

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SMITH INTERFACE TECHNOLOGIES, LLC,
Patent Owner.

IPR2024-01091
Patent 10,936,114 B1

Before JEFFREY S. SMITH, BARBARA A. BENOIT, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

BENOIT, *Administrative Patent Judge*.

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

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of *inter partes* review of claims 1, 27, 30, 32, 34, 59, 62, and 64 (“the challenged claims”) of U.S. Patent No. 10,936,114 B1 (Ex. 1001, “the ’114 patent”). Smith Interface Technologies, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

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

A. Real Parties in Interest

Petitioner identifies itself as real party in interest. Pet. 87. Patent Owner identifies itself as a real party in interest. Paper 3 (Patent Owner’s Mandatory Notices), 1.

B. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), each party identifies *Smith Interface Technologies, LLC v. Apple Inc.*, Case No. 3-23-cv-01187 (S. D. Cal.), filed June 27, 2023. Pet. 87; Paper 3, 1. Patent Owner additionally identifies one concluded case: *Smith Interface Technologies, LLC v. Samsung Electronics Co., Ltd. et al.*, 2-22-cv-00290 (E. D. Tex.). Paper 3, 1.

C. The ’114 Patent

The ’114 patent is titled “Gesture-Equipped Touch Screen System, Method, And Computer Program Product.” Ex. 1001, code (54). The patent generally relates to “touch screens” and describes “altering a user experience based on a received signal.” *Id.* at 1:37–38, 4:49–51, Fig. 3. Ways in which

the user experience may be altered include, for example, (i) by causing input to the device, (ii) by causing output from the device, and (iii) by causing processing by the device. *Id.* at 17:2–5. In addition, the received signal may include “a pressure signal which is indicative of a magnitude of pressure” and “the user experience may be altered as a function of the magnitude of the pressure being applied to the touch screen, utilizing the pressure signal.” *Id.* at 16:11–14 (describing step 302 in Fig. 3), 17:19–23 (describing step 304 in Fig. 3).

Figure 5, shown below, illustrates “a pressure-sensitive user interface for making a selection.” *Id.* at 4:55–56.

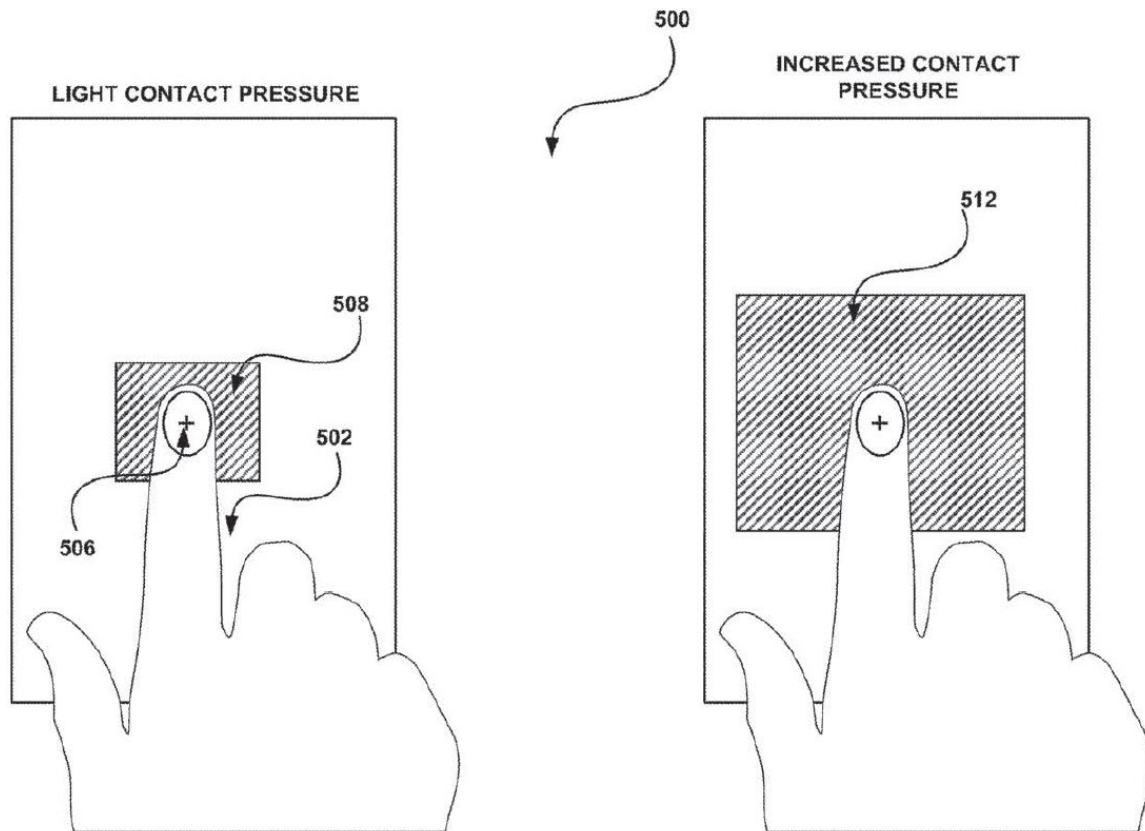


Figure 5 shows user interface 500, user’s finger 502, contact point 506, and selection areas 508 and 512. *Id.* at 28:9–19. The user interface shown on the left depicts selection area 508 with “light contact pressure,”

whereas the user interface shown on the right depicts a larger selection area 512 reflecting “increased contact pressure.” *Id.* at Fig. 5. As the patent explains:

a user’s finger 502 may exert a small amount of force over contact area 504, which is centered on contact point 506 located on a pressure sensitive touch screen. If the contact pressure level is sufficient, then a selection area 508 having a selection boundary 510 is calculated and displayed. As the contact pressure is increased, the selection boundary expands to encompass a larger selection area 512.

Id. at 28:12–19.

D. Challenged Claims

Claims 1, 27, 30, 32, 34, 59, 62, and 64 of the ’114 patent are challenged, all of which are independent. Illustrative claims 1, 27, and 30 follow, with Petitioner’s identifiers added for clarity:

1. An apparatus, comprising:

[1.a] at least one non-transitory memory storing instructions and a plurality of applications;

[1.b] a touch screen; and

[1.c] one or more processors in communication with the at least one non-transitory memory and the touch screen, wherein the one or more processors execute the instructions to:

[1.d] display, via the touch screen, an object and at least a portion of an interface;

[1.e] detect a gesture on the touch screen on the object;

[1.f] when a magnitude of a duration of the gesture being detected on the touch screen on the object is less than a first magnitude threshold, perform an operation;

[1.g] when the magnitude of the duration of the gesture being detected on the touch screen on the object is

greater than the first magnitude threshold, perform a scaling in connection with at least the object, [1.h] where the scaling includes a in a size such that the size is inversely related to the magnitude of the duration of the gesture being detected on the touch screen on the object; and

- [1.i] when the magnitude of the duration of the gesture being detected on the touch screen on the object is greater than a second magnitude threshold, perform another operation.

Ex. 1001, 97:13–38.

27. An apparatus, comprising:

- [27.a] at least one non-transitory memory storing instructions and a plurality of applications;
- [27.b] a touch screen; and
- [27.c] one or more processors in communication with the at least one non-transitory memory and the touch screen, wherein the one or more processors execute the instructions to cause the apparatus to:
 - [27.d] display an object on at least a portion of an interface;
 - [27.e] detect a gesture via the touch screen on the object;
 - [27.f] perform a first function in a first touch state;
 - [27.g] perform a second function in a second touch state; and
 - [27.h] during detection of at least a portion of the gesture and based on a change in a duration of the gesture being detected via the touch screen on the object, perform a scale operation in connection with the at least portion of the interface, where the scale operation includes a reduction in a size that is inversely related to the

duration of the gesture being detected via the touch screen on the object.

Ex. 1001, 106:30–49.

30. An apparatus, comprising:

[30.a] at least one non-transitory memory storing instructions and a plurality of applications;

[30.b] a touch screen;

[30.c] a vibrator; and

[30.d] one or more processors in communication with the at least one non-transitory memory, the touch screen, and the vibrator, wherein the one or more processors execute the instructions to cause the apparatus to:

[30.e] display a first object and at least one other object;

[30.f] detect a gesture on the touch screen on the first object;

[30.g] during detection of at least a portion of the gesture before a completion thereof is detected, perform a scale operation, based on a change in a duration of the gesture being detected on the touch screen on the first object, on at least the at least one other object, [30.h] where the scale operation includes a reduction in a size that is inversely related to the duration of the gesture being detected on the touch screen on the first object; and

[30.i] after at least a portion of the scale operation, vibrate the apparatus and perform an action.

