

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VALVE CORPORATION,
Petitioner,

v.

IMMERSION CORPORATION,
Patent Owner.

Case IPR2024-00582
Patent 11,175,738

**PATENT OWNER'S SUR-REPLY
TO PETITION FOR INTER PARTES REVIEW**

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I. INTRODUCTION

The challenged claims are patentable over Pratt, Ku, and Jiang.

II. CLAIM CONSTRUCTION

A. The Court Should Adopt Immersion's Proposed Construction of "Haptic Effect"

Immersion's proposed construction of "haptic effect" is "a single, unmodified haptic effect that is based on the proximity sensor signal and the touch sensor signal." The Court should adopt it because it is consistent with the intrinsic evidence, and none of Valve's arguments shows otherwise.

1. Immersion's proposed construction is correct in light of the intrinsic evidence.

Immersion's proposed construction is correct in light of the intrinsic evidence because the specification describes the claimed "haptic signal" as a single signal and the claimed "haptic effect" as a single, unmodified haptic effect that is based on the proximity and touch sensor signals. POR, 19-21 (citing EX2008, ¶¶31-36).

Claims must be read as understood by a POSA in light of the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). Figure 5 of the '738 patent identifies step 508 which is later described in column 11 as the step in which the processor "determines a haptic effect." EX1001, Fig. 5 & 11:29-40. This haptic effect is based on both proximity and touch signal. *Id*; POR, 19-21 (citing EX2008, ¶¶31-36). The specification further states that "[s]uch a haptic effect *may further be*

modified or combined with another haptic effect based on the proximity sensor signal.” EX1001, 11:35-37 (emphasis added). This underscores that the original haptic effect is a single, unmodified haptic effect that must be based on both proximity and touch input signals. Thus, the haptic effect that is derived from further modification as described in 11:35-38 is not the original, claimed haptic effect. It is instead a secondary haptic effect derived from an original haptic effect that is further modified or combined with another haptic effect, and, as discussed below, this embodiment falls outside the scope of claim 1.

2. Immersion's proposed construction does not exclude a preferred embodiment.

As the portion of the '738 patent quoted by Valve makes clear, in “*some embodiments*, the haptic effect can include one or more haptic effects.” Reply, 16 (quoting EX1001, 11:32-40). Thus, in some embodiments, this is the case, and in others it is not. The Federal Circuit has “acknowledge[d] that a claim need not cover all embodiments.” *Intamin, Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1336-37 (Fed. Cir. 2007) (affirming construction that might not cover particular disclosed embodiment). “The fact that one construction may cover more embodiments than another does not categorically render that construction reasonable.” *PPC Broadband, Inc. v. Corning Optical Communs. RF, LLC*, 815 F.3d 747, 754-55 (Fed. Cir. 2016) (finding that Board's construction, which included all disclosed

embodiments, was unreasonable). Indeed, it would be “improper to read a limitation from the specification into the claims.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004) (citations omitted). Immersion’s proposed construction is consistent with the intrinsic evidence because it distinguishes different embodiments and clarifies that only one of them is the claimed “haptic effect.”

3. Valve implicitly relies on a construction of “haptic effect” that contradicts the intrinsic evidence

To argue against Immersion’s proposed construction, Valve confuses the way the term “haptic effect” is used in the vernacular with how it is used in the claims. Reply, 17. In its Reply, Valve attempts to construe “haptic effect” at odds with its plain meaning, by, for example, conflating *sensation* and *haptic effect*. *Id.* at 17-19 (“the term plainly encompasses a sensation experienced by the device user). It is true that combined haptic effects may be perceived as a single sensation but that does not mean that they are single, unmodified haptic effects as that term is used in the claims. *Id.* at 18-19. Immersion has not argued that a haptic effect does not cause a sensation, as Valve seems to imply. But as Immersion has pointed out, even though multiple haptic effects may be perceived as a single *sensation*, that does not change the fact that they are *different haptic effects*. POR, 31-32. This matters because the claims concern haptics effects, not sensations, and the salient issue is whether the sensation

derives from a single, unmodified haptic output signal that is based at least in part on a touch signal *and* a proximity signal. *Id.* For that reason, Valve's analogy to orange water (Reply, 22-23) is inapposite because it involves exactly the type of combination that is excluded by the asserted claims.

