

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

IMMERSION CORPORATION,
Patent Owner.

IPR2023-00943
Patent 8,896,524 B2

Before MICHAEL R. ZECHER, PATRICK R. SCANLON, and
CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

OGDEN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner Meta Platforms, Inc. (“Meta”) filed a Petition (Paper 2, “Pet.”) under 35 U.S.C. §§ 311–319 requesting *inter partes* review (“IPR”) of claims 1–4, 6–8, and 11–14 of U.S. Patent No. 8,896,524 B2 (Ex. 1001, “the ’524 patent”). Patent Owner Immersion Corporation (“Immersion”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).¹

Under the authority delegated to us by the Director of the USPTO under 37 C.F.R. § 42.4(a), we may institute an *inter partes* review when “the information presented in the petition . . . and any response . . . shows that 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); *see also* 37 C.F.R. § 42.108(c) (2023). Applying that standard, we institute an *inter partes* review of all the challenged claims of the ’524 patent for the reasons explained below. This is a preliminary decision, and we will base our final written decision on the full trial record.

II. BACKGROUND

A. THE ’524 PATENT (EX. 1001)

The ’524 patent describes “[a] haptic confirmation system . . . that produces a confirmation haptic effect in response to a user interaction with a user interface element, where the confirmation haptic effect is based on

¹ The parties identify themselves as the real parties in interest, and this is not contested on the preliminary record. *See* Pet. 1; Paper 3, 1.

context metadata.” Ex. 1001, code (57). The ’524 patent explains that “[h]aptics is a tactile and force feedback technology that takes advantage of a user’s sense of touch by applying haptic feedback effects (i.e., ‘haptic effects’), such as forces, vibrations, and motions, to the user.” *Id.* at 1:11–15. A “confirmation haptic effect” is a haptic effect “generated in response to a user interaction with a user interface element, in order to confirm the interaction with the user interface element” (*id.* at 6:14–18), which for example could be “a button displayed within a touchscreen or a keyboard” (*id.* at 1:61–62).

“[T]he confirmation haptic effect can be customized based on context metadata . . . associated with the interaction of the user interface element.” Ex. 1001, 1:63–65. Context metadata may include “any kind of data that is associated with an interaction with a user interface element.” *Id.* at 5:62–63. It can include data indicating the following types of information: “physical properties of the user interface element, such as the size or shape”; “functionality of the user interface element”; “a history of interaction with the user interface element”; or “sensor input data, such as a detected force produced by a touch applied to the user interface element by the user.” *Id.* at 1:65–2:17; *see also id.* at 3:65–6:7, Fig. 2.

Figure 4, reproduced below, depicts a method for generating a confirmation haptic effect:

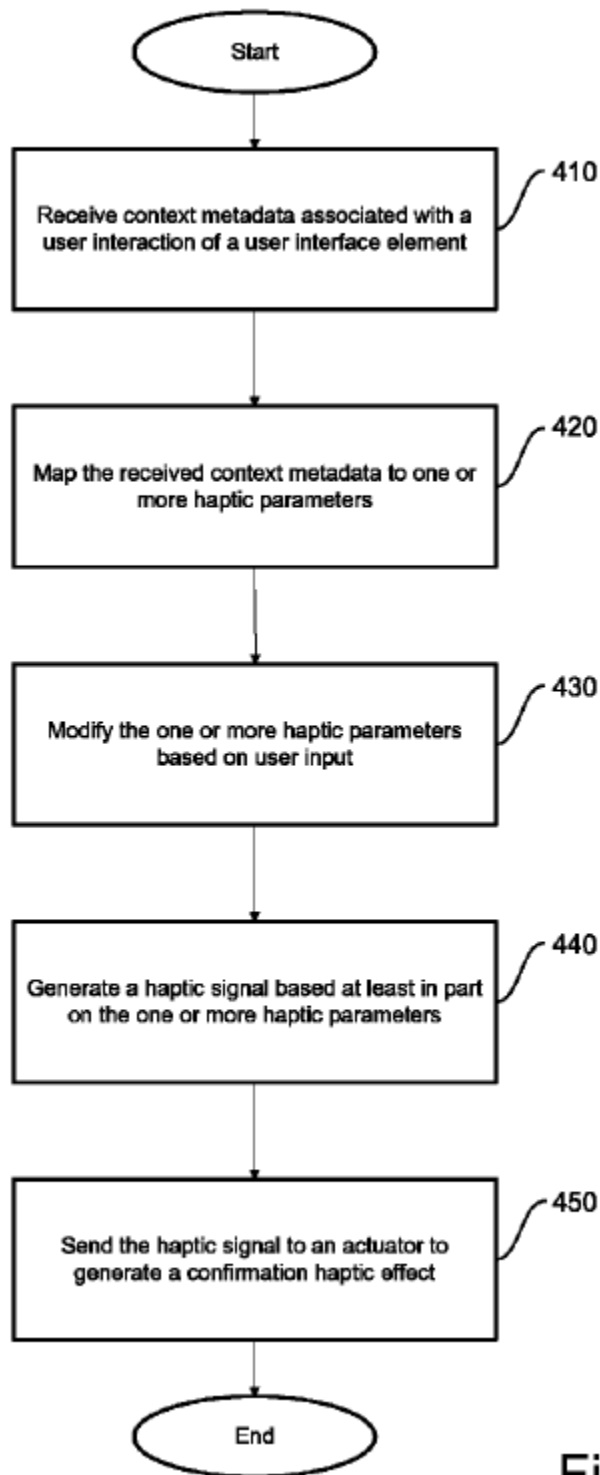


Fig. 4

Figure 4, above, is “a flow diagram of the functionality of a haptic confirmation module” in a device, which is responsible for generating a confirmation haptic effect. Ex. 1001, 9:21–22; *see also id.* at 2:60–63. In

step 410, the confirmation module receives context metadata associated with a user interaction of a user interface element. *See id.* at 9:34–10:2. In steps 420 and 430, the confirmation module maps this context metadata to one or more haptic parameters, as modified by user input. *See id.* at 10:3–44. In steps 440 and 450, the confirmation module generates a haptic signal based on the haptic parameters and sends that signal to an actuator to generate a confirmation haptic effect. *See id.* at 10:45–58.

B. CHALLENGED CLAIMS AND GROUNDS

Representative claim 1 is as follows:

1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to generate a confirmation haptic effect, the generating the confirmation haptic effect comprising:

- 1[a] receiving context metadata associated with a user interaction of a user interface element, wherein the context metadata comprises at least one of: data indicating a functionality of the user interface element, or data indicating a history of the user interface element;
- 1[b] mapping the received context metadata to one or more haptic parameters;
- 1[c] generating a haptic signal based at least in part on the one or more haptic parameters; and
- 1[d] sending the haptic signal to an actuator to generate the confirmation haptic effect.

Ex. 1001, 11:42–57 (Meta’s reference numbers added).

Meta argues two grounds for *inter partes* review, as summarized in the following table:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 6–8, 11–14	103(a) ²	Poupyrev, ³ Yun ⁴
2–4, 12	103(a)	Poupyrev, Yun, Braun, ⁵ Rosenberg ⁶

Pet. 3.

C. DECLARATORY TESTIMONY

Meta submits a declaration by Dr. Jeremy Cooperstock. Ex. 1002.
Immersion submits a declaration by Dr. Gregory Abowd. Ex. 2002.

D. RELATED PROCEEDING

As related matters, the parties identify *Immersion Corp. v. Meta Platforms, Inc.*, No. 22-cv-00541 (W.D. Tex. filed May 27, 2022), *transferred within district*, No. 23-cv-00623 (W.D. Tex. effective June 1, 2023) (“related district court case”). Pet. 1; Paper 3, 2–3.

² 35 U.S.C. § 103(a) (2006), *amended by* Leahy–Smith America Invents Act (“AIA”), Pub. L. No. 112-29 § 103, sec. (n)(1), 125 Stat. 284, 287, 293 (2011) (effective Mar. 16, 2013). This pre-AIA version of § 103 applies because the ’524 patent issued from an application filed on August 24, 2012, which is before the effective date of the AIA amendments. *See* Ex. 1001, code (22).

³ Poupyrev et al., US 7,952,566 B2 (issued May 31, 2011) (Ex. 1003).

⁴ Yun et al., US 2009/0322498 A1 (published Dec. 31, 2009) (Ex. 1004).

⁵ Braun et al., US 6,300,936 B1 (issued Oct. 9, 2001) (Ex. 1005).

⁶ Rosenberg et al., US 6,169,540 B1 (issued Jan. 2, 2001) (Ex. 1006).