Ex. 1001, 107:12–33.

E. The Asserted Grounds of Unpatentability

In its asserted grounds, Petitioner relies on the following references:

Name	Patent Document	Exhibit
Kim	US 2010/0302281 A1 (Dec. 2, 2010)	1004
Bowens	US 2009/0273571 A1 (Nov. 5, 2009)	1005
Lang	US 2006/0139320 A1 (June 29, 2006)	1006

Name	Patent Document	Exhibit
Burrough	US 2010/0156818 A1 (June 24, 2010)	1007

Pet. 3. Petitioner asserts Kim is prior art under pre-AIA 35 U.S.C. § 102(a) and (e), and Bowens, Lang, and Burrough are prior art under pre-AIA 35 U.S.C. § 102(a), (b), and (e). Pet. 2. Petitioner also relies on declaration testimony of Dr. Andrew Cockburn. (Ex. 1003). Patent Owner relies on declaration testimony of Dr. Rajeev Surati (Ex. 2001).

Petitioner challenges the patentability of the challenged claims on the following grounds:

Ground Identifier ¹	Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1A	1, 27, 32	102, 103(a)	Kim
1B	34, 59, 64	103(a)	Kim, Lang
1C	30	103(a)	Kim, Burrough
1D	62	103(a)	Kim, Lang, Burrough
2A	1, 27, 32	103(a)	Kim, Bowens
2B	34, 59, 64	103(a)	Kim, Bowens, Lang
2C	30	103(a)	Kim, Bowens, Burrough
2D	62	103(a)	Kim, Bowens, Lang, Burrough

Pet. 2.

II. ANALYSIS

A. Principles of Law

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 in

¹ For clarity, we refer Petitioner’s identifiers for the asserted grounds. Petitioner identifies two statutory bases for unpatentability of claims 1, 27, and 32 as a single ground (Ground 1A). *See* Pet. 2.

the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. *See* 35 U.S.C. § 314(a).

As relevant here, a claim is anticipated if a single prior art reference discloses all the claimed limitations arranged or combined in the same way as in the claim.” *HTC Corp. v. Cellular Commc’ns Equip., LLC*, 877 F.3d 1361, 1368 (Fed. Cir. 2017); *see also* 35 U.S.C. § 102. Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Additionally, an anticipatory reference can disclose each limitation of the claimed invention either expressly or inherently. *Eli Lilly & Co. v. Los Angeles Biomedical Rsch. Inst. At Harbor-UCLA Med. Ctr.*, 849 F.3d 1073, 1074 (Fed. Cir. 2017).

Also as relevant here, a patent claim is unpatentable 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.” 35 U.S.C. § 103 (2011); *accord KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103). The question of obviousness involves resolving the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We apply these principles to the challenges of the Petition.

B. Level of Ordinary Skill in the Art

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention (“POSITA”). In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quotation marks omitted).

Petitioner relies on declaration testimony from Dr. Cockburn, who asserts that a person of ordinary skill in the art “would have had at least a bachelor’s degree in computer science, computer engineering, electrical engineering, human-computer interaction, or a related field, and would have had at least two years of relevant work experience in the design and development of graphical user interfaces (GUIs), human-computer interfaces, or equivalents thereof.” Pet. 10 n.4 (citing Ex. 1003 ¶ 26); Ex. 1003 ¶ 26. Dr. Cockburn also indicates that “[l]ess work experience may be compensated by a higher level of education and vice versa.” *Id.*

Patent Owner indicates it “does not necessarily agree with all aspects of Petitioner’s proposed level of ordinary skill, but does not believe that resolving that level is necessary to resolve the issues raised in this preliminary response.” Prelim. Resp. 4. Dr. Surati indicates that his opinions provided in his declaration in support of Patent Owner’s Preliminary Response are “provided from the perspective of the POSITA” proposed by Dr.Cockburn. Ex. 2001 ¶ 38 (citing Ex. 1003 ¶ 26).

We are persuaded, on the present record, that Petitioner’s proposal is consistent with the prior art of record. Accordingly, we adopt Petitioner’s definition of the level of ordinary skill for purposes of this Decision.

C. Summary of Prior Art Disclosures

1. Disclosure of Kim

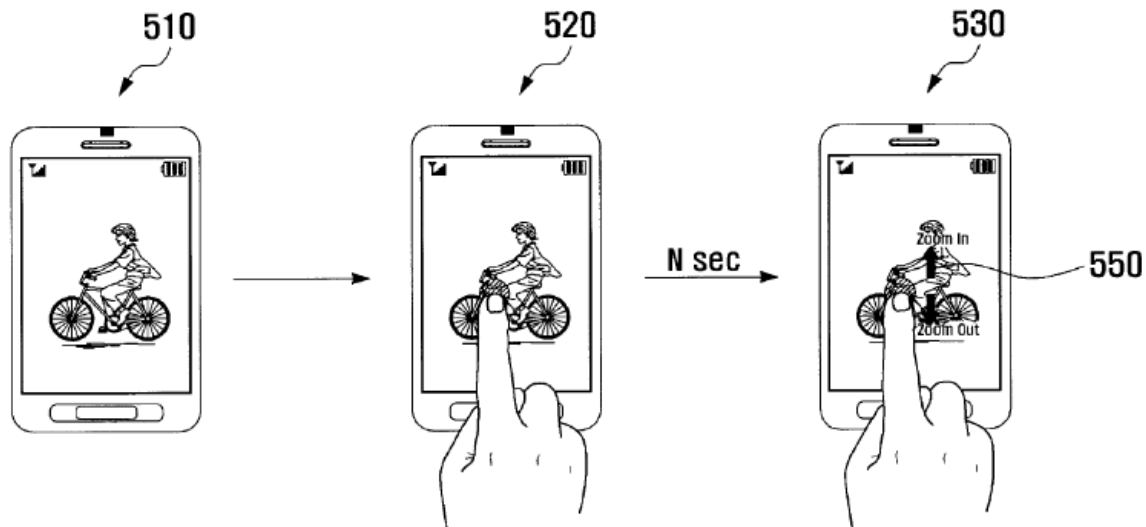
Kim discloses “a touch-based zooming technology in a mobile device and, more particularly, to a mobile device having a touch sensitive surface such as a touch screen, and a touch-based zooming control method in such a mobile device.” Ex. 1004 ¶ 3. Kim seeks to improve on prior art technologies that provide zooming function only at fixed rates, such as 10%, 20%, or 200%. *Id.* ¶¶ 6–7. Kim thus introduces new zoom techniques for mobile device touch screens. *Id.* ¶¶ 8–9.

Specifically, Kim discloses “a zoom mode is activated in response to an interrupt which occurs on a touch sensitive surface such as any of a touch screen and a touch pad of the mobile device.” *Id.* ¶ 30. Kim describes that “depending on a touch-based user gesture, a continuous zooming action is simply and rapidly performed around a user’s desired point on target data displayed on a screen.” *Id.* Kim also discloses a similarly-enabled “reducing action of displayed target data.” *Id.* Kim specifies that:

a gesture includes a long press event for activating a zoom mode, a move event for a zoom-in or zoom-out action in a zoom mode, a double tap event for returning to an initial state with a basic display size after a zoom-in or zoom-out action in a zoom mode, and a double tap event for a toggling function to obtain the effect of offering a preview image or a magnifier.

Id. ¶ 31.

Figure 5 of Kim, shown below, illustrates an example process of initiating a zoom on a mobile device.



Kim's Figure 5 shows content being displayed in element 510, a user invoking a zoom at a particular point being touched with a "long press input," at element 520, and a zoomed image at element 530. *Id.* ¶¶ 84–86.

