

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

IMMERSION CORPORATION,
Patent Owner.

Case IPR2023-00947
Patent 10,248,298

PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBIT LIST

Exhibit No.	Exhibit Description
2001	Declaration of Cliff Win, Jr. in Support of Pro Hac Vice Motion
2002	Declaration of Dr. Gregory D. Abowd, D. Phil.
2003	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 6:22-CV-00541-ADA, Scheduling Order, Dkt# 28
2004	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 6:22-CV-00541-ADA, Defendant Meta Platform, Inc.'s Motion to Transfer Venue to the Northern District of California (Redacted Version), Dkt# 27
2005	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 1-23-CV-00623-ADA, Claims Construction Order, Dkt# 91.
2006	Meta Platform, Inc.'s Final Invalidity Contentions
2007	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 1-23-CV-00623-ADA, Amended Scheduling Order, Dkt# 97
2008	Federal Court Management Statistics, June 2023

I. INTRODUCTION

Patent Owner Immersion Corporation (“Immersion”) respectfully requests that the Board deny institution of this Petition for *inter partes* review because it fails to demonstrate a reasonable likelihood that Meta Platforms, Inc. (“Petitioner”) will succeed in carrying its burden to show that the challenged claims of Immersion’s U.S. Patent No. 9,727,298 (EX1001 or the “’298 patent”) are unpatentable.

The Petition asserts 3 Grounds alleging in Ground 1 that Claims 1-3, 6, 9-11, 14, 17-19, and 22 of the ’298 patent are obvious over Nogami, alleging in Ground 2 that Claims 5, 13, and 21 of the ’298 patent are obvious over Nogami in view of Nelson, and alleging in Ground 3 that Claims 8, 16, and 24 are obvious over Nogami in view of Moriya. As detailed in this Preliminary Response, the Petition suffers from a critical deficiency, namely that Petitioner fails to show that Nogami discloses the limitation “determine a first feedback parameter that depends on an identifier of the peripheral” as required by all independent claims because Nogami is directed to a different problem and solution than those of the ’298 patent.

The inventors of the ’298 patent recognized that in prior art virtual reality systems, immersive feedback to user interactions with the virtual world was rather limited. EX1001, 1:41-45. The inventors looked to enhance such user interaction with interactive content in the virtual world by providing haptic feedback on peripheral devices worn or held by users in which the feedback varies in accordance

with the user's movements and interactions in the virtual world as well as identification of the peripheral from a plurality of possible peripherals in the system. *See, e.g., id.*, 1:45-47, 2:3-2:24, 2:63-3:11, 3:61-4:10. In this novel way, the claimed invention of the '298 patent provides a richer interactive experience for users interacting with the virtual world. *See, e.g.,* EX1001, 2:63-3:11, 7:21-40, 11:20-45.

In contrast, the asserted Nogami reference faced a different challenge, and hence, developed an entirely different approach to controlling haptic feedback. Nogami was concerned with the problem that a user may not recognize the haptic feedback if the intensity of the stimulation on a part of the user's body that *unconsciously* contacted the virtual object is not high enough. EX1003, ¶ [0022]. On the other hand, Nogami recognized that when the user *consciously* contacted a virtual object, the user can easily recognize the contact even if the intensity of the haptic stimulation is low. *Id.* Nogami addressed this problem with a binary approach to haptic feedback variation that is limited to one intensity level for conscious user contact and another intensity level for unconscious user contact with virtual objects.

As detailed below, this technique is not suited for the objectives of the '298 patent, and thus, is not the same as the fine-grained approach of the '298 patent, which determines specific haptic feedback variation based on the position and identification of the user peripheral that interacts with the virtual world. The resulting experience from the coarse binary approach of Nogami falls far short of

the truly immersive and interactive experience the '298 patent provides. Accordingly, institution of *inter partes* review of Claims 1-3, 6, 9-11, 14, 17-19, and 22 of the '298 patent should be denied.

II. IMMERSION CORPORATION—A PIONEER IN HAPTICS TECHNOLOGY

Immersion Corporation is a publicly-traded company, and since its founding 30 years ago, has been the global leader in developing haptic technology as well as licensing software solutions and intellectual property for enabling haptic interfaces in a broad array of product markets including wearable devices, mobile ads and video, mobile devices, medical applications, automotive interfaces, gaming and virtual reality. Over 3 billion devices are licensed to use Immersion's haptic feedback software and intellectual property.

