

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

10,936,114

PATENT OWNER SUR-REPLY

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	CLAIM CONSTRUCTION	2
A.	“Duration of The Gesture” – Plain Meaning with Antecedent Basis Applied Consistently	2
B.	The POR’s Reference to “Single Continuous” “Touch” / “Gesture” Is Shorthand for the Antecedent Basis of “the Gesture,” Nothing More	7
C.	Conditional Limitations Are Not Optional	9
III.	PETITIONER’S IMPROPER MAPPING OF THE CONDITIONAL LIMITATIONS (CLAIMS 1, 32, 34, AND 64).....	11
A.	Petitioner Does Not Map the Claims Under Patent Owner’s Constructions.....	11
B.	Petitioner’s Mapping Fails Even Under Petitioner’s Constructions.....	11
IV.	PETITIONER’S MAPPINGS OF THE “OPERATION” AND “ANOTHER OPERATION” LIMITATIONS DEFICIENT (CLAIMS 1, 32, 34, 64).....	13
A.	No Showing of an Operation Triggered by a Duration “Less Than A First Magnitude Threshold”	13
B.	No Showing of “Another Operation” Triggered by a Duration “Greater Than A Second Magnitude Threshold”.....	15
C.	The Second Threshold Is Necessarily Higher than the First Threshold.....	17
V.	PETITIONER FAILS TO PROVIDE A PERSUASIVE MOTIVATION TO ADD HAPTIC FEEDBACK TO KIM’S DOUBLE TAP GESTURE (CLAIMS 30, 62)	19
VI.	CONCLUSION.....	23

PATENT OWNER'S EXHIBIT LIST

Exhibit	Shorthand	Description
2001		[Withdrawn] Declaration of Rajeev Surati, Ph.D.
2002		[Withdrawn] CV of Rajeev Surati, Ph.D.
2003	JCC	Excerpts of Joint Claim Construction Chart
2004	Webster-Duration	“Duration.” Merriam-Webster’s Collegiate Dictionary, Eleventh Edition (2004)
2005	Oxford-Duration	“Duration.” New Oxford American Dictionary, Third Edition (2010)
2006	Stay Order	October 2, 2024 Order Granting in Part Apple’s Motion to Stay in <i>Smith Interface Technologies, LLC v. Apple Inc.</i> , 3-23-cv-01187, S.D. Cal (Dkt. No. 127).
2007	Licygiewicz Dec.	Declaration for Pro Hac Vice Admission of Arthur P. Licygiewicz
2008	Madisetti Dec.	Declaration of Dr. Vijay Madisetti
2009	Madisetti CV	CV of Dr. Vijay Madisetti
2010	’918 Provisional	U.S. Provisional Patent Application 61/581,918
2011	Webster-Remain	“Remain.” Merriam-Webster’s Collegiate Dictionary, Eleventh Edition (2004)
2012	Oxford-Remain	“Remain.” New Oxford American Dictionary Third Edition (2010)
2013	Deposition	Deposition of Andrew Cockburn, Ph.D.

I. INTRODUCTION

The Board identified several claim interpretation issues that “may be dispositive.” Paper 10, 2. **First**, Petitioner’s Reply (Paper 23) confirms that it requires a rewrite of the claims “permi[tting] the conditional limitations to be met by different detected gestures, each having a duration that meets a different condition” for its mapping to apply. Reply, 16. As discussed in the POR (Paper 18) and below, Petitioner’s interpretation ignores the plain claim language; instead, arguing that it is entitled to rewrite the plain language because “no single detected gesture could meet all of limitations [1.f], [1.g], and [1.i],” which purportedly renders the claims internally inconsistent. Paper 22, 6. As the POR explained, the plain language of the claims does not refer to a “single detected gesture” to the extent that refers to a single instance of user input. POR, 2–3. Rather, “the claims refer to the logic used to evaluate numerous instances of user input,” and, therefore, “it is not necessary that the prior art include logic where the preconditions for each Limitation would be met in response to a single user input.” *Id.* Petitioner offers only feigned confusion in response. Paper 22, 7–9.