2. Disclosure of Bowens

Bowens describes a "state machine gesture recognition algorithm for interpreting streams of coordinates received from a touch sensor." Ex. 1005, Abstract. Bowens relates to gesture recognition from capacitive or resistive touch sensors. *Id.* ¶ 1. Bowens

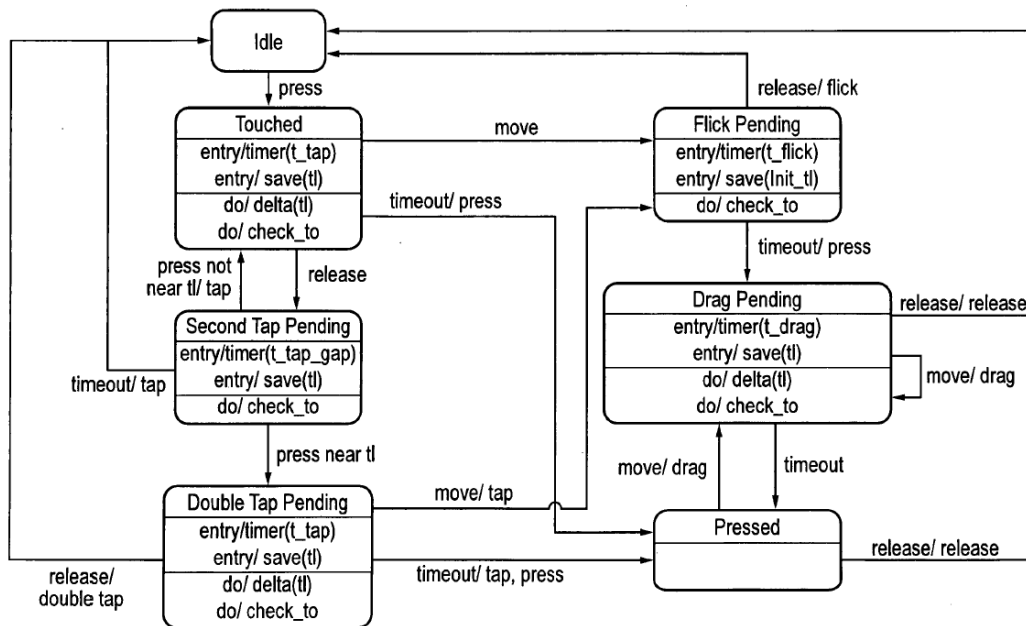
relates to a touch sensor device comprising an at least one-dimensional sensor arranged to output a sense signal responsive to proximity of an object, a position processing unit for calculating a position of an interaction with the sensitive area from an analysis of the sense signals and output a time series of data indicative of interaction positions on the sensor, and a gesture processing unit operable to analyze the time series data to distinguish one or more gesture inputs therefrom, wherein the gesture processing unit is coded with gesture recognition code comprising a plurality of linked state modules.

Id. ¶ 17.

Bowens identifies a number of gestures it addresses and describes a "single touch" state machine for gesture recognition supporting the

following types of gestures: tap; press; double tap; flick; and drag. *Id.* ¶¶ 56–77, 78 (describing state machine). Bowens then describes seven “states,” divided into “static touch” states (press, tap, double tap), and “moving touch” states (flick, drag). *Id.* The states include “Idle,” “Touched,” “Second Tap Pending,” “Double Tap Pending,” “Flick Pending,” “Drag Pending,” and “Pressed.” *Id.* ¶¶ 79–85. Bowens further describes an embodiment that is for “multitouch gestures,” adding “ping, rotate, and stretch,” which requires the addition of a “Multitouch state.” *Id.* ¶ 87. Finally, Bowens describes “transitions” between the various states.

Figure 1, shown below, illustrates a state machine of Bowens for single touches.



The state machine is illustrated in Figure 1 shows states of “Idle,” “Touched,” “Second Tap Pending,” “Double Tap Pending,” “Flick Pending,” “Drag Pending,” and “Pressed.” as well as transitions between the various states. *Id.* ¶ 78; Fig. 1.

3. Disclosure of Lang

Lang describes a “user interface for small computing devices,” especially on “wearable” devices, such as personal digital assistants, cellular phones, and smart watches. Ex. 1006, Abstract, ¶ 3. Lang describes that wearable devices often have small space available for a practical user interface for complex applications, which makes them “awkward and difficult to use.” *Id.* ¶ 4. Lang discloses that these “problems are solved by providing a user with a relatively large bezel surface for interfacing with a small computing device,” which it provides. *Id.* ¶¶ 5, 27.

Figure 1, shown below, is an exemplary smart watch 102, embodying the Lang invention.

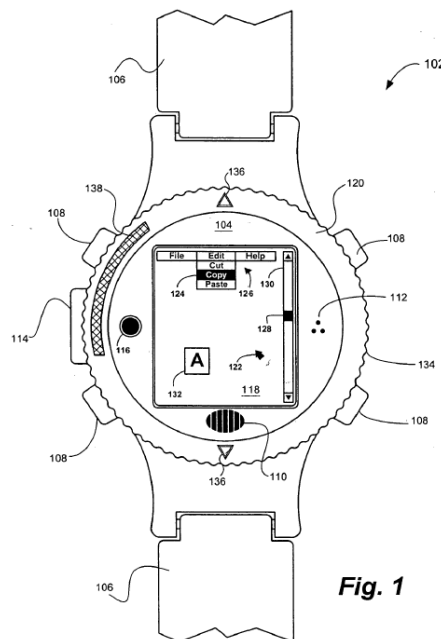


Figure 1 illustrates device housing 104, input buttons 108, display screen 118, rotatable bezel 120, pointing icon cursor 122, highlighted selection cursor 125 in selection array 126, scroll bar cursor 128, scroll bar 130, text selection cursor 132, bezel buttons 136, and sensor 138. *Id.* ¶¶ 22–29. Lang describes that “the display screen 118 may be touch-sensitive,

thereby providing activation signals to the smart watch 102 when the display screen 118 is contacted by the user.” *Id.* ¶ 20.

4. Disclosure of Burrough

Burrough describes methods and systems for processing touch inputs on a “multi-touch sensing device,” and “identifying at least one multi-touch gesture based on the data from the multi-touch sensing device and providing an appropriate multi-haptic response.” Ex. 1007, Abstract.

Burrough describes that multi-touch devices “can distinguish more than one object (finger),” and that “multi-touch devices monitor a sensing surface for a touch or near touch, and when a touch occurs determines the distinct areas of contact and identifies the contacts via their geometric features and geometric arrangement.” *Id.* ¶ 5. Burrough further describes that “research has shown that providing the multi-touch surface with the ability to provide physical (haptic) feedback makes the multi-touch experience even more efficient and realistic to the user.” *Id.* ¶ 8. Burrough thus seeks to incorporate a corresponding physical response to the multi-touch experience, specifically “providing multiple and discretely located haptic sensations across a surface.” *Id.* ¶¶ 9, 33. Burrough explains that multi-touch gestures are “performed with multiple touches as for example from multiple fingers, fingers and palms, a finger and a stylus, multiple styli and/or any combination thereof.” *Id.* ¶ 43.

Burrough describes sensing touch events on the device, and using touch information to “query haptic database 134,” which “describes a specific haptic response H_x in terms of duration of response, type of vibro-tactile response, strength of response, etc.” *Id.* ¶ 47. The information in the database is used to “cause microtroller 132 to activate at least haptic actuator

136,” to create haptic response H_x . *Id.* Burrough describes that a haptic actuator can be piezo-electric, where “the vibro-tactile response is generated by the mechanical flexion of a member composed of a piezoelectric material.” *Id.* ¶ 55.

D. Claim Construction

In *inter partes* reviews, the Board construes a claim using the same claim construction standard employed in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2020). Accordingly, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would have been 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 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “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).

We construe claim terms only as relevant to the parties’ contentions and only to the extent necessary to resolve the issues in dispute. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). Petitioner contends no claim terms need be expressly construed. Pet. 3. Patent Owner contends that “touch state” should be construed in light of

Petitioner’s arguments. Prelim. Resp. 7–8.² We agree with Patent Owner that only “touch state” needs to be construed to determine whether to institute an *inter partes* review.

1. “touch state”

Independent claims 27 and 59 each recite “a first touch state” and “a second touch state.” Ex. 1001, 106:40–41 (Limitations [27.g], [27.h]), 107:51–52 (Limitations [59.g], [59.h]). These claims further require “perform[ing] a first function in a first touch state” and “perform[ing] a second function in a second touch state.” Ex. 1001, 106:40–41, 117:51–52.

Patent Owner contends “touch state” “should be construed as ‘a predefined subset of the range of measurable contact pressures’” because the specification of the challenged patent defines “touch state” in that manner. Prelim. Resp. 8 (citing Ex. 1001, 19:35–41, Ex. 2001 ¶ 65). As we understand the current record, Petitioner does not argue that the prior art describes a touch state related to measurable contact pressure. *See, e.g.*, Pet. 26–29, 33–34. Rather, for showing the requisite touch states, Petitioner relies on particular modes of operating described in the prior art and, alternatively, on various user inputs described in the prior art. *See, e.g., id.* As such, Petitioner implicitly disagrees with Patent Owner’s position that the

² Although Patent Owner discusses claim interpretations of two other claim terms, Patent Owner indicates that no formal constructions are necessary for our decision here. Prelim. Resp. 5–7, 8–9; *see* Prelim. Resp. 7 (noting “a formal construction is likely not necessary given the plain language of the claims” regarding magnitude of duration of the gesture), 9 (indicating “inversely related to” does not need construction in view of Petitioner’s arguments).

specification defines the term “touch state” as being limited to a predefined subset of the range of measurable contact pressures.