If anything, Valve itself proposes a construction beyond the plain and ordinary meaning of the term "haptic effect" by proposing that it should equate to a "sensation" perceived by the user, as opposed to the effect that is output by the haptic actuator. The Board should reject Valve's attempt to rewrite "haptic effect" to "sensation."

4. Valve's other arguments also fail to refute Immersion's showing that its proposed construction is correct.

Valve argues, incorrectly, that the '738 patent does not draw a distinction between original and secondary haptic effects and that the claims broadly claim a generic haptic effect. The '738 patent draws a clear line, stating that the first haptic effect "may further be modified or combined with another haptic effect." EX1001, 11:35-36. The necessary implication of that statement is that the first haptic effect, which is based on both proximity and touch, is meaningfully different from the second haptic effect which is a combination haptic effect. Immersion is not suggesting that a combination haptic effect is no longer a haptic effect. Rather,

Immersion is emphasizing that the haptic effect *claimed in claim 1* is a single, unmodified haptic effect.

Likewise, a haptic effect can be decomposed into smaller components but the issue is whether the haptic output signal that generates the haptic effect is itself based on both proximity and touch. The combined data stream posited by Valve misses the point; if the haptic effect derives from a single haptic output signal which is itself based on *both* proximity and touch then it is within the scope of claim 1. Atomizing the haptic effect into smaller pieces does not change that. Also, as discussed above, the fact that it may be perceived as a single sensation is not determinative.

Valve criticizes Immersion's analogy between Pratt's "bubble effect" and the Choe reference disclosed during prosecution (Reply 24-25) but the parallel is appropriate. Valve argues that Pratt and Choe are materially different because Choe's "relevant embodiment" did not suggest that haptic effects 225 and 226 could be combined because, according to Valve, the language about synthesizing haptic effects came from elsewhere in Choe. Reply, 24. On this basis Valve argues that whereas Choe's effects 225 and 226 are "separate and independent," Pratt achieves "a singular sensation based on both proximity and touch signals." *Id.* But Valve's distinction between Pratt and Choe is contrary to the prosecution history. First, the Board's analysis of Choe clarified that the haptic effect must be based on one signal that is itself based on proximity and touch. This was in the context of explaining that

“Choe discloses the haptic effect 226 is generated based on a touch of the user, *or* the approach of the user's finger, but not both.” EX1002, 1091. As discussed below in §III.A, Pratt's “bubble effect” embodiment—like Choe—discloses two separate haptic effects, one based on proximity and one based on touch. Second, the comparison is appropriate because during prosecution the Board weighed in on whether a combined haptic effect disclosed the limitations of claim 1 and found that it did not: “we agree with Appellant that the Examiner's determination that Choe discloses that haptic signals may be combined is insufficient to support a finding of anticipation.” EX1002, 1091.

B. The Plain and Ordinary Meaning of “Haptic Effect”

If the Board rejects Immersion's proposed construction of “haptic effect,” it must nevertheless give the term its plain meaning in light of its surrounding claim language. *Apple Inc. v. MPH Techs. Oy*, 28 F.4th 254 (Fed. Cir. 2022) (affirming Board's application of plain meaning, noting Board's consideration of surrounding claim language). The claim itself and the specification establish that the haptic output signal is a single signal, and the haptic effect that is generated in response is a single haptic effect based on both the proximity and touch sensor input signals. EX1001, Fig. 5 & 11:29-40.

Even if Immersion's proposed construction is rejected, the claim requires a single haptic output signal that is based on both proximity and touch. For example,

if a proximity sensor signal produces haptic effect “1” and a touch sensor signal produces haptic effect “2” then even if these haptic effects are further combined or overlaid on top of one another, overlapping in time, they are not a single haptic effect because they are a combination of separate haptic effects.

III. GROUND 1: CHALLENGED CLAIMS 1-3, 5-6, 14-15, AND 19 ARE NOT ANTICIPATED AND/OR OBVIOUS OVER PRATT

A. Pratt's “Bubble/Click effect” Embodiment Does Not Anticipate Because It Does Not Disclose a “Haptic Effect” as that Term Is Used in the Asserted Claims.

