limitations [1g] and [1j].

b. Uncontested Limitations

Patent Owner does not contest any of the remaining limitations of claim 1. *See* Prelim. Resp. 19–30. Petitioner provides evidence and argument, supported by the testimony of Mr. Guidash, that these uncontested limitations of claim 1 are met by Petitioner’s proposed combination of Chinn, Takahashi, and EX-V7. *See* Pet. 14–29; Ex. 1003 ¶¶ 78–95, 97–98.

After reviewing Petitioner’s evidence and arguments concerning these uncontested limitations of claim 1, we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that the combined

teachings of Chinn, Takahashi, and EX-V7 meet the uncontested limitations of claim 1, namely the preamble⁵ and limitations [1a]–[1f] and [1h].

c. Conclusion as to Independent Claim 1

We have considered Petitioner’s evidence and arguments that the combined teachings of Chinn, Takahashi, and EX-V7 meet the limitations of independent claim 1, as well as Patent Owner’s evidence and arguments. Based on this preliminary record, and for the reasons given by Petitioner and those summarized above, we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that the combined teachings of Chinn, Takahashi, and EX-V7 meet the limitations of claim 1, and that a person of ordinary skill in the art at the relevant time period would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in that endeavor.

3. Claims 2–11

Petitioner contends that the combination of Chinn, Takahashi, and EX-V7 teaches or suggests the recited limitations of claims 2–8 and 10–11. Pet. 31–47. Petitioner also contends the combination of Chinn, Takahashi, EX-V7, and Kim teaches or suggests the recited limitations of claim 9. Pet. 47–52. Petitioner submits the testimony of Mr. Guidash in support of its contentions. *See* Ex. 1003 ¶¶ 104–154.

⁵ The issue of whether the preamble is limiting need not be resolved at this stage of the proceeding because, regardless of whether the preamble is limiting, Petitioner shows sufficiently for purposes of institution that the recitation in the preamble is satisfied by the prior art.

Patent Owner relies on its arguments with respect to claim 1 to argue that Petitioner has not shown that the asserted prior art teaches or renders obvious these claims. *See* Prelim. Resp. 29–30.

We have considered Petitioner’s evidence and arguments that the combined teachings of Chinn, Takahashi, and EX-V7 meet the limitations of claims 2–8 and 10–11, as well as Petitioner’s evidence and arguments with respect to Kim and claim 9. We have also considered Patent Owner’s evidence and arguments. Based upon this preliminary record, we are persuaded, for the reasons given by Petitioner and those summarized above, that Petitioner has demonstrated sufficiently for purposes of institution that the combined teachings of the cited art meet the limitations of claims 2–11, and that a person of ordinary skill in the art at the relevant time period would have combined their teachings in the manner described and would have had a reasonable expectation of success in that endeavor.

F. Obviousness Over Kim, Yamamoto, Thorn and Chinn (Grounds 3/4)

Petitioner contends that claims 1–3 and 7–10 are unpatentable as obvious over Kim, Yamamoto, and Thorn (Ground 3), and claims 4–6 and 11 are unpatentable as obvious over Kim, Yamamoto, Thorn, and Chinn (Ground 4). *See* Pet. 52–94. Petitioner provides a claim analysis, supported by the testimony of Mr. Guidash. *See* Ex. 1003 ¶¶ 155–249.

Patent Owner disputes certain aspects of Petitioner’s evidence and arguments, namely with respect to limitations [1i], [1j], [11d], and [11h] (Ground 3), and limitations [11d] and [11h] (Ground 4). *See* Prelim. Resp. 30–37.

We address certain aspects of the parties' evidence and arguments with respect to Grounds 3 and 4, in particular arguments raised by Patent Owner with respect to certain limitations.

Limitation [1i] recites, “*control such that a first standby time of a case where the first camera is enabled and the second camera is disabled is longer than a second standby time of a case where the second camera is enabled and the first camera is disabled.*” Ex. 1001, 16:38–42 (emphasis added).

For this limitation, Petitioner contends that “[t]he Kim-Yamamoto-Thorn combination renders obvious this limitation.” Pet. 75 (citing Ex. 1003 ¶ 200). Petitioner asserts that “[t]he Kim-Yamamoto-Thorn combination discloses activating the front camera (i.e., first camera) when the e.g., ‘Say Cheese’ voice command is received.” Pet. 75 (citing limitation [1g]). According to Petitioner, a person of ordinary skill in the art “would have understood that the need to activate the front camera means that it was previously inactive/disabled.” Pet. 75 (citing Ex. 1003 ¶ 201). Petitioner asserts that a person of ordinary skill in the art “would have also understood that because only the front camera is activated, the back camera (i.e., second camera) would remain disabled.” Pet. 75. According to Petitioner, the “[b]enefits of doing so would be to reduce power consumption and increase battery life.” Pet. 75.

