

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VALVE CORPORATION
Petitioner,

v.

IMMERSION CORPORATION,
Patent Owner.

Case IPR2024-00477
U.S. Patent 7,336,260

PATENT OWNER'S SUR-REPLY

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EXHIBIT LIST

Exhibit No.	Exhibit Description
2001	Declaration of Cliff Win Jr. in Support of Admission for <i>Pro Hac Vice</i>
2002	Declaration of Craig Rosenberg, Ph.D. in Support of Immersion Corporation's Patent Owner Preliminary Response, dated April 26, 2024
2003	<i>Curriculum Vitae</i> of Craig Rosenberg, Ph.D.
2004	<i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv000712-TL, Joint Claim Construction Statement (Exhibit A), Dkt. # 68-1
2005	<i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv000712-TL, Order on Motion to Stay Pending <i>Inter Partes</i> Review, Dkt. # 69
2006	<i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv000712-TL, Case Scheduling Order, Dkt. # 46
2007	<i>Immersion Corp. v. Valve Corp.</i> , 2:23-cv000712-TL, Valve Corp.'s Invalidity Contentions
2008	Declaration of Robert Akl, Ph.D. in Support of Immersion Corporation's Patent Owner Response, dated October 15, 2024
2009	<i>Curriculum Vitae</i> of Robert Akl, Ph.D.
2010	Transcript of September 24, 2024, Deposition of Jean Renard Ward in IPR2024-00477

I. INTRODUCTION

Valve concedes that the claim should be read to provide a first tactile sensation based on the *detected* first pressure as it acknowledges the logic, grammar, and antecedent basis supporting such an interpretation. But Valve refuses to consistently apply this logic to the next claim element requiring the detection of a second pressure and where the *detected* second pressure is determined as greater than the *detected* first pressure. Valve argues that the second pressure can be detected *before* detecting the first pressure. But, reading the claim as detecting a second pressure (where the detected second pressure is greater than the first pressure) *before* the first pressure is ever detected defies logic, grammar, and well-settled antecedent-basis case law. The claim language is clear that the recited steps must occur in sequential order and should accordingly be read to cover only those embodiments in which multiple pressures are detected in sequence as a user presses on a button with increasing pressure. Under this proper reading of the claim, none of the Petition's grounds anticipate the challenged claims.

As for Ground 3 in particular, the Rosenberg reference discloses a conventional mouse with a button press feedback mechanism that mimics a traditional mechanical spring and the resistive effect one feels when pushing down on the spring. *First*, this spring-like resistive effect is not a vibrational effect required by the claims as properly construed in light of the intrinsic evidence.

Second, Rosenberg does not disclose the continuous detection of three progressively increasing pressures applied by a user during operation of the mouse and providing corresponding vibrotactile sensations for each of the detected pressures as required by the claims. Rosenberg only discloses a conventional mouse at the time of the invention, where the mouse button only has a single ON state, such that a click is registered when the user presses down on the button to a threshold activation level. Further pressing down or applying more pressure beyond that point will not activate additional input functionality. In other words, the mouse behaves on a single press, rather than accommodate multi-level pressing functionality as taught by the '260 patent.

Valve criticizes this clear distinction as an attack on a strawman alleging that the Petition relied on a different embodiment than the one described above. As detailed in this sur-reply, however, Immersion is addressing the exact same embodiment that Valve mapped in its Petition. And consistent with that embodiment, Rosenberg's conventional mouse does not provide varying feedback to the user based on progressively increasing pressure applied by the user. During user operation, Rosenberg only detects one pressure as the user can only press down on the button to a single ON or activation state. Further, Valve's selective citations to Rosenberg omit critical context, such as the fact that any variation in feedback effects at all provided by the mouse to the user are spatially dependent on which

graphical objects the mouse cursor hovers over—not dependent on how hard the user is pressing on the button. Therefore, Rosenberg does not disclose all elements of the challenged claims.