On this preliminary record, we disagree with Patent Owner. The standards for finding lexicography in a specification are exacting. *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). “To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning and must clearly express an intent to redefine the term.” *Id.* (internal quotations omitted).

As Patent Owner correctly notes, the specification states:

In various embodiments, the contact pressure level may be represented by a touch state. In the context of the present description, a touch state refers to a predefined subset of the range of measurable contact pressures. For example, in one embodiment, contact pressure levels may be represented as one of four predefined touch states: no touch, light touch, medium touch, and heavy touch.

Ex. 1001, 19:35–41; Prelim. Resp. 27 (quoting Ex. 1001, 19:35–41). Patent Owner, however, has not identified any words of manifest exclusion or restriction in that passage that indicate an intent to redefine the claim term. Rather than indicating the claims are to be restricted, the specification indicates how that the term “touch state” is to be understood in the descriptions presented in the specification. Ex. 1001, 19:36–37.

This view is further supported by other parts of the specification. The specification includes a separate section of “Definitions,” which does not include the term “touch state.” Ex. 1001, 6:45–12:56. The specification also indicates in a separate “Terminology” section that “[t]he terminology used herein is for the purposes of describing particular embodiments only and is not intended to be limiting of the invention.” Ex. 1001, 12:60–64; *see*

also Ex. 1001, 14:30–33 (“Language” section indicating “[t]he terminology and language used herein is for the purpose of describing particular embodiments only and is not intended to be limiting”).

In light of the definition and terminology sections in the specification, we do not view, on this preliminary record, the statement “[i]n the context of the present description, a touch state refers to a predefined subset of the range of measurable contact pressures” as exhibiting an intent to limit the claim term to that meaning.

Patent Owner cites Dr. Surati’s declaration testimony that presents identical construction arguments as presented by Patent Owner without adding additional reasoning or evidence as to how one of ordinary skill would have understand that passage to limit the claim terms. Prelim. Resp. 8 (citing Ex. 2001 ¶ 65³); Ex. 2001 ¶ 62. Dr. Surati’s declaration testimony does not adequately add to our understanding of the cited passage in the context of other specification statements that the terminology and language of the descriptions is not to limit the invention. *See* Ex. 2001 ¶ 62.

2. Other Claim Terms

In addition, we discuss claim interpretation to the extent necessary in the context of analyzing the asserted grounds.

E. Claim 1

Petitioner asserts that Kim anticipates or renders obvious independent claim 1 (Ground 1A), and that claim 1 would have been obvious based on the combined teachings of Kim and Bowens (Ground 2A). Pet. 2, 4–26, 52–

³ Although Patent Owner cites to paragraph 65, paragraph 62 that addresses “touch state.” Ex. 2001 ¶ 62.

68. Petitioner notes that its “Ground 1A presents two separate Kim-based grounds based on § 102 or § 103 collectively.” Pet. 4 n.1. Petitioner provides analysis for each claim limitation using the claim identifiers presented in the listing of challenged claims presented in its Petition. *See, e.g.*, Pet. 13 (contending “Kim teaches or renders [1.a] obvious.”); Pet. v–xi (claim listing). Petitioner provides analysis for each claim limitation and provides reasons one of ordinary skill would have combined Kim and Bowens in the manner proposed by Petitioner. *See, e.g.*, Pet. 53–68. Patent Owner contends that “the Petition maps to three *different* gestures associated with three *different* durations beginning at *different* points in time,” which does not meet the language of the claims. Prelim. Resp. 1 (emphasis in original); Prelim. Resp. 22 (asserting that the Petition fails to map to any single gesture in Kim to each of Claim 1’s “a gesture” [1.e], “the gesture” [1.f], “the gesture” [1.g], and “the gesture” [1.i]”); *see* Prelim. Resp. 18–25.

1. Asserted Obviousness over Kim (Ground 1A)

To determine whether to institute, we address whether Petitioner has demonstrated a reasonable likelihood of showing the subject matter of claim 1 would have been obvious over Kim (Ground 1A).

a. Petitioner’s Claim 1 Contentions

Regarding the non-transitory memory, touch screen, and one or more processors of the recited apparatus (limitations [1.pre, 1.a, 1.b, 1.c]), Petitioner points to Kim’s disclosure of “a mobile device with ‘a touch sensitive surface such as a touch screen’ that provides ‘a touch-based zooming control method.’” Ex. 1004, Abstract; *see* Pet. 12–15. For these limitations, Petitioner specifically identifies Kim’s “touch screen 910,”

Kim’s “control unit 950” for the recited one or more processors, and Kim’s “memory unit 930,” which “stores a plurality of applications required for controlling a general operation of the mobile device, and a plurality of applications required for controlling a zooming function based on a user gesture in the mobile device.” Pet. 13–15 (citing Ex. 1004 ¶¶ 122–135, 144, Figs. 9).

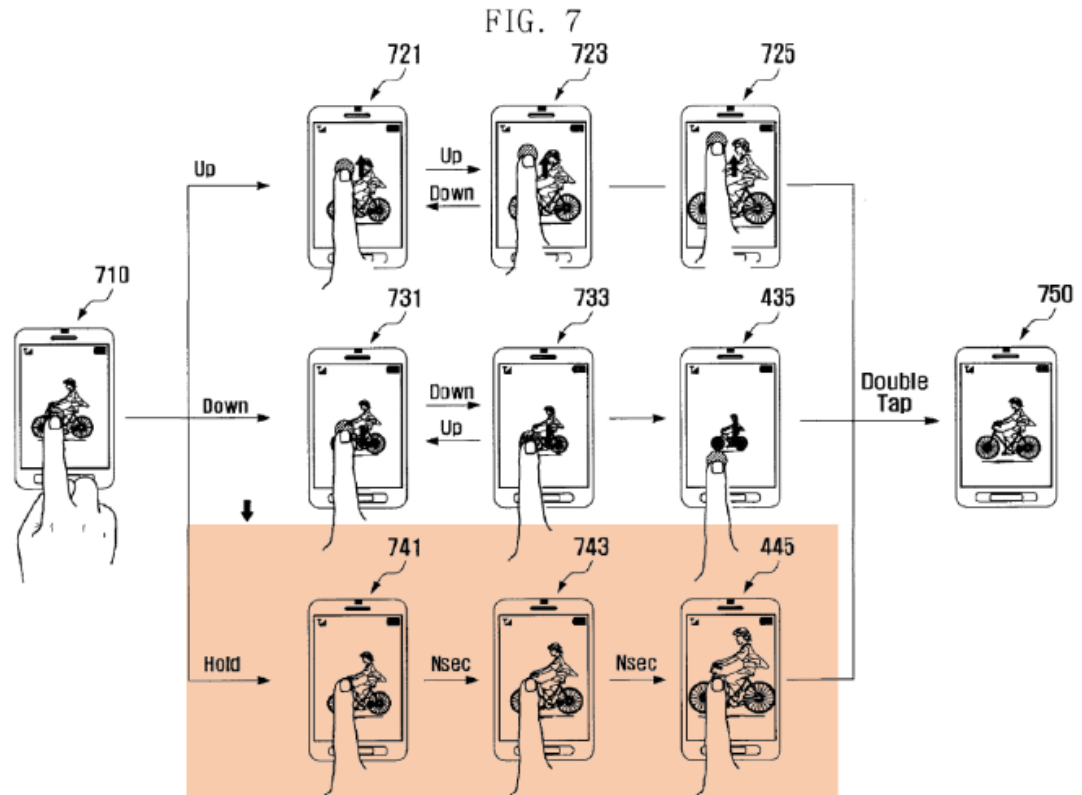
Claim 1 recites executing instructions stored in non-transitory memory to “display, via the touch screen, an object and at least a portion of an interface” (Limitation [1.d]) and “detect a gesture on the touch screen on the object” (Limitation [1.e]). In the example of Figure 7, Petitioner identifies the bicyclist and bicycle as a displayed object and highlights the portion of the interface surrounding the bicyclist and bicycle. Pet. 17 (citing Ex. 1004 ¶¶ 94–107, Fig. 7). In the example of Figure 8, Petitioner identifies the car and text hyperlink as displayed objects and highlights the surrounding interface. Pet. 17–18 (citing Ex. 1004 ¶ 109, Fig. 8).

For Limitation [1.e], Petitioner indicates Kim describes detecting a user gesture by “receiving an input event from a user through the touch screen” and provides various examples from Kim of such gestures. Pet. 18 (quoting Ex. 1004 ¶ 53; citing Ex. 1004 ¶¶ 41–45, 48, 49, 53, 64, 68, 72, 76, 99, 103, 104, 106, 130, Figs. 7–8). Petitioner argues further that Kim describes “a continuous zoom-in action depending on a hold event” in Figure 7, which shows detecting a gesture on the bicycle and rider object displayed. Pet. 18–19 (citing Ex. 1004 ¶¶ 104, Figs. 5–7). Petitioner also indicates Kim’s Figures 5–7 provide various examples of detecting gestures on the touch screen “at least as illustrated by the finger shown in each of those figures.” Pet. 19–20 (citing Ex. 1004, Figs. 5–7, ¶¶ 108–115, Fig. 8).