Second, Petitioner does not dispute that the conditional limitations of apparatus claims 1, 30, and 32 are mandatory. Paper 22, 13–15. As to method claims 34 and 64, Petitioner fails to address the Federal Circuit’s 2025 *Sierra Wireless* decision cited extensively in the POR. *Id.*

The Reply also fails to justify numerous other flaws in the mappings. Even under Petitioner’s constructions of the conditional limitations, the mapping remains based on unjustified stitching together of various modes across two references. The Reply fails to justify the inconsistencies in merging those modes that the POR pointed out. The Reply also fails to identify any causal or temporal link between what it maps to the recited “operation” and “another operation,” in violation of the “when” / “based on” language of the claims. Finally, the Reply, like the Petition, fails to identify any specific teaching in the prior art that would motivate a POSITA to add haptic feedback to Kim’s double tap gesture, resting on overgeneralizations that the POR squarely refutes.

II. CLAIM CONSTRUCTION

A. “Duration of The Gesture” – Plain Meaning with Antecedent Basis Applied Consistently

The plain language of the claims is dispositive. Each of these claims first recites detecting “a gesture” on a touch-screen object (e.g., Limitation [1.e]) and then refers to “[a]/[the] magnitude of [a]/[the] duration of *the* gesture being detected” in each of the conditional Limitations. POR, 22–24; D.I., 25–26. The definite article in “*the* gesture” ties each conditional clause to the original gesture identified in the initial detection step. And the plain meaning of “[a]/[the] magnitude of [a]/[the] duration of *the* gesture” refers to the length of time the gesture lasts (or has lasted to a given point). POR, 23–24. The plain language likewise confirms that a period that

starts *after* the gesture begins is not measuring *the* gesture; it is at best a *portion* of *the* gesture. *Id.*

Petitioner's constructions rewrite the plain language. For example, Petitioner's assertion that the claim language "permits the conditional limitations to be met by *different* detected gestures, each having a duration that meets a different condition" (POR, 16) does not reflect the plain language. Rather, it rewrites "*the* gesture" in each conditional Limitation as "*a* gesture," untethering the conditions from a common starting point the claims explicitly recite and eliminating the antecedent basis.

As another example, Petitioner argues that the claim language does not "foreclose[]" "including the magnitude of the duration of any gesture being detected, which includes the duration magnitude of *any part of the inputs*, flags, and signals that constitute the gesture being detected." Paper 22, 3. Respectfully, it does. The plain language is not duration of *any part* of the gesture. It is the duration "of *the* gesture."

Unable to abide by the plain language, Petitioner asserts that the plain language is internally inconsistent as an excuse to rewrite it. *Id.*, 6–11. Petitioner is wrong that the claims are internally inconsistent for the reasons Patent Owner explained in the POR and for which Petitioner does not rebut. As the POR explained, "consistent with 'decision-tree' and detection logic" described in the '114 Patent and

incorporated provisional, “claims refer to the logic used to evaluate numerous instances of user input.” POR, 24–25. Thus, the fact that no “single detected gesture,” to the extent the Board used that term to refer to a single instance of user input,¹ could meet all of the conditional Limitations is not a flaw in the claim language, but rather reflects the fact that the claims recite logic operating on numerous “detected gestures” (i.e., instances of user input).

Petitioner also accuses Patent Owner of not respecting the antecedent basis of “*the* duration” to justify Petitioner’s ignoring of the antecedent basis of “*the* gesture.” Reply, 7–8. But Patent Owner has not ignored the antecedent basis of “*the* duration.” The POR explains that the “duration of the gesture” in the claims means the time period from the start of a gesture (initial touch detection) until the time of the execution of the evaluation logic or the end of that gesture. POR, 23–24. For a given instance of user input, it is this same duration that each set of logic in each conditional limitation evaluates.

¹ Petitioner criticizes Patent Owner for using the term “single instance of user input” rather than “single detected gesture.” Paper 22, 7. The POR directly answers the Board’s questions, confirming Patent Owner does not dispute that “single detected gesture,” to the extent the Board used that term to refer to a specific instance of user input “will not meet all three Limitations.” POR, 29.