Valve argues that Pratt's “bubble effect” (also referred to as the “click effect”) embodiment invalidates because the haptic effects produce a single “sensation.” Reply, 19, 24-25. But the sensation the user experiences is not determinative as to what is actually claimed (*supra* §II.B). POR, 22-35. And, crucially, by their plain language, the challenged claims are directed to the haptic effect and not the user's perception thereof. The first haptic effect in Pratt's “bubble effect”—deflecting the screen towards the user's finger—is based entirely on proximity sensing. POR, 26 (citing EX1006, ¶[0049]-[0050], Figs. 7(a)-(d); EX2008, ¶80). The second haptic effect in Pratt's “bubble effect”—returning the screen to its original flat position—is based solely on touch sensing. *Id.* Thus, each sensor signal, proximity and touch, generates a different haptic effect.

The Board's analogy between the “pushing effect” embodiment disclosed in the '738 Patent at 11:38-40 and the “bubble effect” embodiment does not render the

claims anticipated or obvious because, as detailed in the POR, the “pushing effect” embodiment is outside the scope of the claims. POR, 21-22. The haptic effect that is derived from further modification as described in 11:35-38 is not the original haptic effect that is claimed in claim 1 and described at step 508. Rather, it is a secondary haptic effect derived from a single or original haptic effect that was further modified or combined with another haptic effect. This secondary haptic effect is beyond what is determined at step 508 and outside the scope of the claim. An example of this secondary haptic effect is “‘pushing’ on a virtual button.” *See Intamin*, 483 F.3d at 1336-37 and *PPC Broadband*, 815 F.3d at 754-55 (both noting that construction need not disclose all embodiments). The “pushing” of a virtual button in the context of the ’738 patent describes two haptic effects that are *combined*. The analogy with the “bubble effect” fails because that embodiment is not a haptic effect based on a single signal based on both proximity and touch. In Pratt’s “bubble effect” embodiment, the first effect is based solely on proximity, and the second effect is based solely on touch.

**B. It Would Not Have Been Obvious to Combine Pratt’s
“Latency” Embodiment with the “Rate-of-Approach”
Embodiment**

**1. Pratt paragraphs 39 and 41 disclose different,
incompatible embodiments.**

Valve’s obviousness argument based on its reading of Pratt in which paragraph 39 allegedly modifies paragraph 41 to disclose a hypothetical embodiment

that combines elements of paragraphs 39 and 41 is not supported by the text of the reference. As detailed below, not only are these embodiments directed to different problems, but their solutions are incompatible. Thus, a POSA would not combine these distinct embodiments as Valve proposes. *See Abiomed, Inc. v. Maquet Cardiovascular, LLC*, IPR2017-01204, -01205, Paper 8 at 8-12 (PTAB Oct. 23, 2017) (rejecting Petitioner's appeal on obviousness grounds because it was "unpersuaded that the features of Aboul-Hosn's various embodiments are interchangeable or that [a POSA] would have combined those features in the manner proposed by Petitioner."); *Intel Corp., v. Qualcomm, Inc.*, IPR2018-01154, Paper 33 at 4-5 (PTAB Aug. 11, 2021) (rejecting obviousness argument because petitioner failed to provide sufficient motivation to combine two embodiments in single reference); *In re Stepan Co.*, 868 F.3d 1342, n1 (Fed. Cir. 2017) ("Whether a rejection is based on ... combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination...").

First, paragraphs 39 and 41 are directed to different problems. Paragraph 39 is concerned with latency, i.e., the amount of time it takes an actuator to generate a haptic effect after a user touches a surface. It discloses using a device to detect a user's finger at a predetermined distance from the touch surface and, based on that detection, initiate pre-charging of the haptic actuator. EX1006, ¶[0039]. But the

haptic effect in paragraph 39 is generated only *after* the user has touched the surface. *Id.* (“the device may detect the finger making contact with the touch surface At this time . . . , the device may drive the haptic actuator with the a corresponding haptic effect voltage[.]” (sic)). Although the pre-charging caused by the device’s detection of the user’s finger at a distance from the surface does not generate or change the haptic effect, as a result of the pre-charging, “the device may generate the haptic effect *faster upon touch* screen contact because of pre-charging . . . thereby *reducing latency* between the user touching the screen and feeling the corresponding haptic feedback.” *Id.* (emphasis added); POR, 2. Thus, there are two attributes to the embodiment disclosed at paragraph 39: (1) it uses proximity *not* to generate or change the haptic effect but only to pre-charge the actuator to reduce latency and (2) it delivers the haptic effect only *after* the user touches the surface.