III. DISCRETIONARY GROUND FOR DENYING INSTITUTION

Institution of *inter partes* review is at the Director's discretion, which has been delegated to the Board under her guidance. *See* 35 U.S.C. § 314(a); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he [USPTO] is permitted, but never compelled, to institute an IPR proceeding.”); 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

Under Board precedent, one of the considerations that may weigh in favor of denying a petition under § 314(a) is the advanced state of a parallel district court action. *See NHK Spring Co. v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board, Consolidated Trial Practice Guide, 58 & n.2 (Nov. 2019), <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>. In *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential), the Board explained that “cases addressing earlier trial dates as a basis for denial under *NHK* have sought to balance considerations such as system efficiency, fairness, and patent quality.” *Fintiv*, Paper 11 at 5. *Fintiv* sets forth six non-exclusive factors for determining “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* at 6. The Director has also issued interim guidance to the Board on applying these factors. *See* Katherine K. Vidal, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022) 9, https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf (“Director Memo”).

The Director Memo explains that, “[c]onsistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.” Director Memo 3 (footnote omitted) (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A)). The Director Memo explains that such a *Sotera* stipulation “mitigates concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB . . . and allows the PTAB to review grounds that the parallel district court litigation will not resolve.” *Id.* at 7–8.

Meta acknowledges that in the related district court case, the court has set a trial date for February 20, 2024. Pet. 4.⁷ But to address any concerns regarding duplication of efforts between the related district court case and this proceeding, Meta provides a stipulation that it “will not pursue in the district court any grounds of invalidity against the challenged claims that were raised or reasonably could have been raised in IPR.” *Id.*

In response, Immersion acknowledges that Meta offers a *Sotera* stipulation, and that under these circumstances “a petition should not ordinarily be denied in accordance with the *Fintiv* factors.” Prelim. Resp. 22. But Immersion contends that we should still exercise our discretion to deny the Petition under § 314(a) based on the advanced state of the district court

⁷ Meta argues that it filed a motion to transfer the case to the U.S. District Court for the Northern District of California that remained pending at the time of filing the Petition. Pet. 4. Immersion informs us that this motion was unsuccessful. *See* PO Resp. 25.

case and the duplication of invalidity grounds asserted in this proceeding. *Id.* at 22–23 (citing *Cisco Sys., Inc. v. Estech Sys., Inc.*, IPR2021-00329, Paper 13 (PTAB July 6, 2021)). According to Immersion, “Petitioner’s *Sotera* declaration is conditional, and the district court case is so far along, the declaration will not result in significant savings of resources because expert discovery will be over by the time an institution decision is rendered.” *Id.* at 23. Consequently, Immersion contends that it “will be required to fully rebut in the district court case the same art [Meta] raises here.” *Id.*

We do not agree that we can effectively ignore the Director Memo under these circumstances. Immersion cites *Cisco*, a non-precedential Board decision issued prior to the Director Memo in which the panel weighed the *Fintiv* factors and determined that a *Sotera* stipulation did not overcome a trial date scheduled significantly before the projected date of a final written decision. *See* Prelim. Resp. 23. The Director Memo issued after this decision as “binding agency guidance.” Director Memo at 3. Thus, the Director Memo abrogates any prior inconsistent holdings by Board panels, including the non-precedential holding in the *Cisco* decision. Because Meta has provided a *Sotera* stipulation, the Director Memo is controlling and the *Fintiv* factors are not a basis for denying institution.

IV. GROUNDS OF THE PETITION

For the reasons below, we determine that Meta has demonstrated a reasonable likelihood that it would prevail in showing that at least one of claims 1–4, 6–8, and 11–14 of the ’524 patent is unpatentable under a ground of the Petition. We begin by discussing the level of ordinary skill in the art and the construction of claim terms.

A. LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the pertinent art at the time of the invention is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors we consider when determining whether a patent claim is obvious over the prior art. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

To assess the level of ordinary skill, we construct a hypothetical “person of ordinary skill in the art,” from whose vantage point we assess obviousness and claim interpretation. *See In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). This legal construct “presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan.” *Id.* (citing *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1993)).

Meta argues that a person of ordinary skill in the art would have had “a bachelor’s degree in electrical engineering or computer science (or an equivalent degree), and two years of practical or industry experience in the field of human computer interaction, including implementation of computer-based systems and software for providing haptic feedback effects to a user.” Pet. 4–5 (citing Ex. 1002 ¶¶ 12–13). At this stage, Immersion does not contest this definition of the level of ordinary skill. *See Prelim. Resp.* 9.