Petitioner identifies no flaws in Patent Owner’s explanation, arguing only that it should be able to rewrite the claims “to preserve validity.” Paper 22, 8–9. This is precisely the argument that the Federal Circuit rejected in *Sierra Wireless, ULC v. Sisvel S.P.A.*, 130 F.4th 1019 (Fed. Cir. Mar. 10, 2025), which the POR (POR repeatedly cites (POR, 2, 26–27, 45) and Petitioner does not address. There, just as Petitioner argues, the Board held that two limitations were “mutually exclusive” and “cannot both occur in response to the same set of stimuli” and, “[o]n that basis,” altered the plain language “to preserve their presumed validity.” *Sierra Wireless, ULC*, 130 F.4th at 1022. The Federal Circuit “reject[ed] the Board’s conclusion because the plain and unambiguous language of” the claim was clear and the canon of preserving validity only applies “[i]f, after applying all other available tools of claim construction, a claim is ambiguous.” *Id.* (quoting *Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC*, 824 F.3d 999, 1004 (Fed. Cir. 2016)); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (canon of preserving validity “not applied” “broadly”). Further, Patent Owner’s explanation **does** preserve validity while also not altering the plain language.

Petitioner also points to dependent claims, but only to reinforce the undisputed but irrelevant point that certain conditional Limitations are mutually exclusive and, thus, require multiple user inputs before all could be met. Paper 22, 6–7. Petitioner also points to claim 33, which recites “the first, second, and third components of the

gesture are detected *in a third use case scenario.*” *Id.*, 9. But Petitioner’s argument assumes, without justification, that the “third use case scenario” refers to a single instance of user input rather than multiple instances of user input.

Finally, Petitioner identifies *nothing* in the specification that supports rewriting the claims at Petitioner urges. Reply, 7–8. Petitioner appears to criticize Patent Owner and Dr. Madisetti for not identifying an example in the specification “of a single gesture having three different durations that result in three different actions.” *Id.* Again, the POR identifies substantial disclosures of “multi-part, multi-action gestures” and use of a “decision tree” and a “phase space path” to detect multiple aspects of a gesture. POR, 4–9. And the POR explained how this disclosure is consistent with interpreting the claims as logic operating on multiple instances of user input by defining “multiple patterns” that can be detected that “may share the same starting (and intermediate) points.” *Id.* Importantly, while citing to the POR’s footnote, Petitioner does not dispute that, as a matter of law, “it is not incumbent on Patent Owner to do so nor would the lack of any specific embodiment be a justification to ignore the plain language.” Again, “the patentee is free to choose a term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.” *IQRIS Techs. LLC v. Point Blank Enters., Inc.*, 130 F.4th 998, 1004 (Fed. Cir. 2025).

B. The POR's Reference to "Single Continuous" "Touch" / "Gesture" Is Shorthand for the Antecedent Basis of "the Gesture," Nothing More

Petitioner criticizes Patent Owner's purported "overly narrow argument that the gesture must be a 'single continuous gesture.'" Reply, 14–16. To be clear, Patent Owner did not use these phrases in its claim construction discussion (POR, 21–31), but instead used them (*id.*, 35–39) as shorthand to refer back to the claim construction point that the reference to "the gesture" in Limitations [1.f, 1.g, and 1.i] must all refer to "'the gesture' that is 'detect[ed]' in Limitation [1.e]" (*id.*, 35). Petitioner's Reply later recognizes the heart of the dispute, asserting its proposed claim scope is different than Patent Owner's because, Petitioner contends, the claims "permit[] the conditional limitations to be met by different detected gestures, each having a duration that meets a different condition." Reply, 16.

Despite later acknowledging the actual dispute, Petitioner's Reply inaccurately characterizes Patent Owner's positions and then attacks those nonexistent positions. Reply, 14–16. Those attacks do not help Petitioner because they do not reflect Patent Owner's position, and even if the manufactured disputes were resolved in Petitioner's favor, they still would not save Petitioner's flawed mapping. *First*, Petitioner argues that Patent Owner's position is inconsistent with its infringement mapping "where it mapped [1.f] to a *tap* but then mapped [1.g] and [1.i] to a *long press*—separate from the tap." Reply, 14 (emphasis in original).