II. CLAIM CONSTRUCTION

A. The Claimed Steps Must Occur in Order

1. A consistent reading of the claim across all elements based on Valve's own admission compels the claimed steps to be read in sequential order

Valve admits that claim elements 1A and 1B should be read in order where 1A detects a first pressure and 1B should be read as “provide a first tactile sensation to the first input device, the first tactile sensation based at least in part on the [*detected*] first pressure.” Reply, 4. Valve concedes that these steps must be read in order because 1B's step of providing the “*first tactile sensation*” cannot be “*based ... on*” a pressure that has not yet been detected. *Id.* By similar logic, Valve also admits that elements 1C and 1D should be read in order, where the second tactile sensation is “*based ... on*” the “*detected second pressure.*” *Id.*

Based on this admission, the other claim steps must be read consistently under the same logic. *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“a claim term should be construed consistently with its appearance in other places in the same claim”). In other words, under the same logic, the next element after 1B, claim element 1C, should be consistently read as “detect a second pressure

on the first input device, the [*detected*] second pressure greater than the [*detected*] first pressure.” Applying Valve’s logic consistently across the entire claim should result in the following read shown on the left, in contrast to the inconsistent read shown on the right that Valve proposes.

Consistent read of Claim 1 based on Valve's admitted logic	Valve's inconsistent read of Claim 1
[1A] detect a first pressure on a first input device	[1A] detect a first pressure on a first input device
[1B] provide a first tactile sensation to the first input device, the first tactile sensation based at least in part on the [~~detected~~] first pressure	[1B] provide a first tactile sensation to the first input device, the first tactile sensation based at least in part on the [~~detected~~] first pressure
[1C] detect a second pressure on the first input device, the [~~detected~~] second pressure greater than the [~~detected~~] first pressure	[1C] detect a second pressure on the first input device, the [~~detected~~] second pressure [magnitude] greater than the [~~detected~~]-first pressure [magnitude]
[1D] provide a second tactile sensation to the first input device, the second tactile sensation based at least in part on the [~~detected~~] second pressure	[1D] provide a second tactile sensation to the first input device, the second tactile sensation based at least in part on the [~~detected~~] second pressure
[1E] detect a third pressure on the first input device, the [~~detected~~] third pressure greater than the [~~detected~~] second pressure	[1E] detect a third pressure on the first input device, the [~~detected~~]-third pressure [magnitude] greater than the [~~detected~~]-second pressure [magnitude]
[1F] provide a third tactile sensation to the first input device.	[1F] provide a third tactile sensation to the first input device.

As shown on the left above, detection of the second pressure must occur *after* detection of the first pressure in order to determine that the “*detected second pressure*” is greater than the “*detected first pressure.*” If read consistently, claim

element 1C (requiring “*detected second pressure*” is greater than the “*detected first pressure*”) cannot occur before claim element 1A (detect a first pressure) because the first pressure has not yet been detected under Valve’s admitted logic (Reply, 4). Likewise, claim element 1E (requiring “*detected third pressure*” is greater than the “*detected second pressure*”) cannot occur *before the second pressure is detected* in claim element 1C, because the second pressure will not have been detected yet. It is logically impossible to detect a pressure *that is greater than another pressure* that *has not yet been detected*.

Under Valve’s inconsistent read shown on the right above, Valve alleges that the three pressures to be detected have *predefined* magnitudes, so that any one of them can be detected out of order. But, Valve is unable to offer any evidentiary support for such assertion made out of whole cloth. Valve has not and cannot cite to any intrinsic evidence suggesting that a detected pressure can be quantified relative to another pressure that has not yet been detected. A logical and natural reading of the claim requires the claimed detection steps to occur in order such that the quantitative relationship of pressures applied by a user can be established only after they are detected.

2. The antecedent basis in the recited in the claim elements require them to be read in sequential order

Valve brushes aside the fact that claim element 1C's recitation of "*the first pressure*" has its antecedent basis in claim element 1A's "detecting *a first pressure*," by arguing that element 1C's "*the second pressure greater than the first pressure*" is merely an "appositive phrase" that quantifies the antecedent "second pressure" relative to the first pressure. In other words, Valve admits that "*the second pressure*" has its antecedent basis in "*detect a second pressure*," but refuses to acknowledge that "the first pressure" has its antecedent basis in "*the first pressure*." Again, Valve does not apply its admitted logic consistently across the claim. Valve also argues that "[a]s a matter of grammar, there is nothing in the claim's language that precludes the pressures from being [...] predefined values which can be detected in any order." But Valve cannot point to any language in the claims or the specification that states the quantitative relationship of pressures applied by a user can be known *before they are detected*.