Because it is presently uncontested, supported by testimonial evidence, and appears consistent with the types of problems and solutions in the ’524 patent, we adopt Meta’s articulation of the level of ordinary skill for this decision.

B. CLAIM CONSTRUCTION

In an *inter partes* review, we construe a patent claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2023). This generally includes “construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary artisan after reading the entire patent,” and “as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313, 1321.

Meta notes that in the related district court case, the parties have proposed constructions for the terms “confirmation haptic effect,” “context metadata,” and “haptic parameter.” Pet. 6 (citing Ex. 1008, 2). But Meta “does not believe any of these terms requires express construction” for purposes of this proceeding. *Id.*

Similarly, Immersion “does not believe any specific claim terms require construction, and [argues that] all terms should have their plain and ordinary meaning.” Prelim. Resp. 9. Immersion informs us that the district court adopted “plain and ordinary meaning” as the construction for “context metadata.” *Id.* at 9–10 (citing Ex. 2001, 3).

At this stage, we have not identified any claim terms that clearly depart from their ordinary and customary meanings, and our decision to institute trial does not require us to construe any terms explicitly. *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))). Accordingly, we address the claim limitations below in the context of the prior art.

C. OBVIOUSNESS OF CLAIM 1 BASED ON POUPYREV AND YUN

Meta first argues that claim 1 is unpatentable under § 103(a) as obvious over Poupyrev in view of Yun. Pet. 3, 8–39.

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). When a ground in a petition is based on a combination of references, we consider “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We base our obviousness inquiry on factual considerations 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) any objective indicia of obviousness or non-obviousness that may be in evidence. *See Graham*, 383 U.S. at 17–18.

Considering these factors,⁸ we determine that Meta has shown a reasonable likelihood that claim 1 is unpatentable as obvious over Poupyrev in view of Yun, for the reasons explained below.

1. *Overview of Poupyrev*

Poupyrev describes an apparatus with “a haptic feedback generating unit attached to [a] touch screen,” and a “pressure sensing unit” that can “detect pressure applied to the touch screen.” Ex. 1003, code (57). The system provides (1) “tactile notification when a user touches a user interface element on a touch screen without executing functionality of the user interface element,” and separate (2) “tactile notification to the user when the functionality of the user interface element is executed.” *Id.* at 1:47–52.

Poupyrev’s Figure 11 is reproduced below:

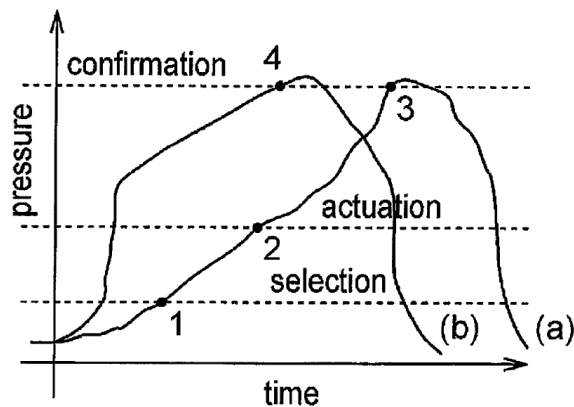


Figure 11, above, “demonstrates an example in which several thresholds are used in actuation and providing the tactile feedback” in response to a user’s

⁸ Because neither party argues that there are objective indicia of obviousness or non-obviousness at this stage, this does not factor into our decision. *See* Ex. 1002 ¶ 127 (Dr. Cooperstock stating that he is not aware of any objective indicia of nonobviousness); *see generally* Prelim. Resp. (omitting any discussion of objective indicia).

interaction with a user-interface element. Ex. 1003, 12:29–30. The figure is a graph of pressure over time, showing curves (a) and (b) reflecting different instances of a user pressing an object on a graphical user interface (“GUI”).

In curve (a), “the user touches and pushes the GUI object to pass a selection threshold,” and in response, “a tactile feedback is provided (Point 1 . . .) without actuating the GUI object.” *Id.* at 12:31–33. Then “[t]he user presses further to pass the actuation threshold where a different tactile feedback is provided (Point 2). In this example, however, the GUI object is not actuated yet.” *Id.* at 12:33–36. The activation occurs when the pressure reaches a confirmation threshold at Point 3, the purpose of which “is to avoid accidental activation of the GUI objects.” *Id.* at 12:36–40.