Petitioner identifies Kim’s “double tap event for returning to an initial state with a basic display size after a zoom-in or zoom-out action” for the gesture recited in Limitation [1.f] that also requires performing “an operation.” Pet. 20 (regarding Limitation [1.f]). Regarding the timing required by Limitation [1.f], Petitioner points to “each tap of the double-tap gesture” for the recited the duration of the gesture and “a threshold value being associated with a longer-lasting (i.e., hold) event” for the recited “first magnitude threshold.” Pet. 20. Petitioner asserts one of ordinary skill would have understood each of the taps of the double-tap “would have a duration shorter than a threshold duration associated with a more persistent gesture (e.g., a hold).” Pet. 20.

Petitioner identifies Kim’s “hold event” that causes a continuous zoom-in or zoom-out action for the gesture recited in Limitation [1.g] that also requires performing a scaling in connection with the displayed object. Pet. 21 (regarding Limitation [1.g]); *see also* Pet. 18–19 (discussing the hold event as an example of the gesture recited in Limitation [1.e]). Specifically, Petitioner notes Kim’s disclosure that “[R]eference numbers 741, 743 and 745 show a continuous zoom-in action depending on a hold event,” which, according to Petitioner, is shown in the bottom path of Figure 7. Pet. 21 (citing Ex. 1004 ¶ 104). Petitioner correctly notes that Kim indicates that “the hold event may be alternatively assigned to a continuous zoom-out function” so the bottom path of Figure 7, according to Petitioner, can be a zoom-out. Pet. 21 (quoting Ex. 1004 ¶ 107).

Kim’s double tap event and hold events are shown in Figure 7 as annotated by Petitioner (Pet. 19):



APPLE-1004, FIG. 7 (highlighted)

Pet. 19.

As shown in Figure 7, Petitioner highlights the continuous zoom-in action performed after the hold event is invoked by the user “through a touch input such as tap and hold.” Ex. 1004 ¶ 104 (describing reference numbers 741, 743, and 745⁴ in which the bicycle and rider are enlarged). Kim further describes that “a user can release a hold event from the screen” and later “a user can invoke a double tap event on the screen” to return to an initial state with a basic display size (shown by reference number 750). Ex. 1004 ¶¶ 104, 106.

⁴ Kim’s Figure 7 shows reference number 445 rather than 745 as paragraph 104 indicates.

Regarding the required timing, Petitioner asserts one of ordinary skill would have understood that the hold event detection requires exceeding a threshold value associated with the hold event (which as discussed above Petitioner maps to the first magnitude threshold). Pet. 21. For Limitation [1.g], Petitioner further notes that “Kim also refers to the request for the zoom mode being activated in response to a ‘long press input’ and a ‘long press event,’ which would be “discriminated from a normal press” based on exceeding a threshold duration. Pet. 22 (citing Ex. 1004 ¶¶ 31, 34, 42, 49, 85, 139).

Regarding the scaling specified in Limitation [1.h], Petitioner contends that, in Kim’s continuous zoom, “the longer the duration of the gesture (press and hold), the more the object is zoomed-out, or the more the size of the object is reduced.” Pet. 24. Petitioner concludes that, [i]n this way the reduction in a size is inversely related to the magnitude of the duration of the gesture (the larger the duration of the gesture, the smaller the size).” *Id.*

For the gesture required by Limitation [1.i], Petitioner further relies on Kim’s description of the process shown in Figure 2a and, specifically, on Kim’s describes displaying a requested menu in response to a detected interrupt. *See, e.g.*, Pet. 24–25. Petitioner maps the action of displaying requested menu to the recited “perform another operation.” Pet. 26. As the gesture meeting Limitation [1.i], Petitioner points to Kim’s user gesture requesting an “interrupt” that is not a request for zoom mode (steps 203 and 205 in Figure 2a) and results in displaying a requested menu. Pet. 24–25. Petitioner maps the second magnitude threshold to Kim’s “minimum threshold to be deemed an intentional touch.” Pet. 24 (Ex. 1004 ¶ 53).

As such, Petitioner relies on a double-tap gesture for meeting Limitation [1.f], a hold event or long-press gesture for meeting Limitation [1.g–1.h], and a “user gesture” requesting an “interrupt” that is not a request for zoom mode (steps 203 and 205 in Figure 2a) for Limitation [1.i].

b. Patent Owner’s Claim 1 Contentions

As noted earlier, Patent Owner argues that “the Petition maps to three *different* gestures associated with three *different* durations beginning at *different* points in time” and so does not “meet the plain language of the claims.” Prelim. Resp. 1 (emphasis in original); Prelim. Resp. 22 (asserting that the Petition fails to map to any single gesture in Kim to each of Claim 1’s “a gesture” [1.e], “the gesture” [1.f], “the gesture” [1.g], and “the gesture” [1.i]”); Prelim. Resp. 18–23 (arguing the Petition points to three distinct gestures rather than identifying a common gesture), Prelim. Resp. 23–25 (arguing the Petition points to three distinct durations that can never overlap rather than identifying a common duration for the magnitude of duration). Patent Owner, however, has not directed us to any portion of the specification of the challenged patent that describes the subject matter of claim 1, much less a portion of the written description that describes a single gesture having three different durations that result in three different actions. *See, e.g.*, Prelim. Resp. 2–4 (“Overview of the ’114 Patent”), 4–7 (“Claim Construction”). Patent Owner contends that these “gesture” and “duration” issues are present in all grounds for claims 1, 32, 34, and 64. Prelim. Resp. 25–26.

Additionally, Patent Owner argues that the Petition fails to demonstrate the requisite gesture duration is less than a first magnitude

threshold or greater than a second magnitude threshold. Prelim. Resp. 29–33.

c. Claim 1 Analysis

Limitations [1.a–1.e]

Regardless of whether the preamble (“[a]n apparatus, comprising”) is limiting, Petitioner’s showing for the preamble and Limitations [1a–1.e] above are sufficient for purposes of institution because Petitioner relies on express teachings of the cited passages discussed above with respect to Kim’s disclosure in asserting such passages render the claim obvious. At this preliminary stage, Patent Owner does not address Petitioner’s showing for these limitations. *See generally* Prelim. Resp.

Limitations [1.f–1.i]

Limitations [1.f–1.i] (collectively, the “when” limitations) are central to the parties’ dispute at this preliminary juncture. Patent Owner argues that antecedent basis requires that Petitioner identify the same gesture having three different durations. Prelim. Resp. 18–23. As we understand the current record, Petitioner views the claim as being met by three different gestures—a double tap, a hold event (or long press), and a gesture related to an interrupt. Pet. 20–26.

On this preliminary record, we agree with Patent Owner to the extent that antecedent basis of “the gesture being detected on the touch screen on the object” recited in Limitations [1.f, 1.g, and 1.i] refers to “a gesture on the touch screen on the object” which is “detect[ed]” in Limitation [1.e]. The three “when” limitations, however, appear to be written in the alternative such that not all of three recited “when” conditions would be met in any scenario meeting the claim language.

First, Limitations [1.f and 1.g] present mutually exclusive conditions because the duration of the gesture⁵ cannot be both *less than* and *greater than* the specified threshold. As such, only action recited in one of alternative Limitations [1.f and 1.g] will be taken for any scenario that meets the claim language.

Additionally, claim 9, which depends from claim 1, further recites “only when the magnitude of the duration of the gesture being detected on the touch screen on the object is greater than the first magnitude threshold and is less than the second magnitude threshold.” Ex. 1001, 98:12–15; *see also id.* at 98:3–7 (claim 8 reciting “when the magnitude of the duration of the gesture being detected on the touch screen on the object to be greater than the first magnitude threshold but is detected to be less than the second magnitude threshold”). In any scenario that meets the plain language of claim 9, action in Limitation [1.f] is *not taken* because the duration of the gesture is greater than (and not less than) the first magnitude threshold, action in Limitation [1.g] *is taken* because the duration of the gesture is greater than the first magnitude threshold, and action in Limitation [1.i] is *not taken* because the duration of the gesture is less than (and not greater than) the second magnitude threshold. Thus, dependent claim 9 informs the scope of claim 1 and identifies an alternative for which only one of the three “when” limitations in claim 1 would be met—namely, Limitation [1.g].