In contrast to paragraph 39’s “latency” embodiment, the distinct “rate-of-approach” embodiment in paragraph 41 is concerned with delivering information to a user about the rate of approach of their finger towards the screen: “haptic effect types may be selected *based on the rate of approach of the user’s finger* as it moves toward a touch screen.” EX1006, ¶[0041] (emphasis added); POR, 2. Paragraph 41 expressly contemplates that the rate of approach of the user’s finger affects *which* haptic effect is generated: “a first haptic effect may be selected in response to a relatively ‘fast’ velocity and a second haptic effect may be selected in response to a

relatively 'slow' velocity." EX1006, ¶[0041]. Thus, there are two attributes to the embodiment disclosed at paragraph 41: (1) it uses the rate of approach of a user's finger to select the haptic effect and (2) it delivers the haptic effect only *before* the user touches the surface.

Second, paragraphs 39 and 41 offer different solutions. The solution proposed in paragraph 39 is to pre-charge the haptic actuator in response to the detected presence of a user's finger so that the haptic effect is delivered faster upon the user's touch. EX1006, ¶[0039]. But as Immersion established in its Patent Owner Response, the fact that the user's finger is detected does not itself generate or change a haptic effect; instead, the haptic effect in paragraph 39 is based entirely on the touch input signal. POR, 2 ("Thus, in [the embodiment disclosed in paragraph 39] the haptic effect is based solely on the touch signal because there is no haptic effect until there is a touch."). In contrast, the solution disclosed in paragraph 41's "rate-of-approach" embodiment is to produce *different* haptic effects based on the rate at which the user's finger approaches the screen. POR, 2; EX1006, ¶[0039]. The result is that in the "rate-of-approach" embodiment "the haptic effect is based solely on the proximity signal." POR, 2. The haptic effect disclosed in the "rate-of-approach" embodiment in paragraph 41 is expressly taught to be "based on" the rate at which the user's finger approaches the screen. EX1006, ¶[0041].

Ignoring these differences, Valve argues that “paragraph 41 ... is a particular embodiment of Pratt’s paragraph 39.” Reply, 6. Valve’s argument cannot be reconciled with the teachings of Pratt. The embodiments disclosed at paragraphs 39 and 41 are directed to different problems and offer different solutions. Thus, the proposed combination of disparate embodiments would not make sense to a POSA because it would deliver *pre-touch* haptic effects based on the “rate-of-approach” to reduce latency associated with *post-touch* haptics. *See, e.g.*, POR, 2, 23, 50; EX2008, ¶¶73, 114. The latency addressed in paragraph 39 is only an issue post-touch, because it is concerned with delivering the haptic effect as soon as possible after the touch so that the user experiences immediate feedback. *Id.* By contrast, the “rate-of-approach” embodiment is concerned with delivering information before the touch, i.e., at a time when the post-touch latency addressed by paragraph 39 is inherently not an issue. POR, 35 (citing EX2008, ¶¶96-97). At bottom, paragraphs 39 and 41 are simply incompatible: one provides a haptic effect *after* touch and the other provides a haptic effect *before* touch. In *Cook Grp., Inc. v. Boston Sci. Scimed, Inc.*, the Federal Circuit affirmed the Board’s finding of no motivation to combine where the combination of references would have resulted in loss of key functionality of the primary reference. 809 Fed. Appx. 990, 995 (Fed. Cir. 2020). Similarly, here the combination of the paragraph 39 and 41 embodiments would result in loss of

functionality, namely the ability to convey information about the rate of approach before the user touches the screen.

For the reasons above, Valve cannot show that a POSA would have been motivated to combine the separate and distinct embodiments of paragraphs 39 and 41. As a result, Pratt does not anticipate or render obvious the challenged claims because without a motivation to combine there can be no finding of obviousness. *See Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1069 (Fed. Cir. 2017) (“anticipation is not proven by ‘multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention’”); *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882 (Fed. Cir. 2024) (emphasizing that mere existence of prior art elements is not sufficient to render invention obvious; there must be clear reason for POSA to combine those elements in claimed manner); *Dome Patent L.P. v. Lee*, 799 F.3d 1372, 1380 (Fed. Cir. 2015) (affirming that even if all elements of claim are found in prior art, “the factfinder must further consider the factual questions of whether a person of ordinary skill in the art would be motivated to combine those references”).