In curve (b), the user presses the GUI object very quickly, and in this case the “selection” and “actuation” feedbacks are skipped because they would be “distracting and hamper the user interaction.” Ex. 1003, 12:41–53. Thus, the user “is presented with the tactile feedback only at the confirmation level (Point 4 of Curve (b)).” *Id.* at 12:53–54.

Poupyrev also teaches that a controller “determines a current logical state of the [GUI] object using a history of detected touch positions and a history of detected pressure values.” Ex. 1003, 2:8–10; *accord id.* at 3:19–22; *see also id.* at 7:39–42 (“[A] history of the previous input and a history of the previous states of the GUI objects is used to determine the tactile feedback to the user . . .”).

2. Overview of Yun

Yun describes a device with a touch screen displaying objects that are divided into “haptic regions,” where the device provides a haptic effect so that “it is possible for a user to easily determine which of the haptic regions

of the object has been touched with the sense of touch.” Ex. 1004, code (57).
An example is depicted in Figure 36, reproduced below:

FIG. 36

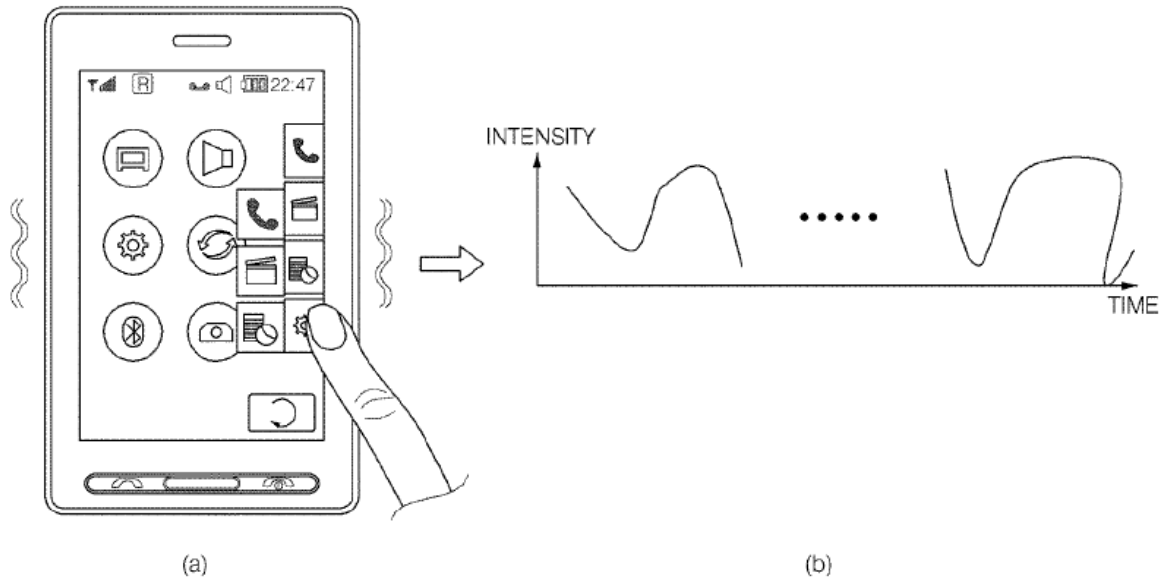


Figure 36, above, is “a diagram of a screen image 860 including a plurality of menu icons.” Ex. 1004 ¶ 109. “[I]f a user touches or approaches . . . one of the menu icons, the name of the chosen menu icon may be analyzed, and a haptic effect corresponding to the name . . . may be generated.” *Id.* For example, if the name of the menu item is “setting,” then the device may sequentially generate “haptic effects (such as vibration effects) respectively corresponding to alphabet letters ‘s’, ‘e’, ‘t’, ‘t’, ‘i’, ‘n’, and ‘g’.” *Id.* “Alternatively, the user may set a haptic effect for the word ‘setting’ in advance,” so that the device generates a haptic effect for the word “setting.” *Id.*

3. *Preamble*

The preamble of claim 1 recites “[a] non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to generate a confirmation haptic effect, the generating the confirmation haptic effect comprising” certain steps. Ex. 1001, 11:42–45.