⁵ For readability, we refer to “magnitude of [a/the] duration of the gesture” using the shorthand “the duration of the gesture.” If the parties recognize a difference between a duration of the gesture and the claimed “magnitude of the duration of the gesture,” the parties are invited to explain the difference in their briefings.

Because the “when” limitations present alternative scenarios, on this preliminary record, we do not agree with Patent Owner that the Petition should be denied because Petitioner has not identified the same gesture having three different durations. Prelim. Resp. 18–25. Rather, we view as appropriate for trial the issue as to whether the “when” limitations are presented in the alternative such that not all of the limitations need to be satisfied in order to meet the claim. *See Brown v. 3M*, 265 F.3d 1349, 1352–53 (Fed. Cir. 2001)); *Hytera Commc’ns Co. v. Motorola Solutions, Inc.*, 841 Fed. Appx. 210 (2021); *Applera Corp. v. Illumina, Inc.*, 375 Fed. Appx. 12, 21 (Fed. Cir. 2010); *Cybersettle, Inc. v. Nat’l Arbitration Forum, Inc.*, 243 Fed. Appx. 603, 607 (Fed. Cir. 2007); *Ex parte Schulhauser*, Appeal 2013-007847 (PTAB April 28, 2016) (precedential).

Regarding Limitations [1.f–1.h], we find Petitioner’s showing, which generally is based on express disclosures, to be sufficient for institution. As discussed above, for the gesture recited in Limitation [1.e] that results in “perform[ing] an operation” in Limitation [1.f], Petitioner relies on Kim’s double-tap that returns the bicycle and rider (or other object) to an initial state with a basic display size after a zoom-in or zoom-out action. Petitioner’s showing regarding Kim’s “hold event” that causes a continuous zoom-in or zoom-out action for the gesture recited in Limitation [1.e] sufficiently shows the required scaling operation on a bicycle and rider (an object) and results in more of a zoom the longer the hold event is sufficient for institution to show the inverse reduction in size recited in Limitation [1.h]. Petitioner’s position also is bolstered by express descriptions in Kim of “continuous zoom” functions that solve the problem of the prior art of zooming based on fixed rates. Pet. 19, 21–23; *see also* Ex. 1004, ¶ 6–7.

With respect to showing the conditions required related to first magnitude threshold, Petitioner identifies the duration of a hold event as the first magnitude threshold. Pet. 20. Petitioner indicates that because the hold event occurs to cause the continuous zoom, the duration of the hold gesture exceeds the first magnitude threshold (which Petitioner mapped to the hold event). Pet. 21 (“For such a hold event, a POSITA would have understood that the magnitude of the duration of the gesture being detected on the touch screen on the object is greater than the first magnitude threshold (threshold value associated with a hold event).”).

Petitioner’s evidence and reasoning that the duration of the double-tap gesture would be shorter than the duration of the more persistent hold event is sufficient for institution to show the required conditions related to the first magnitude threshold. Pet. 20 (citing Ex. 1005 ¶¶ 57, 58, 69; Ex. 1003 ¶ 54 (citing Exs. 1009, 1010, 1011, 1012))). Patent Owner contends that Kim does not “detect a ‘double-tap gesture based on the duration of that double-tap gesture being less than a ‘hold’ threshold.” Prelim. Resp. 27. As best understood, Patent Owner seems to argue that Kim does not expressly describe a comparison of the duration of the double-tap gesture to a threshold. At this preliminary juncture, we understand the plain language of the claim to require performing the operation (here, returning the object to its original size) when the particular condition recited in the claim is met—“when a magnitude of a duration of the gesture being detected on the touch screen on the object is less than a first magnitude threshold.” As such, we find sufficient for institution Petitioner’s contention that the operation is performed when the duration of the double-tap is less than a “first magnitude threshold” of the hold event duration.

With respect to showing the required condition related to the second magnitude threshold, Patent Owner views Petitioner as arguing only that an interrupt is detected when a determination that a minimum threshold of an intentional user input has been met and so does not show performing an operation as required by Limitation [1.i]. Prelim. Resp. 31–32. Patent Owner does not seem to acknowledge Petitioner’s argument that relies on Kim’s mobile device displaying a requested menu (the recited “another operation”) in response to a detected user gesture requesting an “interrupt” that is not a request for zoom mode (steps 203 and 205 in Figure 2a). *See, e.g.*, Pet. 24–25. We find Petitioner’s contentions in this regard to be sufficient for institution.

d. Conclusion Regarding Asserted Obviousness over Kim

In sum, for the reasons discussed above, Petitioner’s showing regarding claim 1 is sufficient for institution. Accordingly, having reviewed the Petition, Preliminary Response, and evidence cited therein, we determine that Petitioner has established a reasonable likelihood that Kim renders obvious claim 1.

As such, Petitioner’s showing is sufficient to institute an *inter partes* review on all challenged claims on all asserted grounds. 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). Notwithstanding, we address other claims and other grounds below, particularly in response to Patent Owner’s preliminary arguments.

2. Asserted Anticipation by Kim (Ground 1A)

Petitioner argues anticipation and obviousness of claim 1 over Kim together. Pet. 12–26. For the reasons discussed above, we also determine Petitioner’s assertions that claim 1 is anticipated by Kim to be a sufficient for institution.

3. Asserted Obviousness over Kim and Bowens (Ground 2A)

We also find Petitioner’s assertions that the subject matter of claim 1 would have been obvious over Kim and Bowens to be sufficient for institution. Petitioner generally relies on Kim’s description as discussed above. Pet. 62–68. Specifically, in its combination, Petitioner relies on Kim’s hold event and scaling operation for Limitations [1.g and 1.h]. Pet. 64–67. Petitioner additionally relies on Bowen as providing details on recognizing and acting on specific gestures on a user interface. *See, e.g.*, Pet. 55. Petitioner provides reasons one of ordinary skill would have combined the references in the manner proposed by Petitioner. *See, e.g.*, Pet. 53–62. Petitioner also provides reasons one of ordinary skill would have reasonable expectation of success in combining the references in the manner proposed by Petitioner. Pet. 60–61.

4. Claims Reciting Similar Subject Matter to Claim 1

Claims 32, 34, and 64 recite similar subject matter to the “when” limitations recited by claim 1.

Independent claim 32 is directed to an apparatus that executes instructions, which largely track with the limitations recited in claim 1. *Compare* Ex. 1001, 97:14–38, *with id.* at 107:40–108:3. Petitioner asserts that Kim anticipates or renders obvious independent claim 32 (Ground 1A),

which also would have been obvious based on the combined teachings of Kim and Bowens (Ground 2A). Pet. 37–40, 75–79. Petitioner in large measure contends that Kim teaches or renders obvious claim 32 limitations for at least the same reasons as discussed for corresponding limitations recited in claim 1. Pet. 37–40. For example, Petitioner relies on Kim’s hold event for Limitation [32.g and 32.h] reciting performing a scale operation. Pet. 39–40. Petitioner likewise relies on its arguments made for claim 1 in asserting claim 32 would have been rendered obvious over Kim and Bowens. *See, e.g.* Pet. 77 (regarding Limitation [32.g]).

Independent claims 34 and 64 each are directed to a method comprising “at an apparatus including a watch with at least one non-transitory memory storing a plurality of applications, a touch screen, and one or more processors in communication with the at least one non-transitory memory and the touch screen:” and reciting five steps that generally track with the steps discussed above with respect to claim 1. *See* Ex. 1001, 108:14–38 (claim 34), 118:42–119:5 (claim 64).

Petitioner asserts that claims 34 and 64 would have been obvious based on the combined teachings of Kim and Lang (Ground 1B) and also would have been obvious based on the combined teachings of Kim, Bowens, and Lang (Ground 2B). Pet. 2, 41 (claim 34), 44 (claim 64), 79–80 (claim 34), 80 (claim 64). For the watch recited in claims 34 and 64, Petitioner relies on Lang in each of Grounds 1B and 2B and provides reasons for combining the prior art in the manner proposed by Petitioner and reasons one of ordinary skill would have had a reasonable expectation of success. Pet. 41–43. Petitioner generally relies on its claim 1 assertions made regarding Kim’s disclosure of similar limitations in claims 34 and 64. *See, e.g.*, Pet. 43 (claim 34), 44 (claim 64).

Patent Owner argues claims 1, 32, 34, and 64 have the same gesture and duration defects. *See, e.g.*, Prelim. Resp. 25. For the reasons noted above, at least on this preliminary record for purposes of institution, we do not agree that claim 1 has the gesture and duration defects asserted by Patent Owner .