2. Immersion substantively addressed the embodiment disclosed in paragraph 39 in its POR.

Valve devotes several pages of its Reply to a false premise, namely that Immersion did not address the “rate of approach” embodiment in its POR. Reply, 5-

8. That is not true. The crux of Valve's argument is that Pratt's "rate of approach" embodiment disclosed in paragraph 41 can be implemented such that the haptic effect is generated after the user touches the screen. Petition, 26-28; Reply, 5-6. Immersion substantively addressed this argument. POR at 35 ("the purpose of the haptic effect disclosed in [the rate-of-approach] embodiment of Pratt is to convey information *before* the user touches the menu icon. Thus, a POSA would understand that in the context of that embodiment, one would not wait to convey that information until after they have touched the menu icon."). The detail that Valve pulls from paragraph 39 is simply that haptics can be produced after a touch. The specifics of "time t1" and "time t2" are not relevant to the combination of embodiments; they simply state that the touch happens at time t2. Notably, Immersion cited paragraph 39 in the introduction to its POR when establishing the relevant premise. POR, 2. There was no reason to cite it again when applying the concept in the relevant section. POR, 35 ("that sentence is in reference to the embodiment where the haptic effect is generated based on proximity alone, not touch. Further, the purpose of the haptic effect disclosed in this embodiment of Pratt is to convey information before the user touches the menu icon.") Valve elevates form over substance, criticizing Immersion for not citing to paragraph 39 and ignores Immersion's substantive rebuttal of Valve's argument that the "rate-of-approach" embodiment could be implemented by delivering the haptic effect after a touch.

Specifically, Immersion pointed out that a POSA would not understand that paragraph 41 could be modified to produce rate-of-approach haptics after the touch because the rate-of-approach embodiment in paragraph 41 dealt with pre-touch haptics and so it would be contrary to the purpose of the embodiment to modify it in that way: “Pratt is directed to two principal concerns. The first is reducing latency.... The second concern is conveying information to the user about the speed and direction of their approach.” POR, 2, 35. “[T]he purpose of the haptic effect disclosed in [the rate-of-approach] embodiment of Pratt is to convey information before the user touches the menu icon. Thus, a POSA would understand that in the context of that embodiment, one would not wait to convey that information until after they have touched the menu icon.” POR, 35 (citing EX2008, ¶¶96-97).

IV. GROUND 2: CHALLENGED CLAIMS 1-6, 14-16, AND 19 ARE NOT RENDERED OBVIOUS BY PRATT IN VIEW OF KU

A. The Combination of Pratt and Ku Does Not Disclose the Claimed Invention

Pratt does not disclose a single haptic effect based on proximity and touch signals. POR, 23-27, 36-52. Nor does Ku; it discloses two separate haptic effects—one based on the proximity signal and one based on the touch signal—that occur sequentially and in some cases overlap in time. POR, 36-45; EX2008, ¶107. Therefore, the combination of Pratt and Ku still does not disclose the claimed

invention because neither reference discloses a single haptic effect based in part on both proximity and touch. EX2008, ¶¶98-114.

B. Pratt and Ku Are Directed to Different Problems with Different Solutions and So It Would Not Have Been Obvious to Combine Them

Rather than dispute that Pratt is not directed to the same issue as Ku, Valve turns this around and argues that this is the very reason to combine them: “Pratt does not address the problem Ku discusses: ‘distinguishing between different types of touch signals and proximity signals depending on where they are detected relative to the on-screen icons. POSAs would have recognized such an alert as desirable to indicate to users whether they touched the icon they intended to touch.’” Reply, 26-27. But as discussed in the POR, “Petitioner simply creates a combination out of whole cloth claiming that it would be advantageous to have the latency-reducing effects of Pratt along with Ku’s ability to distinguish between types of proximity or touch signals.” POR, 50-52. Valve’s argument on Reply turns the obviousness analysis on its head, implicitly arguing that any two references can be combined on the basis that they solve different problems.

In *Sundance, Inc. v. Demonte Fabricating Ltd.*, the Federal Circuit considered the same issue, namely whether a reference was “ready for improvement” under the standard articulated in *KSR*. 550 F.3d 1356, 1367 (Fed. Cir. 2008). There, the court agreed that the combination was invalidating but only because a POSA would have

understood that the combination was “inescapably obvious” and that what the two references offered “would give the resulting design exactly the same benefit.” *Id.* Here, the inventions of Pratt and Ku do **not** confer exactly the same benefit, as Valve concedes (Petition, 26-27), and the combination is not inescapably obvious.