Meta argues that Poupyrev teaches such a medium, pointing to hardware including a processor, memory, input, and circuits for generating haptic feedback effects. Pet. 8–11, 17–18 (citing Ex. 1002 ¶¶ 65–69, 73; Ex. 1003, 2:1:61–65, 4:66–5:10, 5:27–31, 5:46–47, 6:3–4, 6:23–29, 7:34–36, 8:6–8, Fig. 1). Meta argues that Poupyrev specifically generates a “confirmation haptic effect” because the haptic effects function to confirm the user’s interaction with a GUI object. Pet. 11–17 (citing Ex. 1001, 1:14–18; Ex. 1002 ¶¶ 67–69, 71–72, 92–96; Ex. 1003, 5:9–11, 6:14–19, 8:12–19, 8:41–42, 8:47–52, 8:56–67, 9:4–16, 12:30–34, Figs. 5, 11, Ex. 1008, 2).

Immersion does not specifically contest these arguments at this stage. *See generally* Prelim. Resp. Because the preliminary evidence suggests that Poupyrev discloses the preamble as recited, including a computer-readable medium with instructions for generating confirmation haptic effects, we need not decide whether the preamble is limiting. *See, e.g.*, Ex. 1003, Figs. 1, 5, 11.

4. *Limitation 1[a]*

Limitation 1[a] recites “receiving context metadata associated with a user interaction of a user interface element, wherein the context metadata comprises at least one of: data indicating a functionality of the user interface

element, or data indicating a history of the user interface element.” Ex. 1001, 11:47–51.

Meta argues that Poupyrev teaches this limitation because the controller receives data about a user’s history of interacting with a GUI element. *See* Pet. 18–23. In particular, Meta contends that Poupyrev generates “context metadata” in the form of “information about (1) the *position* on the screen where the interaction is occurring, and (2) the *amount* of pressure applied by the user.” Pet. 19 (citing Ex. 1003 ¶¶ 76–77). According to Meta, it is obvious that this position and pressure information would be “received” by the controller hardware of the device, because the controller uses this information to generate particular haptic feedback. Pet. 19–21 (citing Ex. 1003, 2:10–14, 5:33–34, 5:46–47, 6:3–4, 7:1–5, Fig. 1; Ex. 1003 ¶ 76).

Meta also argues that Poupyrev’s controller uses the *history* of this position and pressure information, in relation to a GUI object, to determine the tactile feedback to be provided to the user, thus satisfying the requirement of limitation 1[a] that context metadata indicate either functionality *or* history of the user interface element. Pet. 22–23 (citing Ex. 1003, 2:8–14, 2:22–33, 7:29–34, 7:39–42; Ex. 1003 ¶ 80).

Alternatively, Meta argues that Yun teaches generating context metadata comprising a *functionality* of a user interface element, as shown in the example of Yun’s Figure 36. Pet. 23–26; *see supra* Section IV.C.2. According to Meta, when a user in that example selects the “setting” icon, the system will generate context metadata leading to a specific confirmation haptic effect associated with the textual word “setting,” which reflects the functionality of that icon. *Id.*

Meta also contends that a person of ordinary skill in the art would have incorporated Yun’s teachings into Poupyrev’s system by using functionality-based context metadata (in addition to data about the history of the user interface element) because “this would have enabled the controller in Poupyrev to provide tactile feedback customized based on the particular GUI object with which the user is interacting.” Pet. 27 (citing Ex. 1002 ¶¶ 85–86). Meta argues that both references are analogous to the claimed invention, and that the proposed combination “would have provided the further benefit of providing tactile feedback that not only indicates to a user that the GUI object has been selected and activated, but *also* allows the user to determine through the tactile feedback the identity of the GUI object being selected or activated.” Pet. 28–29 (citing Ex. 1002 ¶¶ 88–91).

In response, Immersion argues that the language limiting claim 1’s context metadata to categories of “functionality” or “history” was added during prosecution to overcome a prior art reference (Tierling, Ex. 2003) that generated haptic effects “based on received *physical characteristics* of the haptic device”—which would be in either the “physical properties” or “sensor input data” categories described in the ’524 patent. Prelim. Resp. 14–19 (citing Ex. 1001, 4:27–48, 4:49–5:31, 5:60–64, 11:48–51, 12:40–43, Fig. 2; Ex. 2002 ¶¶ 38–40; Ex. 1009 (prosecution history of the ’524 patent), 82, 87, 89–90, 99; Ex. 2003 ¶ 43).