F. Claim 27

1. Asserted Obviousness of Claim 27 over Kim (Ground 1A)

a. Limitations [27.pre–27.e]

Regarding the non-transitory memory, touch screen, and one or more processors of the recited apparatus (limitations [27.pre, 27.a, 27.b, 27.c]), Petitioner points to Kim’s disclosure of “a mobile device with ‘a touch sensitive surface such as a touch screen’ that provides ‘a touch-based zooming control method.’” Ex. 1004, Abstract; *see* Pet. 26 (identifying arguments made for claim 1 as applying to claim 27), Pet. 12–16 (regarding Limitations [1.pre, 1.a, 1.b, 1.c]. For these limitations, Petitioner specifically identifies Kim’s “touch screen 910,” Kim’s “control unit 950” for the recited one or more processors, and Kim’s “memory unit 930,” which “stores a plurality of applications required for controlling a general operation of the mobile device, and a plurality of applications required for controlling a zooming function based on a user gesture in the mobile device.” Pet. 13–15 (citing Ex. 1004 ¶¶ 122–135, 144, Figs. 9).

Claim 27 recites executing instructions stored in non-transitory memory to cause the apparatus to: “display an object on at least a portion of an interface” and “detect a gesture via the touch screen on the object” in Limitations [27.c, 27.d, 27.e]. For Limitation [27.d], Petitioner identifies various examples in Kim of displaying specific content on the screen,

including a bicyclist on a bicycle in Figure 7 and a car, text, and a hyperlink in Figure 8. Pet. 16–18 (discussing Limitation [1.d]), Pet. 26 (identifying arguments regarding Limitation [1.d]). In the example of Figure 7, Petitioner identifies the bicyclist and bicycle as a displayed object and highlights the portion of the interface surrounding the bicyclist and bicycle. Pet. 17 (citing Ex. 1004 ¶¶ 94–107, Fig. 7). In the example of Figure 8, Petitioner identifies the car and text hyperlink as displayed objects and highlights the surrounding interface. Pet. 17–18 (citing Ex. 1004 ¶ 109, Fig. 8).

For Limitation [27.e], Petitioner indicates Kim describes detecting a user gesture “by receiving an input event from a user through the touch screen” and provides various examples from Kim of such gestures. Pet. 18 (quoting Ex. 1004 ¶ 53; citing Ex. 1004 ¶¶ 41–45, 48, 49, 53, 64, 68, 72, 76, 99, 103, 104, 106, 130, Figs. 7–8). Petitioner argues with particularity that Kim describes “a continuous zoom-in action depending on a hold event” in Figure 7, which shows detecting a gesture on the bicycle and rider object displayed. Pet. 18–19 (citing Ex. 1004 ¶¶ 104, Figs. 5–7).

Regardless of whether the preamble (“[a]n apparatus, comprising”) is limiting, Petitioner’s showing for the preamble and the limitations discussed above are sufficient for purposes of institution because Petitioner relies on express teachings of the cited passages discussed above with respect to Kim’s disclosure in asserting such passages render the claim obvious. At this preliminary stage, Patent Owner does not address Petitioner’s showing for these limitations. *See generally* Prelim. Resp.

b. Limitations [27.f and 27.g]

Regarding Limitations [27.f and 27.g], which respectively recite “perform a first function in a first touch state” and “perform a second function in a second touch state,” Petitioner identifies the recited “touch states” as Kim’s zoom mode and toggle mode. Pet. 26–29.

Petitioner contends that Kim describes performing different functions in response to detected gestures when in zoom mode or toggle mode and so teaches or renders obvious Limitations [27.f and 27.g]. Pet. 26, 28. In particular, Petitioner indicates Kim teaches performing appropriate actions in toggle mode when receiving a request for toggle mode (and not zoom mode) for rendering obvious “perform a first function in a first touch state.” Pet. 26–27 (citing Ex. 1004 ¶¶ 34, 35, 48–50, Fig. 2a); Ex. 1004 ¶ 50 (“Meanwhile, if an interrupt is a request for the toggle mode, the mobile device performs appropriate actions in the toggle mode as will be described with reference to FIG. 4.”). Regarding Limitation [27.g], Petitioner points to Kim’s description of the double tap causing the device to display the object with a predefined basic size when in zoom mode. Pet. 28–29 (citing Ex. 1004 ¶¶ 34, 51–64, Fig. 2B). As such, Petitioner contends “Kim teaches performing a second function (‘offer basic sized display 243’) in a second touch state (i.e., when in the ‘zoom mode’ state).” Pet. 28 (citing Ex. 1004 ¶ 64, Fig. 2B).

Patent Owner contends that Petitioner does not identify the requisite touch states because the specification of the challenged patent defines “touch state” as “a predefined subset of the range of measurable contact pressures” and Petitioner’s arguments do not relate to contact pressure. Prelim. Resp. 34–36. For the reasons discussed in Section II.D, we do not agree on this preliminary record that the claim term “touch state” is so limited.

Petitioner’s showing for these limitations relies on express teachings in Kim regarding a zoom mode and a toggle mode. As such, we find Petitioner’s showing to be sufficient for purposes of institution.

c. Limitation [27.h]

For Limitation [27.h], Petitioner relies on Kim’s “continuous zoom out (or alternatively, a zoom-in) function” performed “in response to a press and hold gesture” and described with respect to Figure 7. Pet. 29 (citing Ex. 1004 ¶¶ 104, 105, 107, Fig. 7). Petitioner contends that the “continuous zoom-out function” on the bike and bicyclist of Figure 7 “is the equivalent of scale operation that includes a reduction in size of the object” as required by Limitation [27.h]. Pet. 30 (citing Ex. 1003 ¶ 74). Petitioner also relies on Kim’s description that the object is scaled “in response to the duration of the hold event” and so discloses “where the scale operation includes a reduction in a size that is inversely related to the duration of the gesture being detected via the touch screen on the object.” Pet. 30 (citing Ex. 1004 ¶ 105).

Here, too, we find Petitioner’s showing relies on express teachings of Kim’s continuous zoom function and is sufficient for purposes of institution.

d. Conclusion Regarding Asserted Obviousness over Kim

In sum, for the reasons discussed above, Petitioner has established a reasonable likelihood that Kim renders obvious claim 27.

2. Asserted Anticipation of Independent Claim 27 by Kim

As noted above, Petitioner argues both its anticipation and obviousness grounds over Kim together. Pet. 4 n.1. For the reasons discussed above, we also determine Petitioner’s assertions that claim 1 is anticipated by Kim to be a sufficient for institution.

3. Asserted Obviousness of Claim 27 over Kim and Bowens

For Limitations [27.a–27.e and 27.h], Petitioner generally relies on Kim’s description as discussed above. Pet. 68–74. In its combination of Kim and Bowens for Limitation [27.f], Petitioner asserts Bowen’s “Second Tap Pending” discloses a first touch state and the function of activating a hyperlink to the recited first function. Pet. 69 (citing Ex. 1005 ¶¶ 65, 81). Given the breadth of the plain language of the limitation—“perform a first function in a first touch state”—and the lack of a definition of “touch state” in the specification limits the scope of the claim as Patent Owner contends, Petitioner’s showing for this limitation is sufficient on this preliminary record. *See* Prelim. Resp. 35–36 (characterizing Petitioner’s position as not relating to contact pressure).

Similarly, Petitioner contends that Bowen’s “Idle state” discloses a second touch state and a second function of displaying target data with a given basic magnification value is performed following a double tap detection while in the Idle state, as required by Limitation [27.g]. Pet. 69 (citing Ex. 1005 ¶¶ 57, 82; Ex. 1004 ¶ 106; Ex. 1003 ¶ 203). Here, too, given the breadth of the plain language of the limitation—“perform a second function in a second touch state”—and the lack of a definition of “touch state” in the specification limits the scope of the claim as Patent Owner contends, Petitioner’s showing for this limitation is sufficient on this preliminary record. *See* Prelim. Resp. 35–36 (characterizing Petitioner’s position as not relating to contact pressure).

As such, Petitioner’s showing is sufficient for institution that Kim renders obvious claim 27.

4. Claim 59 Reciting Similar Subject Matter

Independent claim 59 is directed to a method that includes a watch and performs steps that largely track with the limitations recited in claim 27. *Compare* Ex. 1001, 117:43–61, *with id.* at 106:30–49. Petitioner asserts that claim 59 would have been obvious based on the combined teachings of Kim and Lang (Ground 1B) and also would have been obvious base on the combined teachings of Kim, Bowens, and Lang (Ground 2B). Pet. 2, 43–44, 80. Petitioner does not make any new arguments with respect to claim 59 but relies on previous contentions regarding claim 27, claim 34, and claim 1, with which we found sufficient for institution as discussed previously. Pet.43–44, 80. Patent Owner argues claim 27 and 59 together based on Patent Owner’s overly narrow construction of “touch state,” with which we do not agree for the reasons noted previously.