1. Valve oversimplifies the references to argue motivation to combine.

Valve argues that a POSA would be motivated to combine Pratt and Ku “because both references disclose devices with *a user interface including multiple icons.*” Reply, 26. Valve’s argument takes the broadest possible read of the references to find commonality between them but they are different inventions directed to solving different problems. Asserting that there is a motivation to combine all references regarding user interfaces with multiple icons would sweep in almost all art concerning electronics with touch screens. Without more, the mere motivation to “build something better” is not enough to combine various references. *ActiveVideo Networks, Inc. v. Verizon Communs., Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (affirming district court’s grant of JMOL of no invalidity, rejecting generic testimony for motivation to combine based on “want[ing] to build something better”); *see also MR Techs., GmbH v. W. Digit. Techs., Inc.*, No. 22-01599, 2024 U.S. Dist. LEXIS 186490, *12 (C.D. Cal. July 8, 2024) (“A generalized mix and

match approach to the prior art is not sufficient to establish motivation to combine.”
(citing *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017)).

2. Valve misinterprets *KSR*.

Valve repeatedly asserts that Pratt was “ready for improvement” based on Ku (Reply, 26-27) but this is not the case. First, Valve’s incantation of the “ready for improvement” concept comes from a misreading of *KSR*. In *KSR* the Court directed trial courts to “ask whether the improvement [of the asserted patent] is more than the predictable use of prior art elements according to their established functions.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). It is in the context of this admonition that the Court remarked that a patent is not obvious where it involves “more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* Thus, the phrase “ready for improvement” refers to the situation where a known technique that has already been used to “improve similar devices in the same way” is combined with a primary reference. Only in that circumstance is the reference “ready for improvement.” *KSR* does not stand for the proposition that any reference is “ready for improvement” by any other reference in the field.

As an example, a hammer is “ready for improvement” by a known technique if another, similar hammer has already been improved in the like manner. It would turn Section 103 on its head to find that the first hammer was “ready for

improvement” simply because it lacked the feature with which it was later improved. Such hindsight reasoning would make it impossible for there to be any innovative progress because all improvements would be treated as per se evidence that the thing improved had been ready for improvement.

V. GROUND 3: CHALLENGED CLAIMS 1-5, 14-16, AND 19 ARE NOT RENDERED OBVIOUS BY KU

A. Ku Does Not Disclose All the Limitations of the Asserted Claims

As detailed in Immersion's POR, Ku does not disclose a single, unmodified haptic effect based on both proximity and touch. POR, 45-50; EX2008, ¶115. Instead, Ku discloses two separate haptic output signals each based solely on proximity or touch, but not both. *Id.* The resulting haptic effects occur sequentially and where the user hovers over and then touches the same menu icon, the haptic effects can overlap in time. *Id.*

1. Immersion's POR addressed Valve's Ku obviousness combination and showed that a combined command signal does not invalidate the asserted claims.

Valve's argument regarding Ku is that one haptic output signal (producing haptic effect 705) can be combined with another haptic output signal (producing haptic effect 710) to create a single haptic output signal to drive haptic effect 715. Petition, 66. Valve takes issue with Immersion's response as responding to an anticipation argument rather than an obviousness argument. Reply, 3, 11. Immersion

responded to Valve's argument that "Ku is not substantively different from Choe and does not anticipate the '738 Patent for the same reasons." Immersion previously referred to anticipation rather than obviousness but the response is the same, namely that even if it were true that the signals could be combined into a single command signal, this single command signal does not disclose all the limitations of the asserted claims. POR, 48-49, 53. The reason is that a combined haptic output signal is still not a single signal based at least in part on both proximity and touch. Instead, it is a *combined* signal, where each of the original output signals is based solely on either proximity or touch but not both. *Id.* As detailed in the POR, "To the extent that Ku discloses combining haptic effects, as described in the specification of the '738 Patent, that is outside the scope of the claimed haptic effect where 'such a haptic effect may further be combined or modified with another haptic effect.'" POR, 47-48 (quoting EX1001, 11:35-37).