“Likewise,” Petitioner asserts, “Kim teaches activating the back camera 121’ (i.e., second camera) EX1009, 94-95, in response to the user performing an image capture input signal on the touch display 130.” Pet. 75 (citing limitation [1h]; Ex. 1003 ¶ 202). According to Petitioner, a person of ordinary skill in the art “would have understood that the need to activate the back camera means that it was previously disabled.” Pet. 75. Petitioner

asserts that a person of ordinary skill in the art “would have also understood that because only the back camera is activated, the front camera (i.e., first camera) remains disabled.” Pet. 75 Petitioner asserts that the “[b]enefits of doing so would be to reduce power consumption and increase battery life.” Pet. 76.

Petitioner also asserts that “[t]he Kim-Yamamoto-Thorn combination renders obvious starting a recording of the first image signal acquired by the first camera on the storage in response to the first instruction.” Pet. 76 (citing Pet. at § VIII.B.5; Ex. 1003 ¶ 203). Petitioner explains that in Yamamoto, “when the voice command is ‘Say Cheese,’ ‘an image is captured after a certain period of time (for example, 0.5 seconds) passes after . . . ‘Say Cheese’ or the like has [been] uttered.” Pet. 76 (citing Ex. 1009 ¶ 249) (alterations in original). “As such,” Petitioner argues, “Yamamoto discloses a 0.5 second delay before taking a voice activated image, which corresponds to the ‘first standby time.’” Pet. 76 (citing Ex. 1003 ¶ 204).

Petitioner concedes that “Kim does not disclose introducing any delays between the manual selection and the taking/recording of an image with the back facing camera 121’ (second camera).” Pet. 76 (citing Ex. 1003 ¶ 205). “Likewise,” Petitioner explains, “Yamamoto does not disclose introducing any delays between the manual operation of the manually-operated shutter button 201 and the taking/recording of an image.” Pet. 76 (citing Ex. 1009 ¶ 82; Ex. 1003 ¶ 205). Petitioner asserts that “[t]o the extent that this limitation is satisfied by a 0 second standby time, Kim and Yamamoto disclose or render it obvious.” Pet. 76 (citing Ex. 1003 ¶ 205).

Petitioner asserts that “[i]f this limitation requires a second standby time greater than 0, but less than Yamamoto’s 0.5 second first standby time,

Thorn discloses it.” Pet. 77 (citing Ex. 1003 ¶ 206). Petitioner explains that “Thorn discloses calculating an average blink time for a subject about to be photographed based on the subject’s blink history, and discloses typical values of these average times as being between about 100 milliseconds and 300 milliseconds, with a default of 250 milliseconds being used if not enough data has been collected.” Pet. 77 (citing Ex. 1011 ¶¶ 46, 60). “These values,” Petitioner explains, “are predetermined values based on blink history calculated prior to the touch command for the back facing camera 121’ (second camera).” Pet. 77.

Petitioner explains that “Thorn also discloses the use of other predetermined time periods: ‘[i]n another embodiment, the delay may be a *predetermined amount of time*, such as about 100 ms, about 150 ms, about 250 ms or some other length of time.’” Pet. 77–78 (citing Ex. 1011 ¶ 60; Ex. 1003 ¶ 207) (alteration in original). According to Petitioner, “Thorn further discloses adding a standby period equal to the average blink time after a command to take a photograph if the subject is blinking at that moment.” Pet. 78 (citing Ex. 1011 ¶¶ 58–60, Fig. 5, steps 36, 38, 44).

“Thus,” Petitioner argues,

Thorn discloses waiting a predetermined second standby time of a length between about 100 milliseconds and about 200 milliseconds if a subject blinks when the image capture command is detected, and this second standby time is less than the 0.5 second (500 millisecond) first standby time used for the Yamamoto ‘Say Cheese’ voice command-activated front camera image capture.

Pet. 78 (citing Ex. 1003 ¶ 208).

Petitioner explains that “Thorn’s predetermined standby time that is only performed if a blink is detected when a touch command to enable the rear camera to capture an image is recognized is ‘a second standby time of *a*

case where the second camera is enabled and the first camera is disabled’ as recited by this limitation: a case where the subject is blinking when the touch command is recognized.” Pet. 78–79 (citing Ex. 1003 ¶ 208).