Further, Valve attempts to distinguish the antecedent-basis case law that Immersion cited in support of the reading the claim to require detecting the pressures in order. The alleged distinctions for cases such as *Wi-Lan v. Apple*, 811 F.3d 455, 460 (Fed. Cir. 2016), *Medtronic, Inc. v. Teleflex Life Scis*, 2024 U.S. App. LEXIS 6703 *8 (Fed. Cir. 2024), and *Tuna Processors v. Hawaii Int'l*

Seafood, 327 F. App'x 204, 209-210 (Fed. Cir. 2009) are based on whether the claim language or the specification supports Immersion's reliance on the antecedent basis of the "detected pressures" recited in the claim. The instant case is not distinguishable on those grounds—as detailed throughout this sur-reply and in the POR, both the express claim language and the specification support Immersion's interpretation of the claim in accordance with the recited antecedent basis of the claim terms. *See, e.g.*, POR, 22-28.

3. The Challenged claims do not embody all disclosed embodiments

Valve admits that the '260 patent discloses certain embodiments that require pressures to be detected in order. Reply, 8 (acknowledging "other embodiments [...] where pressures are detected in order."). But Valve argues that there is nothing in the claim language that as a matter of grammar or logic requires the claims to only cover embodiments that detect pressures applied by users in order. *Id.* As detailed above, however, applying consistent logic across the entirety of the claim and recognizing the antecedent basis for the terms recited in the claim, compels a construction that is limited to the embodiments that detect pressures in order.

Further, Valve cites to *Google LLC v. EcoFactor, Inc.*, 92 F.4th 1049, 1058 (Fed. Cir. 2024) to justify a construction that covers all embodiments. Reply, 8.

In *Google*, however, the specific claim language supported a broader construction and there was no evidence to support the possible exclusion of an embodiment. *Google LLC*, 92 F.4th at 1058-59 (Fed. Cir. 2024). Here, as detailed above, the claim language itself supports a narrower construction that is limited to the multi-press sequential detection and corresponding tactile feedback embodiment in the '260 patent. As explained in the POR, the plain language of the claim recites “greater than” relationships of the different detected pressures, which is unique to the multi-press sequential detection embodiment. In contrast, the other embodiments, such as those involving the truth table in Figure 9, do not disclose the “greater than” relationship feature. *See also*, POR, 28-31. And Petitioner's expert also agrees that the challenged claims do not recite the “monitoring passes” feature of the other embodiments that may allow pressures to be detected out of order. *Id.*, 31.

Valve also attempts to distinguish two cases Immersion cited for the proposition that claims are not necessarily construed to cover all disclosed embodiments. *First*, for *Intamin Ltd. v. Magnetar Techs., Corp.*, 4832 F.3d 1328, 1336-37 (Fed. Cir. 2007), Valve argues that the difference here is that claim 1 does not have any language that excludes the truth table embodiment involving Figure 9, which allows monitoring multiple passes and detecting pressures out of order. Reply, 9. As detailed above, however, the express language of claim 1

including its antecedent basis relationships between the terms and the “greater than relationships” of the detected pressures support such exclusion of the truth table embodiment. *Second*, Valve brushes off the *PPC Broadband* case as inapplicable because it purportedly addressed the broadest-reasonable interpretation standard. Reply, 9. But that is irrelevant. The fact remains that *PPC Broadband* acknowledged well-established Federal Circuit case law that every claim does not have to be interpreted to cover every embodiment. *PPC Broadband, Inc. v. Corning Optical Comm’ns RF, LLC*, 815 F.3d 747, 754-55 (Fed. Cir. 2016) (citing *Baran v. Med. Devices Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010) (“It is not necessary that each claim read on every embodiment”)).