Started in 1993 by Louis Rosenberg, a pioneer in sensing interfaces and feedback technology, Immersion developed and commercialized haptic innovations beginning with its force feedback technology, allowing devices to provide tactile sensations and resistance to user interactions, such as force feedback in input devices like joysticks. Immersion was one of the first companies to release haptic joysticks, computer mice and steering wheels for video games. This technology has been widely used in gaming controllers, medical simulators, and other applications to enhance realism and user engagement.

Throughout the mid- to late- 1990s, Immersion continued to develop its haptic technologies, eventually developing VR interfaces for specific medical procedures. Using Immersion's technology to provide realistic feedback, these systems are used in medical schools around that world to train physicians in surgical procedures in a realistic and safe virtual environment. Immersion also partners with manufacturers and systems integrators of actuator hardware. Through these partnerships, Immersion provides designs and guidance for the development of actuators that are required to implement advanced haptic features.

Immersion, over its 30-year history, has developed and licensed haptic products and IP across diverse applications, including gaming systems, medical devices, automobiles, touchscreens, and mobile devices. Recently, a primary focus has been developing and implementing advanced haptic effects, including effects optimized for use in virtual and augmented reality ("AR/VR") systems. Immersion also has a long history of developing advanced software. For example, Immersion's TouchSense® 3000 software includes a driver package designed to operate an actuator, a haptic API that programmers can use to create, launch, and modulate haptic effects, a library containing more than 100 pre-defined effects, and user

interface support. Video game industry leaders, including Nintendo, have recognized the value of Immersion's technology and partnered with Immersion.¹

Immersion's industry-defining technology is used in over three billion devices worldwide, including tablets, smartphones, wearables, gaming controllers, and automotive interfaces. The Institute of Electrical and Electronics Engineers ("IEEE") has recognized Immersion in its annual IEEE Spectrum Patent Power scorecards, which evaluate the technology world's most valuable patent portfolios by quantitative benchmarks. Immersion's established and growing leadership in haptic technology is reflected by its consistent ranking in the top 20 in its industry segment.

Immersion's technological advances in the haptics space has generated over 3,500 issued patents world-wide. Immersion's patents have been proven novel through multiple challenges over the years. The patents have been challenged in 37 IPRs² of which only 2 cases have resulted in determinations of unpatentability.

¹<https://ir.immersion.com/news-releases/news-release-details/immersion-and-nintendo-enter-agreement-bring-immersions>

² 10 of these IPRs were denied institution, 14 of them were terminated prior to an institution decision in light of settlements, while 13 of them were instituted with 11 of those terminated prior to a final written decision in light of settlements.

III. THE CHALLENGED PATENT—U.S. PATENT NO. 9,727,298

A. Overview

The '298 patent is directed to a system and method for providing haptically enhanced interactivity with interactive content such as virtual objects displayed to a user via live video. EX1001, Abstract, 1:22-47. In virtual reality systems, users can interact with virtual objects in a virtual environment, e.g., by manipulating physical objects in the real world to interact with a virtual object. *Id.*, 1:41-47. These systems typically further incorporate augmented reality technology to integrate 3D virtual objects based on this live video. *Id.*, 1:35-47.

As mentioned above, the '298 patent teaches techniques that enhance the user experience in virtual reality systems. The inventors of the '298 patent recognized that in conventional virtual reality systems at the time, visual and/or audio feedback may provide a sense of interaction with virtual objects to users. EX1001, 1:41-42. However, virtual objects may be presented to a user on video displays such that the virtual object can be seen as moving with accompanying sound effects at times, while at other times, the virtual object may be seen moving without accompanying sound effects. *Id.*, 1:41-47.

The inventors of the '298 patent sought to further enhance how users experienced and interacted with such virtual objects by introducing a physical sense of interaction with virtual objects to users by way of haptic feedback on peripheral

devices worn or held by users (e.g., interactive clothing, accessories, mobile devices, remote controls, etc.). *See, e.g., id.*, 1:45-47, 2:3-2:24, 2:63-3:11, 2:61-4:10. This type of haptic feedback, such as vibrations and touch feedback to the user provides “a more compelling and complete user experience while interacting with interactive virtual content.” *Id.*, 2:63-3:11.

B. Claims

Petitioner challenges claims 1-3, 5-6, 8-11, 13-14, 16-19, 21-22, and 24 of the '298 patent, including three independent claims, which are similar in scope.