Immersion also contends that in the example of Yun’s Figure 36, the title of the “setting” button “does not reflect the ‘functionality’ of the button as described in the [’]524 specification” because the textual word “[s]ettings” does not correspond to a functionality, but rather an arbitrary title or name, and instead of causing a particular function to occur likely

presents the user with an additional set of buttons or menu items.” Prelim. Resp. 19–20 (citing Ex. 1001, 4:55–58; Ex. 2002 ¶¶ 41–44).

Also, according to Immersion, whereas “the [’]524 Patent describes changing the haptic response associated with the same GUI object depending upon the context, . . . Yun discloses assigning different haptics to different buttons,” which “is not the same as having different buttons with different names using different haptic responses.” *Id.* at 20–21 (citing Ex. 1001, 4:49–5:2; Ex. 2002 ¶¶ 41–44).

Notwithstanding Immersion’s preliminary arguments, we find Meta’s arguments sufficiently persuasive at this stage. Immersion is correct that, during prosecution of the ’524 patent, the applicant narrowed claim 1 by restricting content metadata to either “functionality” or “history” to distinguish Tierling’s teaching to “improve or tailor haptic instructions based on received physical characteristics of the haptic device.” Ex. 1009, 89–90 (citing Ex. 2003 ¶ 66). Tierling discloses that such physical characteristics include “mass, shape, acceleration, deceleration, resonant frequencies, harmonic modes, frequency response, performance at varying altitudes or orientations, and/or other measurable features of the haptic device.” Ex. 2003 ¶ 29. Although this would seem to overlap to some extent with the category of “sensor input data” in the ’524 patent (*see, e.g.*, Ex. 1001, 5:43–45 (“a sensor can generate sensor input data associated with an acceleration of a device”)), we do not understand Meta to be relying on Poupyrev as teaching context metadata in the form of physical properties of Poupyrev’s haptic *device*, such as the device’s acceleration.

Instead, Meta relies on Poupyrev’s teaching that confirmation haptic effects are based on the history of a user’s touch interactions with a user

interface element, including position and pressure. *See* Pet. 19–23. This would appear to fall within both “history” and “sensor input data” categories described in the ’524 patent.

But we find nothing in the ’524 patent disclosure to suggest that these categories are mutually exclusive. For example, the ’524 patent discloses that, when a user touches a user interface element, the system generates “sensor input data” in the form of a pressure reading. Ex. 1001, 5:35–43. But the same touch might also produce “history” context metadata in the form of “a speed at which a user . . . touches a button displayed within the touchscreen.” *Id.* at 5:9–11.

Thus, at this stage, we determine that Meta has sufficiently demonstrated that Poupyrev discloses a system that receives context metadata “indicating a history of the user interface element.” as recited in limitation 1[a].

We also find Meta’s argument based on Yun sufficiently persuasive at this stage. The word “settings,” which is the label of a menu icon in Yun’s Figure 36, appears to reflect the functionality of that user interface element, which is to allow the user “to enter a menu corresponding to the chosen [settings] menu icon.” Ex. 1004 ¶ 110. We disagree with Immersion that the title of the menu icon is arbitrary, at least in the example of Figure 36, because the intent of basing the haptic effect on the title of the menu icon is so that “the user may easily recognize” the particular icon that they touched. *Id.* So, at least in this example, the title “settings” indicates the functionality of bringing up a “settings” menu, and the device would have communicated that functionality to the user through the associated haptic effect. *See id.*

We also find nothing in claim 1, or the '524 patent disclosure as a whole, requiring that there be multiple haptic responses associated with a single user interface element. Claim 1 only recites “receiving context metadata associated with *a* user interaction of *a* user interface element,” and generating “*a* confirmation haptic effect” (not necessarily a plurality of different confirmation haptic effects) associated with that context metadata. Ex. 1001, 11:44–45, 11:47–48 (emphasis added); *see also id.* at 11:4–12 (disclosing that the described system “*can* provide for multiple possible confirmation haptic events for a single user interface element” (emphasis added), but not limiting the claimed invention to this embodiment).⁹

For the above reasons, we find that Meta has sufficiently shown, at this stage, that Poupyrev, either alone or in view of Yun, teaches limitation 1[a].