Again, Patent Owner’s position is that all of the conditional limitations need **not** be met “in response to a single user input” or “a single instantiation of a gesture.” POR, 25, 27. Rather, each conditional “Limitation requires evaluating instances of user input beginning at a common starting point.” *Id.*, 24. This is true for the accused **tap** and **long press** gestures, both of which begin at the common starting point of the start of a touch on an application icon, but it is **not** true for the three gestures Petitioner maps to Limitations [1.f, 1.g, and 1.i], whose “mapped” durations do not start at a common starting point.

Second, Petitioner argues that Patent Owner’s position is inconsistent with the specification’s example of “**double press**” gesture. Reply, 15 (emphasis in original). But this criticism assumes that Patent Owner’s position is that the Challenged Claims are limited to a gesture that includes continuous contact for the entirety of the gesture. This is not a position Patent Owner has taken. Patent Owner specifically noted that the specification’s example gestures include “multi-part pattern-based” gestures without forbidding lift-off between parts. POR, 25; EX2008, ¶61; *see also* EX2010, [00529] (describing a multi-part “gesture” that “triggers the display of a pop-up menu,” “allows a user to cycle through menu items,” and “may have as a final operation the selection of the current menu item and removal of the pop-up menu”). Unlike IPR2024-01088, where the issue of whether the particular claim language permits lift-off is relevant to the presented invalidity grounds, it is

irrelevant and need not be reached here. The flaw in Petitioner’s mapping in this case is a failure to map “the gesture” consistently, regardless of whether the claims permit that gesture to include lift-off between parts.

C. Conditional Limitations Are Not Optional

Patent Owner maintains that, for challenged apparatus claims 1, 30, and 32, all of the recited conditional logic must be present in the prior art combination, and that even for method claims 34, 62, and 64, Petitioner cannot evade showing the full scope of the claimed logic. The plain language of each independent claim sets out a device or process that is capable of evaluating multiple conditions and performing multiple corresponding actions. In claim 1, for example, there are three conditional “when” clauses ([1.f], [1.g], [1.i]) that “collectively recite three actions to be performed” under different circumstances. Nothing in the claim text suggests that the invention is satisfied by an apparatus that can perform only one of the actions but not the others. To the contrary, the use of multiple conditional clauses implies the system is configured with logic to handle each scenario that may arise.

Petitioner relies on *Ex Parte Schulhauser* for the proposition that a method claim with conditional steps can be satisfied by prior art that meets only one branch. Paper 22, 13–15 (citing *Ex Parte Schulhauser*, Appeal No. 2013-007847 (PTAB Apr. 28, 2016)). But that reliance is misplaced, especially in light of the Federal Circuit’s recent precedential decision in *Sierra Wireless*, which Petitioner

conspicuously fails to address in either its claim construction briefing or its reply. In *Sierra Wireless*, the Federal Circuit confirmed that a Petitioner has to show, without picking and choosing from different embodiments, that the prior art teaches all of the claim's elements, even method claims containing mutually exclusive limitations. *Sierra Wireless*, 130 F.4th at 1022 (“[T]he plain and unambiguous language of claim 1 requires that a method, to come within the claim, must perform both limitations 1[c] and 1[d] **where their preconditions apply.**”); *see also* POR, 27. In other words, there are preconditions that would result in one condition being performed, and other preconditions where another condition is performed, but ultimately, the prior art must still disclose all the conditions. Petitioner's silence on the *Sierra Wireless* decision speaks volumes.

In sum, there is no dispute that *Schulhauser* does not apply to the apparatus claims. Even for the method claims, Federal Circuit precedent mandates the result is the same—the prior art must show the conditional features where their preconditions apply. Petitioner's approach of mixing and matching gestures from different contexts fails to meet this standard. Instead, Petitioner has identified separate pieces across references that it asserts correspond to individual conditions. That fragmented showing is insufficient to meet the claims as a whole, whether apparatus or method claims. As a result, Petitioner has not demonstrated that any single prior art system has all three conditional responses as claimed.

III. PETITIONER’S IMPROPER MAPPING OF THE CONDITIONAL LIMITATIONS (CLAIMS 1, 32, 34, AND 64)

A. Petitioner Does Not Map the Claims Under Patent Owner’s Constructions

The Reply acknowledges that the “Petition’s mapping of ‘the gesture being detected’ limitation” maps “three *different* gestures.” Reply, 3. Thus, as the Board surmised, rejecting this rewrite of the plain language is “dispositive.” Paper 10, 2.