Claim 1 is recited below:

1. A system comprising:

a processor; and

a memory device comprising program code that is executable by the processor

to cause the processor to:

display a virtual environment via an electronic display;

detect an interaction with a virtual object in the virtual environment based on

a peripheral being at a particular position in free space with respect to

the virtual object; and

based on detecting the interaction:

determine a first feedback parameter that depends on an identifier of the peripheral and a second feedback parameter that depends on the particular position of the peripheral in free space; and transmit a haptic signal configured to cause a haptic output device to output haptic feedback in accordance with the first feedback parameter and the second feedback parameter.

EX1001, 12:56-13:6.

IV. PERSON OF ORDINARY SKILL IN THE ART (POSA)

Petitioner identifies a person of ordinary skill in the art (“POSA”) as one who would have possessed a bachelor’s degree in electrical engineering or computer science (or an equivalent degree), and two years of practical or industry experience in the field of human computer interaction, including implementation of computer-based systems and software for providing haptic feedback effects to a user and determining the position and/or orientation of a device (such as a device worn on the human body). Pet., 4-5. Petitioner also states that a person could have qualified as an ordinarily skilled artisan with more formal education and less practical or industry experience, or vice versa. *Id.*

Immersion submits that a POSA at the time of the ’298 patent would have had a bachelor’s degree in electrical engineering or computer science (or an equivalent

degree), and two years of practical or industry experience in the field of human computer interaction (HCI), including implementation of computer-based systems and software for providing haptic feedback effects to a user. EX2002, ¶ 11. Also, a person could have qualified as a POSA with more formal education and less practical or industry experience, or vice versa. Immersion reserves the right to propose a different level of skill in the art if trial is instituted.

V. CLAIM CONSTRUCTION

Petitioner contends that none of the '298 patent's claim terms need to be construed because the challenged claims are allegedly obvious under the constructions proposed by both parties in the pending litigation for the claim term **“free space.”** Pet., 6.³ As such, Petitioner declined to offer claim constructions on any of the terms in the challenged claims.

Immersion submits that all claim terms should be afforded their ordinary and customary meaning, as understood by a POSA, in the context of the patent specification. EX2002, ¶ 37-38. Immersion reserves the right to propose terms for construction if trial is instituted.

³ The Western District of Texas has construed the claim term “free space” as having “Plain and ordinary meaning.” *See* EX2005, 4.

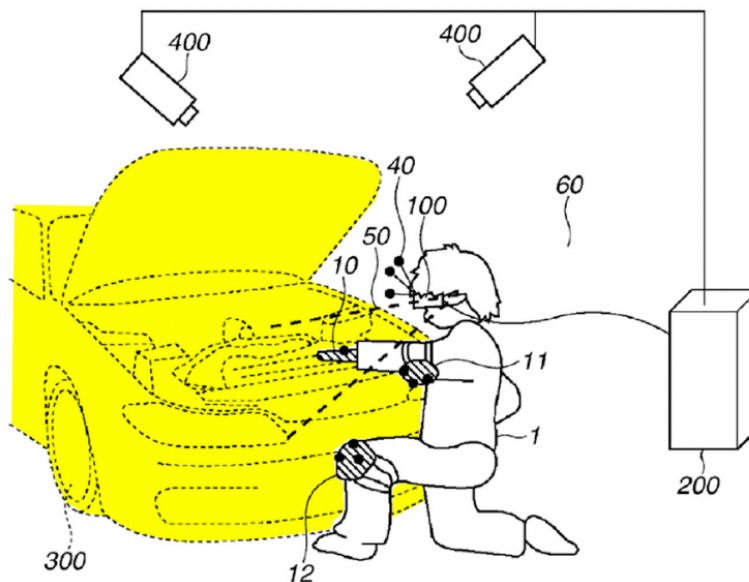
VI. THE NOGAMI REFERENCE (EX1003)

U.S. Patent Application Publication No. 2009/0066725 to Nogami et al. (“Nogami”) discloses an information processing apparatus and method for “implement[ing] an interaction between a virtual space and a user who observes the virtual space.” EX1003, ¶ [0002]. Nogami’s invention is generally directed to varying the intensity of haptics stimulation provided by vibration motors mounted on wearable accessories such as gloves and elbow pads. *See, e.g.*, EX1003, ¶¶ [0062]-[0072], [0081], [0120]-[0122].