B. “Tactile Sensation”

Based on the context of the '260 patent and fully supported by the intrinsic record, the claim term “tactile sensation” is limited to “vibrotactile sensation.” Contrary to Valve’s bald assertion that nothing in the intrinsic record supports this construction, Immersion cites to ample citations in the specification confirming that the claimed tactile sensations are vibrotactile sensations. EX1001, 3:44-52; *see also* POR, 32 (citing 3:56-60, 4:35-38, 4:35-42). The '260 patent clearly describes vibrotactile sensations as the only type of tactile sensation attributed to the invention. *Id*; *see also, e.g.*, EX1001, 4:35-38 (“the actuator is an existing eccentric mass motor as is used, for example, as a vibrating ringer in a pager or

mobile telephone”), 14:53-57 (“an actuator to cause the input device to vibrate at a frequency associated with Sensation 13”).

Valve makes much of the fact that there are other non-vibrotactile types of sensations generally known in the prior art and outside the context of the '260 patent. For example, Valve alleges that there is agreement by the parties that the ordinary meaning of the term is “a sensation perceptible by touch.” Reply, 12. But, as Immersion explained, that is based on a broad construction taken out of context of the claimed invention—which expressly specifies “vibrations” as the only suitable sensation. POR, 33. The '260 patent not only states suitable tactile sensations as vibrations, but also explains that a “plurality of distinct tactile sensations can be created by *varying the frequency, amplitude, and waveform output by the actuator*” for delivering tactile sensations to the input device. EX1001, 3:44-52. Indeed, the '260 patent repeatedly describes vibrational output by the actuator. *Id.*, 4:35-38, 8:2-5, 8:19-25, 9:34-44, 9:56-64, 10:21-25, 10:54-59, 11:65-67, 13:11-17, 14:53-57.

Valve insists that any mention of vibrotactile sensations in the '260 patent is part of an open-ended list of examples or is merely related to a non-limiting embodiment. Reply, 13. But Valve cannot offer any intrinsic evidence showing other examples or embodiments of tactile sensations that are not vibrational. Instead, Valve grasps onto a single phrase “or other haptic sensations.” Reply, 13

(citing EX1001, 3:60). The full sentence, however, describes how the “[vibrotactile actuator 6] can include a flexure, for example an arrangement of flexible material, couple[d] to the rotating shaft of a DC motor or step motor to transform the rotation of the motor shaft into vibrations or other haptic sensations.” Here, the fact remains that this sentence is describing a possible arrangement of the *vibrotactile actuator 6* with a motor to transform the rotation of the motor shaft into vibrations or other haptic sensations. There is nothing here stating that other haptic sensations are in fact non-vibrotactile as Valve suggests.

III. GROUND 1: KOMATA

Valve contends that even under Immersion’s proposed claim construction, Komata still anticipates the claimed feature of continuously detecting three progressively increasing pressures and providing corresponding tactile sensations for each of the detected pressures in an ordered sequence.¹ In support of its argument, Valve states, “[n]othing in Komata restricts its software from performing claim 1’s steps in order when progressively increasing pressure placed on Komata’s button.”

¹ Valve only asserts obviousness as to the claimed feature of providing different tactile sensations, but only asserts anticipation as to other claimed features such as detecting progressively increasing pressures applied in sequential order. See Pet., 34.

But this is the wrong legal standard. In order for Komata to anticipate this claimed feature of ordered steps, it must clearly disclose it within its four corners. *See Xerox Corp. v. 3Com Corp.*, 458 F.3d 1310, 1322 (Fed. Cir. 2006) (“anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention.”).

Unable to point to any disclosure within the four corners of the Komata reference as required for anticipation that clearly discloses the ordered steps feature, Valve relies on the truth table of Komata for a list of pressure-sense values and their corresponding drive signals. As explained in the POR, however, disclosure of the mere relationship between sensed pressure and drive signal magnitude alone, as listed in the table of Figure 2, does not teach a user's application of progressively increasing pressure levels in sequence and the output of correspondingly increasing magnitudes of tactile feedback. POR, 50-54.