Patent Owner contends that “Petitioner cannot show that the alleged prior art combination ties the alleged first standby time with the first camera being enabled with reference to specific evidence.” Prelim. Resp. 31. Patent Owner argues that “Yamamoto does not disclose multiple cameras” and that Kim does not “disclose disabling a ‘second camera’ or disabling a ‘first camera, and associating such disabling to first and second standby times.” *Id.* at 32.

Patent Owner also asserts that Petitioner “fails to explain **how** the ‘certain period of time’ of Yamamoto would be combined with Kim,” and that “[n]either Petitioner nor its expert provide any analysis on why a POSITA would be motivated to combine Yamamoto’s delay for a single camera device with the multiple camera device of Kim,” which lacks “any sort of voice activated image capture or corresponding standby time.” Prelim. Resp. 32.

Patent Owner argues that

Petitioner’s conclusion is contradicted by the specification of the ’757 Patent which specifically discloses an example in Figure 12 describing “a screen on which two camera videos are composed and displayed. In this case, both the first imaging unit 123 (in camera) and the second imaging unit 124 (out camera) **are simultaneously enabled**, and two units of video are input.”

Prelim. Resp. 33 (citing Ex. 1001, 13:32–36 (emphasis by Patent Owner)).

We disagree with Patent Owner. Patent Owner asserts that “Petitioner fails to explain how a POSITA would be motivated to combine the standby time of Yamamoto with the dual camera system in Kim, lacking any sort of

voice activated image capture or corresponding standby time.” Mr. Guidash, however, specifically testifies that a person of ordinary skill in the art

would have understood that one way to improve Kim’s images taken with the front facing camera 121 (e.g., selfie) would be to implement a delay between the utterance of the voice command and the taking of the image, which would allow the photographer to pose before the image is taken. Yamamoto discloses such a delay, among other voice activated processes. EX1009, ¶249. The implementation of a voice activated selfie, including a standby time delay, would have merely amounted to another voice command/operation on the Kim terminal 100, which was already implementing voice commands.

Ex. 1003 ¶ 157 (citing Ex. 1008 ¶¶ 56, 160–164).

Mr. Guidash also testifies that

Kim is already adapted to image the user with its front camera 121 and could readily implement a voice activated . . . selfie as taught by Yamamoto. A POSITA, in my opinion, would have been able to implement Yamamoto’s delayed voice activated image processes (e.g., “Say Cheese”) to delay image taking with Kim’s front camera as doing so would simply involve applying a known technique (i.e., delay/timer between voice utterance and image taking as taught by Yamamoto) to a known device ready for improvement (Kim’s two camera device) to yield predictable results (a properly taken selfie). It is my understanding that these are appropriate rationales for this combination.

Ex. 1003 ¶ 159.

With respect to Patent Owner’s arguments that “Yamamoto does not disclose multiple cameras” and Kim does not “disclose disabling a ‘second camera’ or disabling a ‘first camera, and associating such disabling to first and second standby times,’” one cannot show non-obviousness of the challenged claims by attacking the references individually where the asserted basis for unpatentability is the combined teachings of the

references. *See Boundary Solns. Inc. v. Corelogic, Inc.*, 711 F. App'x 627, 631–632 (Fed. Cir. 2017) (citing *In re Keller*, 642 F.2d at 425).

Here, Petitioner is relying on the combined teachings of Kim, Yamamoto and Thorn to establish the unpatentability of the challenged claims. Petitioner is specifically relying on Kim's disclosure of a two-camera system with front and back cameras, not Yamamoto. *See* Pet. 65–67; Ex. 1003 ¶¶ 179–184. With respect to the first/second standby times, and first/second enabled/disabled camera limitation [1i], Petitioner is relying on the combined teachings of Kim, Yamamoto, and Thorn to meet this limitation, not Kim alone. *See* Pet. 75–79; Ex. 1003 ¶¶ 200–209.

Limitation [1j] recites, “*wherein the first standby time is a time from a recognition of the first instruction to a start of the recording of the first image signal acquired by the first camera, and the second standby time is a time from a recognition of the second instruction to a start.*” Ex. 1001, 16:43–48 (emphasis added).

For limitation [1j], Petitioner contends that “[t]he Kim-Yamamoto-Thorn combination renders this limitation obvious for reasons set forth for limitation [1i].” Pet. 79 (citing Pet. §§ VIII.B.8 (limitation [1g], VIII.B.10 (limitation [1i]; Ex. 1003 ¶ 210).