For the reasons discussed above, Petitioner’s showing is sufficient for institution that Kim renders obvious claim 59.

G. Claim 30

Petitioner asserts the subject matter of independent claim 30 would have been obvious over Kim and Burrough (Ground 1C) and over Kim, Burrough, and Bowens (Ground 2C). Pet. 2, 44–51, 80–83. Petitioner provides analysis for each claim limitation using the claim identifiers presented in the listing of challenged claims presented in its Petition. Pet. 44–51, 80–83. Petitioner also provides reasons one of ordinary skill would have combined Kim and Burrough in the manner proposed by Petitioner and would have combined Kim, Burrough, and Bowens. *See, e.g.*, Pet. 45–48, 80.

*1. Asserted Obviousness of Claim 30 over Kim and Burrough (Ground 1A)
and over Kim, Burrough, and Bowens (Ground 1B)*

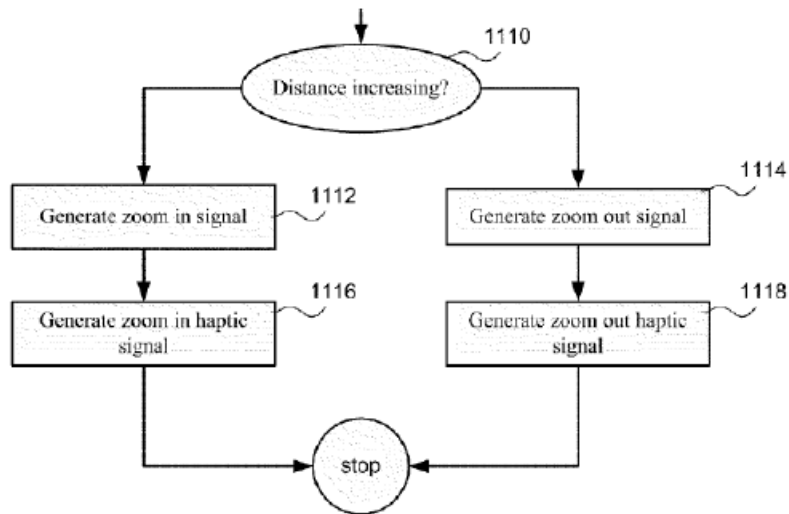
Petitioner relies on many of the same descriptions in Kim as discussed above. Pet. 48–51. For example, regarding the non-transitory memory, touch screen, and one or more processors of the recited apparatus, Petitioner points to arguments made for Limitations [1.a–1.c]. Pet. 48. Additionally, for the “vibrator” recited in claim 30, Petitioner points to Burrough’s haptic device. Pet. 48 (citing Ex. 1007 ¶¶ 13, 33, 37, 47, 55, 56, Figs. 1A–1E).

For “display[ing] a first object and at least one other object” (Limitation [30.e]) and “detect[ing] a gesture on the touch screen on the first object” (Limitation [30.f]), Petitioner relies on Kim’s bicycle and rider shown in Figure 7 and receiving a hold event, for example. Pet. 49 (referring to Limitation [32.d], which refers to Limitation [1.d] regarding Limitation [30.e]); Pet. 49 (referring to Limitation [32.e], which refers to Limitation [1.e]) regarding Limitation [30.f]). For the scale operation required by Limitations [30.g and 30.h], Petitioner relies on Kim’s continuous zoom operation performed in response to hold event. Pet. 49.

Limitation [30.i] recites “after at least a portion of the scale operation, vibrate the apparatus and perform an action.” Petitioner points to Kim’s double tap to return to a basic magnification level for the action performed. With regard to the “vibrate the apparatus” required by this limitation, Petitioner also contends:

A POSITA would have understood that a haptic signal (1116/1118 of Figure 11) follows any zooming signal in the Kim-Burrough-Device, and therefore, the zooming action that occurs to “offer basic sized display” (243 in FIG. 2b of Kim) in the Kim-Burrough-Device would be accompanied by a haptic output, as Burrough teaches.

Pet. 50–51. Petitioner then presents an excerpted portion of Burrough’s Figure 11 for support:



APPLE-1007, FIG. 11 (excerpted)

Patent Owner contends that Petitioner overgeneralizes Burrough’s disclosure when Petitioner asserts that “Burrough teaches providing haptic feedback in response to user input, including zooming operations.” Prelim. Resp. 37 (quoting Pet. 46). Rather, according to Patent Owner “Burrough discloses detecting a ‘zoom gesture’ and providing haptic feedback *during* and ongoing ‘zoom gesture.’” Prelim. Resp. 37 (emphasis in original); *see also* Prelim. Resp. 37–38.

Patent Owner correctly indicates that Burrough’s Figure 11 describes generating the haptic signal during the zoom signal as the two-finger zoom gesture is increasing distance. Prelim. Resp. 37; Ex. 1007, ¶¶ 79–80, Fig. 11. Patent Owner contends that combining Burrough’s haptic signal during the zoom signal with Kim’s device would not provide feedback during the double-tap used by Kim’s device to return to the basic magnification level. Prelim. Resp. 38. This is because, according to Patent

Owner's declarant, Kim's double-tap is not an ongoing zoom operation, Kim's double-tap does not met Burrough's criteria of multiple finger engagement, and Kim's return to the basic magnification level is instantaneous so does not need haptic feedback. Prelim. Resp. 38 (citing Ex.1007 ¶¶ 79–81; Ex. 1003 ¶ 106; Ex. 2001 ¶¶ 1001. Rather, according to Patent Owner and Patent Owner's declarant, "Burrough's teachings would at most suggest adding haptic feedback *during* a continuous zoom-in or continuous zoom-out operation, but not upon recognition of a double-tap user input gesture." Prelim. Resp. 38; Ex. 2001 ¶ 100.

At least on this preliminary record, Patent Owner's point is well taken that Burrough's teaching is vibration during an ongoing zoom operation. Petitioner's position, however, seems to be that Kim's double-tap to return to the basic magnification level is a zoom operation. Pet. 50–51. At least on this preliminary record, returning the object to basic magnification level necessarily changes the size of the object so seems at least arguably to be a type of zoom operation. As such, at this preliminary juncture, we do not agree with Patent Owner's position that Burrough's teaching would not result in vibration during Kim's double-tap.

We also recognize Patent Owner's declarant's other point—that Kim's return of the zoomed object to basic magnification level occurs rapidly and visual feedback makes haptic feedback unnecessary—has merit on this preliminary record. Ex. 2001 ¶ 100; *see* Prelim. Resp. 38. On balance, however, we do not conclude that Petitioner's position has no reasonable likelihood of prevailing with respect to claim 30.

We reach a similar conclusion regarding Petitioner contentions that the subject matter of claim 30 also would have been obvious over Kim, Burrough, and Bowens (Ground 2C) on this preliminary record. Petitioner

relies on similar arguments discussed above and also discussed previously with respect to claims 1 and 32 for Petitioner’s combination of Kim and Bowens. Pet. 81–83. Patent Owner argues Grounds 1C and 2C together. Prelim. Resp. 36–38. We find no reason to reach an alternation conclusion here regarding Petitioner’s showing of reasonable likelihood.

2. Claim 62 Reciting Similar Subject Matter

Petitioner contentions that the subject matter of claim 62 would have been obvious over Kim, Lang, and Burrough (Ground 1D) and also would have been obvious Kim, Burrough, Lang, and Bowens (Ground 2D) rely on similar arguments discussed above and also discussed previously with respect to Lang’s description of a watch. Pet. 51–52, 83–84. Patent Owner argues Grounds 1C, 1D, 2C, and 2D together, which we discussed above with respect to claim 30. Prelim. Resp. 36–38.

Limitation [62.j] recites “subsequent to the performance of the scale operation, vibrating the apparatus and performing an action,” whereas Limitation [30.i] recites “after at least a portion of the scale operation, vibrating the apparatus and performing an action.” In its combinations Petitioner relies on Kim’s double-tap returning the object to basic magnification level (as the action required), which occurs subsequent to the continuous zoom and also after at least a portion of the continuous zoom, at least on this preliminary record.

Accordingly, we reach a similar conclusion for Petitioner’s contentions regarding claim 62 as we did above for claim 30.

III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner

would prevail in showing at least one of claims 1, 27, 30, 32, 34, 59, 62, and 64 of the '114 patent is unpatentable. We institute an *inter partes* review of all challenged claims on all asserted grounds. 37 C.F.R. § 42.108(a); *see SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1, 27, 30, 32, 34, 59, 62, and 64 of the '114 patent on all the grounds set forth in the Petition; and

FURTHER ORDERED that 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; the trial will commence on the entry date of this decision.

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