Valve's argument that such an operation or scenario *would be possible* under the teachings of Komata (Reply, 18) does not meet the legal standard for anticipation and inherency. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *Cont'l Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991); *see also Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002). Also, Valve points to Komata's disclosure for

“smoother and more analog-like” game control to argue that Komata’s software would allow continuous control over time. But the actual disclosure states:

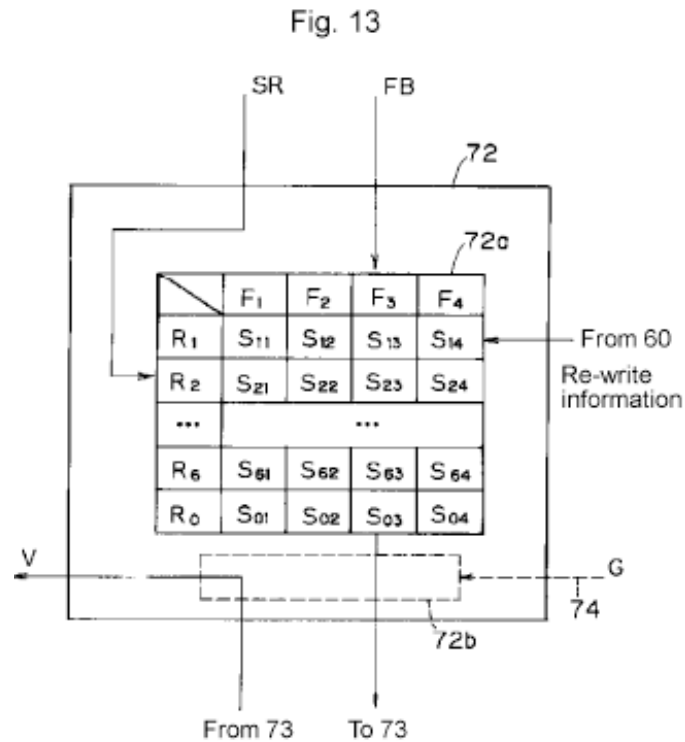
If the actions of the game characters [...] are controlled based on the digital signal that has such a relationship with the pushing pressure from the user, it is possible to achieve smoother and more analog-like *action* than with control based on a binary digital signal based only on zeroes and ones.

EX1005, ¶[0091]. Here, Komata is only referring to the actions of the game characters and says nothing about the claimed feature of detecting three progressively increasing pressures and providing corresponding tactile sensations for each of the detected pressures in an ordered sequence.

IV. GROUND 2: TSUJI

Valve contends that even under Immersion’s proposed claim construction requiring the claimed steps to occur in order, Komata still anticipates the challenged claims. As with Komata, however, Valve offers no evidence that Tsuji discloses continuously detecting three progressively increasing pressures and providing corresponding tactile sensations for each of the detected pressures in an ordered sequence. Instead, Valve only cites to the statement “‘a stronger vibration’ *can be* ‘applied as the operating force gets larger.’” Reply, 18 (citing EX1007, ¶[0111]).

But this merely describes the logic of the truth table in Tsuji's Figure 13 (shown below), where for higher force classifications, a stronger drive signal is generated.



As shown in the table, if a certain force (F) is applied, then a certain drive signal (S) is generated, and if a stronger force is applied, then a stronger drive signal is generated. Valve criticizes this explanation as a non sequitur, because the key aspect of Tsuji's disclosure is the phrase "as the operating force gets larger," which Valve alleges is a description of how Tsuji's software detects transitions from a first force classification to a second or larger force classification during a single pressing operation. Reply, 19. But this is merely Valve's own interpretation without any support other than its expert parroting it. Nowhere in Tsuji's disclosure is there any

explanation of detecting multiple progressive pressures applied in sequence during a single pressing operation. At best, Valve's bald assertion is speculation of a possible scenario, which is insufficient to show anticipation, either expressly or inherently. *Cont'l Can Co. USA, Inc.*, 948 F.2d at 1269 ("Inherency [...] may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.").