B. Petitioner’s Mapping Fails Even Under Petitioner’s Constructions

Petitioner’s prior art mapping is deficient even adopting Petitioner’s constructions. Petitioner suggests a device that can respond to at least one gesture for each condition. Reply, 17. But Petitioner’s mapping does not come from a single reference or even a cohesive combination—it stitches together disparate teachings from different operational modes in Kim and Bowens, to present a hypothetical device. For example, Petitioner’s reliance on Kim’s “long press” gesture while the device is in “zoom mode” to satisfy one branch and Kim’s “tap” gesture in another mode requires a device that operates in two mutually exclusive states at once, or a substantial modification of Kim to merge functionalities that Kim itself separates. POR, 45–47; EX2008, ¶¶94–95. The Petition never adequately explained how these pieces would be integrated, and the Reply simply declares context a non-issue.

Furthermore, Petitioner’s mapping of the scaling ([1.g]) and the “another operation” ([1.i]) to Kim assumed that the device could detect a gesture (or gestures)

to trigger each action separately. Patent Owner showed that Kim’s scaling (a continuous zoom-out) and Kim’s “perform some action” (displaying a menu) could not both be outcomes of the same kind of gesture in Kim because they occur in different contexts—one is a press-and-hold in selected mode, the other is an interrupt in zoom mode. POR, 42–45; EX2008, ¶¶89–93. Petitioner’s Reply does not dispute this context mismatch; instead, it asserts that Patent Owner’s focus on Kim’s device state (e.g., whether it is in zoom mode) is “irrelevant” under Petitioner’s claim interpretation. Reply, 16–17. To the contrary, it is highly relevant to whether the prior art combination truly teaches or renders obvious the claimed invention. A theoretically “capable” device that Petitioner describes still has to be grounded in what the prior art discloses or suggests. Here, the prior art does not suggest a single system that would handle user inputs in the manner claim 1 requires when all limitations are considered together.

In sum, Petitioner’s Reply on the “gesture being detected” limitations fails to undermine Patent Owner’s construction and, indeed, confirms that Petitioner’s mapping stretches the prior art beyond recognition. The Board should maintain Patent Owner’s interpretation of these limitations and find that the Petition has not met its burden for claims 1, 32, 34, and 64.

IV. PETITIONER’S MAPPINGS OF THE “OPERATION” AND “ANOTHER OPERATION” LIMITATIONS DEFICIENT (CLAIMS 1, 32, 34, 64)

A. No Showing of an Operation Triggered by a Duration “Less Than A First Magnitude Threshold”

Petitioner’s grounds rely on Kim (sometimes in combination with Bowens) to meet the limitation of performing an operation/function “when...a magnitude of a duration of the gesture...is less than a first magnitude threshold” (e.g., [1.f]). In the Patent Owner Response, it was explained that Petitioner never identified any specific operation in the prior art that is carried out in direct response to detecting a short gesture (shorter than a first threshold). POR, 52–54; EX2008, ¶¶106–108. Petitioner’s Reply does not remedy this omission.

Petitioner argues that a person of skill “would have understood” from Kim that an “interrupt” (step 203) leading to “perform other action” (step 207) implies a “minimum threshold of an intentional user input” is applied. Reply, 18–19. But Kim does not disclose or suggest performing an operation when a gesture’s duration is below a threshold. POR, 53; EX2008, ¶106. Petitioner latched onto Kim’s “perform some action” step, which corresponds to displaying a menu if the interrupt is a menu request, and tried to cast that as the claimed “another operation.” But that menu display in Kim is not tied to how short or long the touch was—it is triggered by a specific type of input (an interrupt signaling a menu request), not by a duration. Thus, Petitioner’s mapping divorces the “duration” condition from the action in Kim.