Nogami sought to overcome the shortcomings of the prior art—specifically, the inability to “appropriately adjust the intensity of stimulation to be provided **according to contact of a user with a virtual object based on whether the user is aware of the contact.**” EX1003, ¶ [0025]. In the prior art, when the user *consciously* contacted a virtual object, the user can easily recognize the contact even if the intensity of the stimulation is low. EX1003, ¶ [0022]. However, when the user *unconsciously* contacted the virtual object, the user may not recognize the stimulation if the intensity of the stimulation on a part of the user’s body that unconsciously contacted the virtual object is not high enough. *Id.* Note that Nogami’s disclosure of its processing is also flawed in that it describes the user’s physical or actual contact with a virtual object rather than “virtual contact” with the virtual object. *Id.*

To address this problem, Nogami is “directed to a method for **controlling a stimulation based on a result of a determination as to whether a user has consciously performed contact with a virtual object** in the case of notifying, to the user, contact of the user with the virtual object using stimulation.” EX1003, ¶ [0026] (emphasis added). Nogami illustrates this concept in the figures below.

FIG.1



EX1003, Fig. 1 (highlighting added by Petitioner at Pet., 16).

In Figure 1, user 1 is wearing HMD 100 (head mounted display), knee pad stimulation unit 12, elbow pad stimulation unit 11, and glove stimulation unit 10. *See, e.g.*, EX1003, ¶¶ [0045]-[0051], [0059]-[0060].

Through HMD 100, user 1 is able to view a virtual environment including virtual object 300, which is a “virtually expressed imitation image of an automobile.”

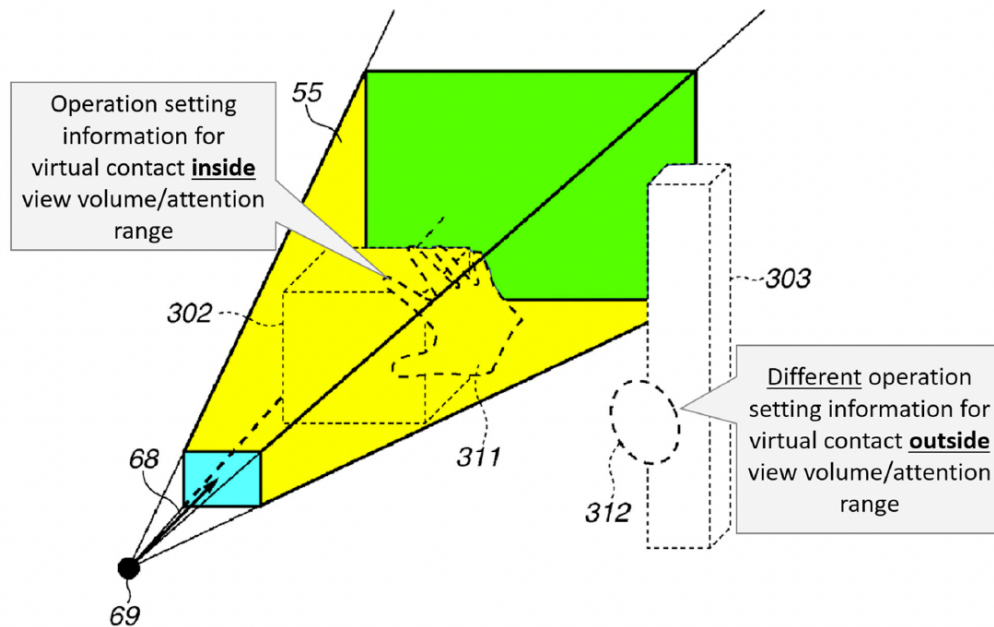
Id., at ¶ [0050]. This virtual viewpoint through HMD 100 is shown in Figure 1 as a view angle with dotted lines and labeled as “attention range 50,” an area or range in which the user can visually perceive the virtual object. *Id.*, at ¶¶ [0098]-[0101]. On the other hand, range 60 is the area outside of range 50, which Nogami refers to as a “non-attention range” because this area is not within the user’s view through HMD 100 *Id.*, ¶ [0101].