Valve further cites to another sentence in Tsuji to support its incorrect interpretation: "[w]hen the operator weakens the operating force." Reply, 19 (citing EX1003, ¶ [0125]). This sentence, however, does not disclose the detection of three different progressive pressures applied in sequential order during a single pressing operation as Valve would like. The full passage context surrounding the sentence is shown below:

In the case of vibration modes, like those in FIG. 14 (a) through (c), vibration continues if the operator applies an operating force F that is larger than the minimum threshold F_{h1} . ***When the operator weakens the operating force F , or removes his/her finger from the operating surface 11,*** this is sensed by the operating force determining unit 54, ***and thus the operating force becomes inactive.***

EX1008, ¶[0125]. Here, Tsuji is explaining how applying a force stronger or weaker than a minimum threshold will result in activation or inactivation. At most, this

describes the detection of two disparate operating forces, but it does not disclose detecting three progressively applied pressures in sequence. And notably, even for the two operating forces Tsuji describes here, the magnitude of the vibrations does not correspondingly change relative to the change in force applied. Instead, there is a constant vibration mode, which is either ON or OFF.

V. GROUND 3: ROSENBERG

A. Rosenberg does not disclose the continuous detection of three progressively increasing pressures and providing corresponding tactile sensations for each of the detected pressures

Valve criticizes Immersion for attacking a strawman, arguing that the Petition never mapped the claimed “tactile sensation” to the “conventional ‘click’ one would expect to feel (or hear) when pressing a mouse button.” Reply, 21. Valve claims that the actual argument that instead, “the Petition mapped the claimed ‘tactile sensation[s]’ to the ‘spring force’ that Rosenberg implements, and which effect mimics the tactile sensation one feels when pressing down on physical button that is biased by a mechanical spring.” Reply, 21.

First, this characterization is incorrect—Immersion is not attacking a strawman; Immersion addresses the same argument Valve advanced in its Petition. In the Petition, Valve argued that Rosenberg disclosed a force-sensing switch embodiment for allegedly determining the position of the mouse button and to control a force output based on that position—i.e., the feedback felt for when the

mouse button is clicked—by citing to, e.g., EX1008, 25:33-26:4. Pet., 61. This is the same embodiment and same citations to Rosenberg that Immersion's POR addresses. POR, 60-62 (citing to and discussing EX1008, 25:33-26:4).

Valve incorrectly draws a semantic distinction that the Rosenberg embodiment it is mapping is the “spring force” effect embodiment as opposed to a “mouse click” embodiment. But both Immersion and Valve are referring to the same embodiment disclosed in Rosenberg at 25:33-26:4. Rather than a strawman, it's a difference in reading of that embodiment. Immersion explained that Rosenberg must be read in the context of the state of the art at the time. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004) (“A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention”) (emphasis added). The state of the art at the time was a conventional, single-press mouse—not a multi-level press mouse. Rosenberg only discloses a conventional mouse, which Valve's own expert does not dispute. *See* POR at 59 (citing EX2010 at 43:21-44:9) Valve's reading takes Rosenberg out of that context. In the proper context, Immersion's POR addressed this very “spring force” embodiment and explained that the magnitude of the spring-force sensation depends on the mouse button's position for a *single* button click—not an unconventional, multi-level press. *See, e.g.*, POR, 61-62; POR at 59 (citing EX2010 at 43:21-44:9). Immersion further explained that this “continuous

range” sensor embodiment provides flexibility on where to define the threshold for when a *single* press/click by the user is registered with its corresponding spring force effect magnitude. *Id.* Nothing in Rosenberg evidences that the mouse provides multi-level press functionality that continuously senses varying pressures of user-presses in real time to output different magnitudes of spring force effect. *Id.* Thus, Valve is incorrect in arguing that “neither Immersion nor its expert disputes that Rosenberg’s ‘spring force’ results in progressively increasing resistive forces being output onto Rosenberg’s button.” Not true. That is the very core of the dispute set forth in the POR. Rosenberg’s mouse allows the single button press to be set based on the fundamental nature of the spring-like mechanism, where a certain magnitude of force is set for a certain depth of the pressing action. And as further detailed below in the following paragraphs, *once that is set*, the normal operation of the mouse only facilitates one level of “*user press*” as conventional mice do not offer multi-level pressing operations, nor does Rosenberg disclose otherwise. POR, 60-62.