Petitioner's Reply asserts that the claims do not require identifying a "specific action" for "another operation," implying that Kim's generic "perform some action" is sufficient. Reply, 19. This misses the point. The issue is not the lack of specificity in Kim's action—it is the lack of any causal link between a measured short duration and that undefined action. Claim 1 requires the operation to be performed "*when*" the gesture's duration is less than the threshold, which means the system detects the gesture, determines its duration is shorter than the first threshold, and then performs the operation. In Kim, there is no such determination for the menu display. The menu appears if the interrupt corresponds to a menu request (a different condition entirely), not if a touch was merely brief. POR, 52–54; EX2008, ¶¶105–108. In fact, Kim's menu action could just as easily be triggered by a long press if that press is specifically interpreted as a menu request because the duration isn't the governing factor, the gesture's identity is. Thus, Petitioner's mapping identifies no prior art operation that is performed in response to a gesture being below a duration threshold.

Petitioner also dismisses Patent Owner's observation that Kim's steps 203 and 207 are not triggered by the "same event," calling it an improper importation of a simultaneous timing requirement. Reply, 19–20. To be clear, Patent Owner's argument is about logical dependency, not being simultaneous. The claim's recitation of "when" and "in response to" denotes a direct dependence of the action on the gesture meeting the duration criterion. Patent Owner's point was that Kim's

“perform some action” (step 207) is not executed because a gesture was below a threshold—it is executed because an interrupt was recognized as a specific request, which is unrelated to duration. POR, 53–54; EX2008, ¶107.

Ultimately, Petitioner’s Reply fails to identify anything in Kim (or Bowens) that corresponds to the claimed first conditional branch. No cited reference shows an operation that occurs upon detecting a gesture with a duration less than a threshold. This failure is independently fatal to Petitioner’s challenge to claims 1, 32, 34, and 64.

B. No Showing of “Another Operation” Triggered by a Duration “Greater Than A Second Magnitude Threshold”

For the conditional limitation involving the “second magnitude threshold” (e.g., [1.i]), Petitioner primarily relies on Bowens’ double-tap detection logic (in combination with Kim) to argue that an “another operation” is performed when a gesture’s duration exceeds a threshold. Reply, 20–21; POR, 54–56. Patent Owner demonstrated that Petitioner’s mapping actually took Bowens’ “timeout/tap” threshold, which is a waiting period for a second tap, and misconstrued it as if it were the duration of a single gesture. POR, 54–56; EX2008, ¶¶109–112. Petitioner reiterates that the “tap input” in Bowens’ device “has a duration magnitude greater than a second magnitude threshold” and the timeout/tap transitions resulting in another operation action. Reply, 20.

Petitioner’s argument is misleading. In *Bowens*, when a user performs a single tap, the system waits for a second tap for a certain timeout period. If no second tap occurs by the time the timeout expires, the system concludes the user intended a single tap and triggers the single-tap action (activating the hyperlink). POR, 55–56; EX2008, ¶¶110–111. In such case, the user’s actual gesture (the first tap) did not last for the entire timeout—it lasted only for the brief moment the finger was on the screen, which would be a fraction of the timeout. The “duration” that exceeds the threshold is an artificially defined interval that includes the absence of any user input. There was no gesture being detected while the device waited out the timeout.

Petitioner attempts to gloss over this discrepancy by treating the single-tap plus the subsequent idle waiting period as one continuous “gesture being detected.” Reply, 20. But, the ’114 Patent’s claim language does not support counting idle time *after a gesture ends* as part of “the gesture being detected,” and Petitioner identifies nothing in the intrinsic evidence to support that interpretation. Thus, Petitioner’s mapping fails to show the system performing an action based on the duration of one continuous gesture exceeding a threshold. Instead, it shows a system performing an action after confirming that a second gesture did not occur within a certain time window. Thus, for the second threshold condition, Petitioner’s mapping fails to meet the claim requirement.

C. The Second Threshold Is Necessarily Higher than the First Threshold

Patent Owner's Response explained that the logical reading of the claims requires the "second magnitude threshold" to be greater than the "first magnitude threshold," and pointed to dependent claim 8 as confirmation. Reply, 21–22. Petitioner's Reply argues that the independent claims are "silent" on any relationship between the thresholds and that requiring second threshold to be greater than the first is importing an unrecited limitation. *Id.* Petitioner is incorrect, and its own mapping tacitly acknowledged the relationship until it no longer served Petitioner's needs.