Petitioner explains that “Yamamoto discloses receiving a command voice for activating the first/front camera, particularly when taking an image of the user.” Pet. 71 (citing Pet. at § VIII.B.2 (limitation [1a])). Petitioner points out that “Yamamoto discloses receiving several types of voice commands from a user to initiate respective processing for the device 200,” and “when the voice command is ‘Say Cheese,’ ‘an image is captured after a certain period of time (for example, 0.5 seconds) passes after . . . ‘Say Cheese’ or the like has [been] uttered.” Pet. 71–72, 76 (citing Ex. 1009

¶ 249) (alteration in original). Petitioner argues that “[a]s such, Yamamoto discloses a 0.5 second delay before taking a voice activated image, which corresponds to the ‘first standby time.’” Pet. 76 (citing Ex. 1003 ¶ 204).

Patent Owner contends that “Yamamoto (and Petitioner) fails to explain or distinguish between times allotted for a trigger recognizing process, a waiting process, and a recording process.” Prelim. Resp. 34 (citing Ex. 1009, Fig. 9). Patent Owner asserts that Yamamoto’s “‘certain amount of time’ measures from the end of an utterance (*e.g.*, ‘Say Cheese’) to the end of the image capture process.” *Id.* 34–35 (citing Ex. 1009 ¶¶ 249–250). Patent Owner argues that “[t]he end of an utterance described in Yamamoto is not the claimed ‘recognition of the first instruction.’” *Id.* at 35. Patent Owner contends that “[t]he processing time for recognition of an instruction happens after and *separately* from detecting the end of an utterance.” *Id.* (citing Ex. 1009 ¶ 55, 37, 44, 47, 245; Ex. 1001, 9:48–55). According to Patent Owner, “Yamamoto’s failure to distinguish these processing times demonstrates that it does not disclose the claimed first standby time.” *Id.* Patent Owner also argues that Petitioner’s “alleged first standby time includes the time for capturing an image. However, the claim language explicitly excludes the capture time from the standby time.” *Id.* “Therefore,” Patent Owner concludes, “the ‘certain amount of time’ mentioned in Yamamoto cannot be the claimed ‘first standby time’ and Petitioner does not rely on Kim or Thorn to overcome this deficiency.” *Id.*

The difficulty of weighing the evidentiary merit of Patent Owner’s arguments at this stage of the proceeding is that they are based largely on unsubstantiated attorney argument, which is not evidence and is not entitled to significant weight, particularly when it addresses technical issues such as whether the “processing time for recognition of an instruction happens after

and separately from detecting the end of an utterance,” or whether Petitioner’s alleged “first standby time includes the time for capturing an image.” Because Patent Owner’s assertions are largely attorney argument, they have little evidentiary value and the testimonial evidence of Mr. Guidash on these issues presently stands un rebutted. *See Icon Health & Fitness*, 849 F.3d at 1046 (“Attorney argument is not evidence or explanation in support of a conclusion.”); *Invitrogen Corp.*, 429 F.3d at 1068 (“Unsubstantiated attorney argument regarding the meaning of technical evidence is no substitute for competent, substantiated expert testimony.”); *In re Payne*, 606 F.2d at 315 (citing *In re Lindner*, 457 F.2d at 508) (“Arguments of counsel unsupported by competent factual evidence of record are entitled to little weight.”).

Because we determine that Petitioner demonstrates a reasonable likelihood of prevailing in its challenge to claims 1–11 as obvious over Chinn, Takahashi, EX-V7, and Kim (Grounds 1 and 2), we institute *inter partes* review as to all other challenges in the Petition, including Petitioner’s challenges on Grounds 3 and 4. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018).

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims of the '757 patent. We therefore institute trial as to all challenged claims on all grounds stated in the Petition.

At this preliminary stage of the proceeding, we have not made a final determination as to the patentability of any challenged claim or any factual or legal issue underlying the patentability inquiry. Any final determination will be based on the complete record developed during trial. We place Patent Owner on express notice that any argument not asserted in a timely-filed Response to the Petition, or in another manner permitted during trial, shall be deemed forfeited or waived, even if that argument was presented in the Preliminary Response.

V. ORDER

Accordingly, it is

ORDERED that an *inter partes* review is instituted as to all challenged claims on all grounds raised in the Petition; and

FURTHER ORDERED that *inter partes* review is instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

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