Second, and more importantly, Valve further maps to Rosenberg’s disclosure at 30:31-33 in support of its “spring force effect” embodiment by reading this disclosure out of context: “the magnitude of this force sensation is dependent on the distance of the button from the origin of the spring.” Reply, 22-23 (citing EX1008, 30:29-33). To be clear, this disclosure on how the traditional mouse behaves on a single press does ***not*** say that “the magnitude of the resistive force sensation that the

actuator provides on the button thus increases *as the pressure applied by the user* increases to push the button further down,” as Valve contends. *See* Reply, 22. There is no disclosure whatsoever in Rosenberg that the user continually feels increasing *progressive* magnitudes of force dependent on incremental pressures applied by the user. That is because Rosenberg only discloses a *conventional* mouse (not a multi-press mouse) which Valve’s own expert does not dispute. *See* POR at 59 (citing EX2010 at 43:21-44:9).

Further, the quote Valve cites above is nothing more than a general description of how a traditional spring fundamentally works: “The magnitude of this force sensation is dependent on the distance of the button from the origin of the spring [...] If the origin of the spring is at the rest position of the button, then the further the button is moved from the rest position, the greater the spring force opposing that motion.” EX1008 at 30:30-34. This disclosure merely states that a force output at a given *single* location is greater, the further button is moved from the rest position. That is, this disclosure only discusses two positions: the resting position (with no pressure) and another single position some distance away whose effect is a function of that distance—not a progression of multiple pressures applied by the user.

Indeed, the specific embodiment Valve points to actually supports this natural reading. The passage Valve cites only discloses two positions, a single button press

(with a single pressure) and a resting position (positioning the cursor without a button press and no pressure):

When the user positions the cursor 446 over an icon 456 and *presses the button*, a light spring force resists the pressed motion of the button. When the user *positions the cursor 446 over a different graphical object*, such as icon 460, a heavy spring force is output having a greater magnitude than the spring force for icon 456

EX1008, 30:36-31:3. Given that the resting position has no pressure, Rosenberg instead bases its magnitude of force on which *graphical object* the mouse cursor hovers over—*not* dependent on the variance of pressure applied by the user.

In the Background of the Invention, Rosenberg expressly explains that at the time, feedback varied by different graphical objects: “For example, when the user moves the manipulatable object and causes a displayed cursor to interact with a *different displayed graphical object*, the computer can issue a command that causes the actuator to output a force on the physical object, conveying a feel sensation to the user.” EX1008, 30:36-31:3. Rosenberg attempted to recreate these graphical object-based effects at lower cost, such as with a traditional, conventional mouse. *See, e.g., id.*, 29:14-21 (“The force feedback mouse of the present invention can provide sensations that make interaction with the *graphical objects* more compelling and more intuitive.”). Accordingly, Rosenberg does not disclose the continuous

detection of three progressively increasing pressures and providing corresponding tactile sensations for each of the detected pressures.

B. Rosenberg does not disclose “tactile sensation”

Valve does not dispute that Rosenberg fail to disclose the claimed “tactile sensation” under its proper meaning in the context of the '260. Valve contends that Rosenberg discloses “tactile sensation” only under the term’s plain meaning taken out of context of the '260 patent. In other words, Valve does not cite to any intrinsic evidence to support its argument. Instead, it relies only on the disclosure of the prior art to interpret the meaning of the '260 patent claims and how a POSA would allegedly understand the ordinary meaning of the claimed term “tactile sensation.” Reply, 25-26. But, as explained previously in Section II, this amounts to Valve looking outside the context of the '260 patent, i.e., looking to the context of the asserted prior art to construe the claim term. Rosenberg does not disclose “tactile sensation” under its proper meaning.

VI. CONCLUSION

The Board should find claims 1-7 not unpatentable.

Patent Owner's Sur-Reply
IPR2024-00477 (U.S. Patent No. 7,336,260)

Respectfully Submitted,

Dated: February 28, 2025

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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 Response totals 4,822 words per Microsoft Word, which complies with the requirement of 5,600 words allowed under 37 C.F.R. § 42.24(c)(4).

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CERTIFICATE OF SERVICE

As authorized by Patent Owner's Mandatory Notice, I hereby certify that on February 28, 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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