As an initial matter, claim construction is not an exercise in isolation—terms like "first" and "second" are often used to distinguish elements and imply order or hierarchy. Here, the natural inference is that the "first threshold" is associated with the shorter duration condition, and the "second threshold" with the longer. Indeed, if the opposite were true, where the second threshold was smaller than the first, the claim's structure would be nonsensical or at least highly counter-intuitive: the claim would allow for a duration of a gesture for which the apparatus would perform both "an" operation and "another" operation in response to the same duration of the gesture. POR, 57–58, EX2008, ¶¶116–117. Petitioner points to nothing in the '114 Patent that would suggest such a bizarre scenario. To the contrary, the disclosure consistently treats multiple thresholds in increasing order when describing user input durations (e.g., distinguishing a tap vs. a long press implicitly assumes a longer time

threshold for the long press). Petitioner has offered no example or reason why a POSITA would interpret “second magnitude threshold” as anything but a higher value than “first magnitude threshold” in the context of duration/magnitude.

Dependent claim 8 removes any doubt. It recites that the scaling is reverted when the gesture’s duration is “greater than the first magnitude threshold, but is detected to *remain* less than the second magnitude threshold.” EX1001, 98:1–7; POR, 58–59; EX2008, ¶118. The use of “*remain* less than the second magnitude threshold” plainly provides that the second threshold is higher than the first. *See* EX2011 (“remain” means “to continue unchanged”); EX2012 (“remain” means “continue to possess a particular quality”); *see also* POR, 59; EX2008, ¶118. This dependent claim, at the very least, would be confusing if it were possible for the “second” threshold to be equal to or lower than the “first” threshold. Petitioner’s attempt to brush this aside via claim differentiation is not persuasive. Dependent claims are often used to clarify relationships of elements introduced in the independent claim. Here, claim 8 explicitly confirms the intended relationship between the two thresholds. Recognizing this is not “importing” a limitation but rather interpreting the existing terms in a consistent and technically sensible way.

Petitioner’s citation of *N. Telecom Ltd. v. Samsung Elecs. Co.*, 215 F.3d 1281 (Fed. Cir. 2000) does not compel a different outcome. Reply, 21. That case cautions against reading unstated limitations into claims, but it does not forbid understanding

terms in context. The Federal Circuit has also made clear that a claim interpretation that renders the claim illogical or inoperable “cannot be correct.” *Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1255 (Fed. Cir. 2010). Petitioner’s interpretation that the “first” and “second” thresholds could be in any order would introduce ambiguity and absurd possibilities that are not disclosed or contemplated in the ’114 Patent. By contrast, interpreting “second” to mean the later or higher threshold gives each limitation clear purpose.

V. PETITIONER FAILS TO PROVIDE A PERSUASIVE MOTIVATION TO ADD HAPTIC FEEDBACK TO KIM’S DOUBLE TAP GESTURE (CLAIMS 30, 62)

Claims 30 and 62 add the requirement of providing haptic feedback in conjunction with the scale operation triggered by the gesture (after or subsequent to the scaling). POR, 59. Petitioner contends it would have been obvious to add Burrough’s haptic features to Kim’s double-tap zoom functionality. Pet., 50, 82–83. Patent Owner demonstrated that this reasoning was flawed because Burrough’s teachings relate to an entirely different kind of user interaction (continuous multi-touch zoom gestures with dynamic haptic feedback). POR, 59–62; EX2008, ¶¶120–124. Petitioner’s Reply insists that there was a “strong motivation” for the combination and that Patent Owner mischaracterized Burrough. Reply, 23–24. Neither assertion is persuasive.

Burrough discloses providing haptic feedback *during* an ongoing zoom gesture. POR, 60; EX2008, ¶121. For example, as fingers spread apart, a “zoom-in signal” is generated, which, in turn generates a haptic signal. *Id.* Kim disclose a double tap—a simple, discrete gesture that instantly triggers a zoom-out to a “basic” magnification level. There is no ongoing, continuous manipulation for haptic feedback to modulate—the action (zoom-out) occurs as a one-time event rather than gradually. The user in Kim does not receive intermediate feedback during the zoom-out because there is no intermediate or ongoing action. *Id.*