In Figure 1, the glove (or, e.g., a virtual depiction of a hand holding a work tool) is shown making contact with the virtual car 300. *Id.*, ¶¶ [0101]-[0102], [0270]. This contact point is located within the attention range 50 (i.e., in the area viewable through HMD 100). (*Id.*) But, the contact point of the knee pad and virtual car 300 (or e.g., contact of elbow pad with virtual car 300) is shown as located outside the view angle of attention range 50. *Id.*, ¶ [0103]. As such, Nogami teaches that the haptic intensity of stimulation unit 10 mounted on the glove has a different (lower) intensity than stimulation unit 11 mounted on the elbow pad because the contact point of the glove with the virtual car is *inside* the attention range while the contact point of the knee or elbow pad with the virtual car is *outside* the attention range. *See, e.g., id.*, ¶¶ [0103], [0120] (“operation setting information can differ according to whether region virtual object contacting the background virtual object is located within the virtual range”), ¶¶ [0121]-[0122], ¶¶ [0180]-[0181]. In other words, the level of intensity for the elbow pad stimulation unit should be higher because it’s

contact with the virtual car may be unconscious and outside of the user's attention range such that a sufficiently higher intensity is needed for the user to recognize the stimulation.

Another example of an attention range is shown in Figure 6 of Nogami below. Here, attention range 55 is the user's viewpoint of a virtual environment including virtual object 302, as well as region virtual object 311, which is a virtual depiction of a glove with mounted stimulation unit 10 generated by imitating a shape of the user's hand. EX1003, ¶¶ [0140]-[0141]. In this illustration, region virtual object 311 representing the user's hand is making contact with the virtual object 302 where the point of contact is inside the attention range. *Id.*, ¶¶ [0148]-[0149]. Conversely, outside of the user's attention range 55 is virtual object 303 making contact with region virtual object 312, which is a virtual depiction of an elbow pad stimulation unit 11 generated by imitating the user's elbow. *Id.*

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EX1003, Fig. 6 (annotations and colored highlights added by Petitioner in IPR2023-00945 at 35).

In this example, Nogami teaches that glove stimulation unit 10 depicted by region virtual object 311 is configured to generate a different, lower intensity level than the elbow pad stimulation unit depicted by region virtual object 312. *Id.*, ¶¶ [0152]-[0154]. This is because the point where the glove is in contact with the virtual object 302 is inside the attention range, i.e., conscious contact; whereas the point where the elbow pad is in contact with the virtual object 303 is outside the attention range, i.e., is unconscious contact, such that a higher intensity is needed for the user to recognize the contact. *Id.*, ¶¶ [0152]-[0154]; *see also, e.g., id.*, ¶¶ [0180] – [0181].

VII. PETITIONER HAS NOT MET ITS BURDEN TO SHOW A REASONABLE LIKELIHOOD OF SUCCESS ON ANY OF THE ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner raises three Grounds of unpatentability, which all fail to show a reasonable likelihood of success as to any of the Challenged Claims 1-3, 5-6, 8-11, 13-14, 16-19, 21-22, and 24. The asserted Grounds and Challenged Claims are as follows:

- (1) Claims 1-3, 6, 9-11, 14, 17-19, and 22 are obvious over Nogami;
- (2) Claims 5, 13, and 21 are obvious over Nogami in view of Nelson
- (3) Claims 8, 16, and 24 are obvious over Nogami in view of Moriya

A. Nogami does not teach, suggest, disclose, or render obvious the Challenged Claims 1-3, 6, 9-11, 14, 17-19, and 22 of the '298 Patent

- 1. Nogami does not teach, suggest, disclose, or render obvious the claim limitation “determine a first feedback parameter that depends on an identifier of the peripheral” as required by independent claims 1, 9, and 17

Independent claims 1, 9, and 17 of the '298 patent also require the claim limitation “determine a first feedback parameter that depends on an identifier of the peripheral.” Consistent with the '298 patent's goal to provide users with enhanced immersive interactions with the virtual world, the challenged claims require the determination of a first feedback parameter *based on the identifier of the peripheral*.

The '298 patent describes key aspects of the invention including a “peripheral configured to enhance the interactivity of interactive content being conveyed to a

user” by way of haptic feedback. *See, e.g.*, EX1001, 1:51-2:24. According to the patent specification, a haptics module is configured to determine the **haptic feedback based on identifying the peripheral from a plurality of possible peripherals** and the one or more position parameters of the peripheral. *See, e.g., id.*, 1:60-2:2 (emphases added); *see also, id.*, 5:11-30 (“identify the peripheral 102 from a plurality of other peripherals”), 7:29-32 (“haptic feedback based, at least in part, on the identification of the peripheral 102 as determined by the peripheral identification module 126”). This is also demonstrated below in step 410 of the '298 patent's Figure 4.