5. *Limitations 1[b]–[d]*

Limitation 1[b] recites “mapping the received context metadata to one or more haptic parameters.” Ex. 1003, 11:52–53. Meta argues that, in Poupyrev, the recited “one or more haptic parameters” correspond to the intended frequency and amplitude of the haptic effect. Pet. 30 (citing Ex. 1003, 2:41–43). Alternatively, Meta argues that Yun discloses haptic parameters in the form of “vibration intensity and pattern.” Pet. 30–31

⁹ We note that, in the context of limitation 1[b], Meta points to Yun’s disclosure that there can be “different haptic effects having different intensities and/or different patterns for different haptic regions of an object such as a menu icon.” Pet. 36 (emphasis omitted) (quoting Ex. 1004 ¶ 133). This suggests that a single menu icon could have multiple haptic responses depending on where the user touches it.

(citing Ex. 1004 ¶ 42). In either case, Meta argues that these parameters are mapped to the received context metadata because there is a correlation between the context metadata (i.e., the position and pressure data, or the title of the “settings” menu icon) and the parameters. Pet. 32–36 (citing Ex. 1001, 6:36–41; Ex. 1002 ¶¶ 94, 96; Ex. 1003, 2:8–14, 2:41–43, 7:39–42, 5:11–16, 10:43–67; Ex. 1004 ¶¶ 109, 133, Fig. 36).

Limitations 1[c] and 1[d] recite “generating a haptic signal based at least in part on the one or more haptic parameters; and sending the haptic signal to an actuator to generate the confirmation haptic effect.” Ex. 1003, 11:54–57. Meta argues that Poupyrev discloses a haptic feedback generating unit with an actuator that generates the confirmation haptic effect based on the haptic parameters. Pet. 37–39 (citing Ex. 1002 ¶¶ 67–72, 94–95, 98; Ex. 1003, 7:29–31, 6:43–46, 5:38–40).

At this stage, Immersion does not contest Meta’s arguments for limitations 1[b]–[d]. *See generally* Prelim. Resp. We find the arguments sufficiently persuasive at this stage. *See* Ex. 1003, Fig. 1 (items 102, 106, 111).

6. *Conclusion as to Claim 1*

For the above reasons, we determine that Meta has shown that Poupyrev, alone or in combination with Yun, teaches all the limitations of claim 1, and that a person of ordinary skill in the art would have had reason to combine the features as Meta argues in the Petition. We therefore determine that Meta is reasonably likely to prevail in showing that claim 1 is unpatentable under § 103(a) as obvious over Poupyrev in view of Yun.

D. OTHER CLAIMS

Independent claim 11 is substantially identical to claim 1, except that it is directed to a method rather than a non-transitory computer-readable medium. *Compare* Ex. 1001, 12:36–49, *with id.* at 11:42–57. Meta relies on the same arguments and evidence presented for claim 1 to teach all the limitations of claim 11. *See* Pet. 46 (citing Ex. 1002 ¶¶ 108, 109). For the reasons above, we likewise determine that Meta is reasonably likely to prevail in showing that claim 11 is unpatentable under § 103(a) as obvious over Poupyrev in view of Yun.

Claims 2–4 and 6–8 depend directly or indirectly from claim 1, and claims 12–14 depend from claim 11. *See* Ex. 1001, 11:58–12:3, 12:8–20, 12:50–61. Meta provides arguments under grounds 1 and 2 addressing the additional limitations in these claims. *See* Pet. 39–57. Immersion does not contest these arguments at this stage. *See generally* Prelim. Resp.

Because Meta has shown a reasonable likelihood of prevailing with respect to claims 1 and 11, we will institute on all claims and all grounds raised in the Petition, and we need not address the second ground or the uncontested arguments under the first ground for claims 2–4, 6–8, and 12–14. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *AC Techs. S.A. v. Amazon.com, Inc.*, 912 F.3d 1358, 1364 (Fed. Cir. 2019) (“[I]f the Board institutes an IPR, it must . . . address all grounds of unpatentability raised by the petitioner.”).

V. CONCLUSION

For the reasons above, Meta has shown that there is a reasonable likelihood it would prevail with respect to at least one of the claims

challenged in the Petition. Thus, we institute trial on all asserted grounds and all challenged claims. *See* 37 C.F.R. § 42.108(a) (2023).

VI. ORDER

It is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–4, 6–8, and 11–14 of the '524 patent is instituted with respect to 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, *inter partes* review of the '524 patent commences on the entry date of this Order, and the Board hereby gives notice of the institution of a trial.

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