According to Valve, a single command signal that is output at the point where the user's finger touches the screen is equivalent to the single haptic output signal of the '738 patent. Petition, 66. This is not the case. The '738 patent claims a single haptic output signal *based at least in part on the first and second sensor signals*, i.e., proximity and touch. By contrast, Ku has two output signals, each based on *one* input signal. The haptic output signal that generates haptic effect 705 is based solely on proximity and the haptic output signal that generates haptic effect 710 is based

solely on touch. Even if Ku were modified to issue a single command signal, this would be a combined haptic output signal because it would involve the combination of two haptic output signals each of which derives from a single input signal. Valve's argument is that you can start with a haptic output signal based solely on proximity, and then combine it with a haptic output signal based solely on touch, and that this *combination* is a haptic output signal based at least in part on both proximity and touch. But that is incorrect because the original signal must be a single signal based at least in part on proximity and touch, and that single signal drives a single, unmodified haptic effect. As discussed above (*supra* §II), the claimed haptic effect is based on a single haptic output signal in order to produce a single, unmodified haptic effect. Thus, "Ku does not disclose a single, unmodified haptic effect that is based on both a proximity signal and a touch signal." POR, 52. Even if Valve's new obviousness combination with Tierling were properly raised in its Petition, the combination fails to cure this critical deficiency in Ku.

B. Ku + Tierling Is Not an Obviousness Combination Raised in the Petition.

Valve incorrectly asserts that Immersion never rebutted Valve's obviousness theory for Ku on the grounds that the POR did not address Valve's proposed combination of Ku and Tierling. Reply, 10-11. But Tierling is *not* one of the obviousness combinations in the Petition and Valve cannot now raise this new

argument.¹ Reply, 11. Per 37 C.F.R. § 42.6(a)(3), “Arguments must not be incorporated by reference from one document into another.” Valve cannot elevate Tierling to the level of an obviousness combination when that reference was only discussed in its expert’s declaration and not in the Petition itself. *See, e.g., Cisco Sys., Inc. v. C-Cation Techs. LLC*, IPR2014-00454, Paper 12 at 10 (PTAB Aug. 29, 2014); *3M Co. v. Evergreen Adhesives, Inc.*, No. 2020-1738 (Fed. Cir. June 25, 2021) (“Citing § 42.6, the Board refused to consider 3M’s central argument [] because the Board determined that this argument was provided only by way of improper incorporation by reference to testimony offered by 3M’s expert[.]”).

VI. GROUND 4: CHALLENGED CLAIMS 1-6, 14-16, AND 19 ARE NOT RENDERED OBVIOUS BY KU IN VIEW OF JIANG

As detailed in the POR, a POSA would not have been motivated to combine the Ku and Jiang references. Valve’s alleged reason for combining Ku and Jiang does not relate to the use of both proximity and touch signals. Instead, Valve claims that a POSA would be motivated to “implement localized haptics feedback in Ku’s mobile terminal such that instead of vibrating the entire device, the tactile feedback

¹ The declaration of Dr. Akl supports and provides context for Immersion’s POR. Valve discounts Dr. Akl’s declaration on the basis that it mirrors Immersion’s POR but does not point to any specific instance which it believes is unreliable. Valve’s citation to decisions from other, unrelated IPRs are inapposite because they deal with a different set of circumstances.

may be concentrated to a localized zone under the user finger.” Petition, 79 (cleaned up). But it is not enough to simply state that it would have been obvious to a POSA to combine two references on the basis that the combination would be theoretically better than the originals. *Id.* There must be a motivation to create the proposed combination and that is lacking. In *Virtek*, the Federal Circuit reversed the Board’s finding of obviousness where the Board relied on the fact that two different systems—3D coordinates and angular measurements—were disclosed in a reference and were therefore “known” as the basis for substituting in a 3D coordinate system to the primary reference. 97 F.4th at 887 (“The mere fact that these possible arrangements existed in the prior art does not provide a reason that a skilled artisan would have substituted [one system for another].”); *see also ActiveVideo Networks*, 694 F.3d at 1328; *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 993, 94 (Fed. Cir. 2017).

Respectfully Submitted,

Dated: May 5, 2025

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Patent Owner's Sur-Reply
IPR2024-00582 (U.S. Patent No. 11,175,738)

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CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for all portions of the foregoing Patent Owner's Sur-Reply totals 5,548 words per Microsoft Word, which complies with the requirement of 5,600 words allowed under 37 C.F.R. § 42.24(d).

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CERTIFICATE OF SERVICE

As authorized by Patent Owner's Mandatory Notice, I hereby certify that on May 5, 2025, a copy of this document has been served in its entirety by electronic mail on Petitioner's lead and backup counsel.

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