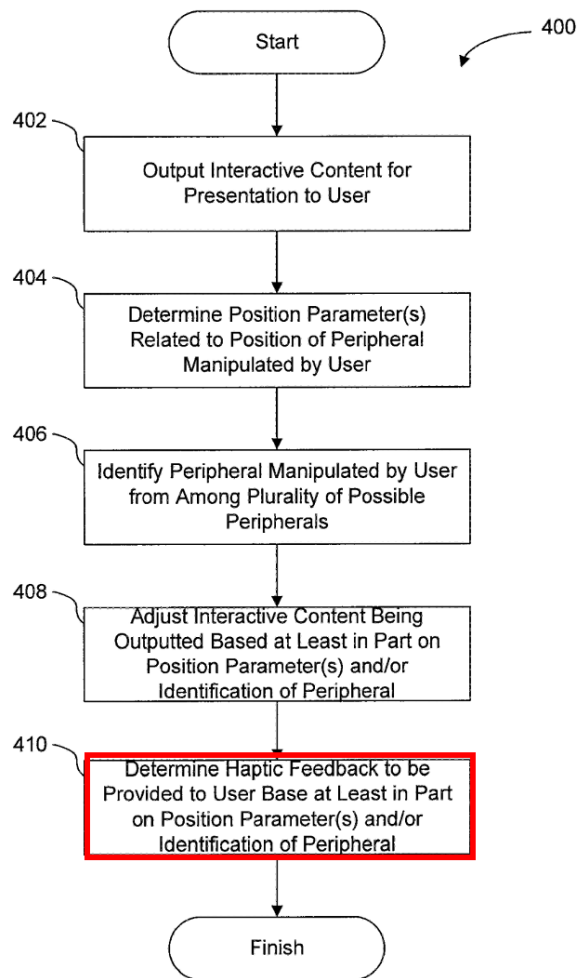


FIG. 4

EX1001, Fig. 4 (red highlight added).

Petitioner contends that this limitation is met by Nogami's disclosure of assigning reference intensity levels. Pet., 31-37. Nogami purportedly discloses the concept of assigning reference intensity levels to different stimulation generation units depending on where on the body the particular stimulation generation unit is worn because the intensity actually felt by the user may differ depending on the location of the stimulation on the user's body (e.g., fingers versus knees or elbows)

even when the stimulation of the same intensity is provided. EX1003, ¶¶ [0279]-[0281]; Pet., 31-32. To account for this, Nogami suggests calibrating different stimulation generation units with different reference intensity levels. *Id.*

Petitioner admits that Nogami does not disclose the assignment of such reference intensity levels to different stimulation generation units based on the identification of the units. Pet., 32. Petitioner hypothesizes that it would have been obvious for a POSA to use bar code 45 as a way to identify each stimulation generation unit in order to assign the appropriate reference intensity level to the unit based on such purported identification. *Id.* However, Nogami provides no enabling disclosure for a POSA to implement such use of bar code 45 in the manner that Petitioner suggests. EX2002, ¶ 42. And, most importantly, Petitioner does not even provide a proper obviousness analysis as to why a POSA would have been motivated to modify Nogami in this manner proposed. *Id.*

Petitioner contends that although Nogami does not disclose the use of bar code 45 to assign appropriate reference intensity levels, a POSA could have done so given that this would have been regarded as a “trivial implementation detail.” Pet., 32-33; *see also* Pet., 35. Petitioner also argues that it was “*elementary knowledge of skilled artisans*” that all objects in computer such as a peripheral device are associated with an identifier that allows them to be identified. Pet., 34.

First, this type of alleged “common sense” or “trivial design choice” modifications “cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art.” *DSS Tech. Mgmt. v. Apple Inc.*, 885 F.3d 1367, 1374-1375 (Fed. Cir. 2018). Further, Petitioner fails to show why a POSA would have implemented reference intensity levels in this way. Petitioner merely concludes that a POSA *could have* done so, rather than show *why a POSA would have* done so. This is insufficient to show obviousness and amounts to nothing more than the improper use of hindsight knowledge of the claimed invention. *Vivint, Inc. v. Alarm.com Inc.*, 754 Fed. Appx. 999, 1006-1007 (Fed. Cir. 2018) (citing *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (the obviousness inquiry concerns “whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention”) (emphasis added)). Second, the Petitioner makes much of the fact that it was trivial or elementary for computer peripherals to have identifiers, but that is insufficient to show that it would have been obvious for a POSA to specifically use such identifiers for the purpose of determining a feedback haptic parameter.