Petitioner’s Reply argues that Burrough’s FIG. 11 shows haptic signals triggered after zoom-in or zoom-out events, implying the haptic feedback can follow the completion of a zoom gesture. Reply, 23–24. Petitioner states that “Burrough’s teaching regarding generating haptic signals does not depend on whether a zoom gesture is ongoing.” *Id.*, 24. This reading is selective. It is true that in Burrough’s flowchart, once a zoom-out command is identified (e.g., at block 1114, generating a zoom-out signal), a corresponding zoom-out haptic signal is provided (block 1118). But crucially, this occurs in the context of a longer chain of events that comprise a single multi-touch gesture, where the haptic feedback (block 1106) occurs “during the gesture,” not after the zoom-in/zoom-out signals. EX1007, [0079], FIG. 11.

Petitioner’s purported motivation is the broad idea of improving user experience by adding tactile feedback. The Petition and Reply cite Burrough and

assert that a POSITA would combine “a haptic device and use of haptic feedback, per Burrough, ... to provide haptic feedback to improve the user experience with the touch screen.” At this high level of abstraction, one could say the same for virtually any user interface action, underscoring the weakness of the reasoning. Aside from general appeal to “user experience,” Petitioner identifies no specific problem or design consideration in Kim that would prompt adding vibration feedback to a double tap. If anything, the Board noted at institution that Patent Owner’s point “that Burrough’s teaching is vibration during an ongoing zoom operation” was well taken. This suggests that a POSITA might not see a benefit in adding vibration to Kim’s instantaneous zoom, because Burrough’s rationale (providing feedback as the user manipulates a zoom) doesn’t directly apply when the zoom occurs instantly. Petitioner’s Reply tries to broaden Burrough’s teaching beyond its context, but context is exactly what informs whether a skilled artisan would have been motivated to make the combination.

Furthermore, Petitioner mischaracterizes Patent Owner’s argument about Burrough’s multi-touch environment versus Kim’s single-touch device as a “straw man.” The point is not that one cannot adapt multi-touch concepts to single-touch devices. Rather, it is that Burrough’s specific implementation (multi-touch pinch with proportional haptics) is tailored to a scenario that has no parallel in Kim. If one were seeking to add haptics to Kim’s interface in 2011, one would look for prior art

where haptics were used for taps or button presses (discrete events). Petitioner has not pointed to any such reference. Burrough is the only haptic reference cited, and it addresses an entirely different style of interaction. A generic statement from Petitioner’s expert that Burrough “teach[es]...haptic vibration after zooming or scaling” and thereby “render[s] obvious haptic vibration after zooming or scaling” (EX1003 ¶151) does not substitute for a concrete reason to implement that in Kim’s system. This is hindsight reasoning—taking an idea (haptic feedback) known in one context and saying it would have been obvious to try in another context to see if it “improves user experience.” The law requires more than an unsupported assertion that adding a known component to achieve a generic benefit would have been obvious.

In sum, Petitioner has not identified a persuasive rationale or “appropriate basis” to modify Kim to include haptic feedback in response to a double tap. The mere existence of haptic technology and its use in other touchscreen scenarios (like Burrough’s pinch-zoom) does not make it obvious to apply it to Kim’s distinct scenario (instantaneous zoom) without a specific motivation. Petitioner’s rationale is at best an invocation that is untethered to the specifics of Kim’s operation. As such, Petitioner has failed to meet its burden for claims 30 and 62. The Board should credit Patent Owner’s arguments that the proposed combination is driven by hindsight and is not taught or suggested by the prior art in any meaningful way.

VI. CONCLUSION

For the foregoing reasons, the challenged claims should be upheld.

Dated: September 8, 2025

Respectfully submitted,

/Eagle H. Robinson/

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Lead Counsel for Patent Owner

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(a)(i), the undersigned certifies that this Paper—exclusive of the table of contents, exhibit list, certificate of service, and this certificate of word count—includes 5,367 words. The undersigned has relied upon the word count feature provided by Microsoft Word.

/Eagle H. Robinson/

Eagle H. Robinson (Reg. No. 61,361)

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on September 8, 2025, a complete copy of the foregoing Patent Owner Sur-Reply was served on Petitioner via email (by consent), at the following email address(s):

IPR50095-0168IP1@fr.com

/Eagle H. Robinson/
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