In fact, a POSA would have implemented reference intensity levels in a different way than Petitioner suggests without relying on identifying the stimulation generation unit. EX2002, ¶¶ 44-45. For example, a POSA would have implemented

an initial calibration procedure in which reference intensity levels would be assigned to each unique stimulation generation unit depending on the body part on which the unit is worn—which would serve as a rough initial proximation of whether the unit is likely inside or outside the attention range; not based on identifying the stimulation unit from a plurality of units. *Id.* Accordingly, this baseline intensity level would be hard-coded for each stimulation generation unit as part of the initial calibration process. *Id.* After this one-time initialization or set-up procedure, during normal system operation, Nogami's haptic feedback intensity would vary based only on whether the contact point of the stimulation unit and the virtual object is *inside or outside* the attention range, which is a coarse-grained determination. *Id.*

A POSA would not vary haptic feedback intensity based on repeatedly assigning a reference intensity level every cycle during normal operation much less based on repeatedly identifying the stimulation generation unit. EX2002, ¶¶ 45. Given the problem Nogami addresses, a POSA would understand that doing so would be highly inefficient and a waste of computing resources when assigning reference intensity levels are only required once during start-up calibration and does not require repeatedly identifying a stimulation unit from a plurality of units. *Id.* Thus, Petitioner has failed to show that this claim limitation is obvious over Nogami.

Petitioner also points to Nogami's disclosure of "correspondence relation information" which purportedly is used to determine which region virtual object

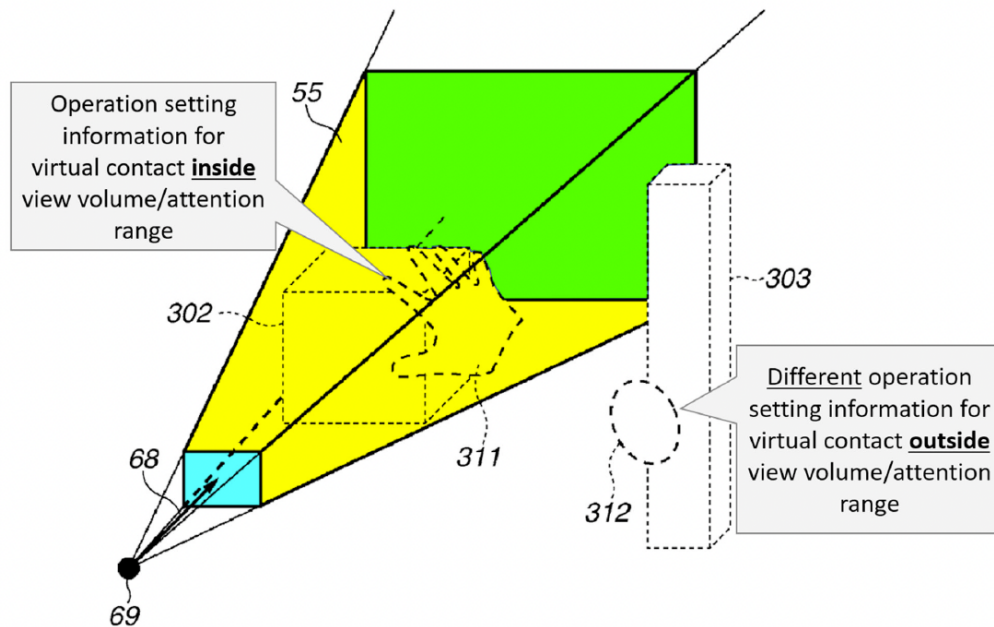
corresponds to a stimulation generation unit for providing haptic feedback. Pet., 35-37. However, this disclosure does not suggest that identification of the stimulation generation unit is used to determine a feedback parameter. Nogami identifies the stimulation generation unit to determine whether the stimulation generation unit is inside or outside the attention range:

In the example illustrated in FIG. 6, the CPU 201 operation setting information for the region virtual sets the object inside the attention range with respect to the stimulation generation unit 10. On the other hand, the CPU 201 sets the operation setting information for the region virtual object outside the attention range with respect to the stimulation generation unit 11.

Pet., 36 (citing EX1003, ¶ [00175]).

This aspect of Nogami is further explained in detail above in § VI and illustrated below.

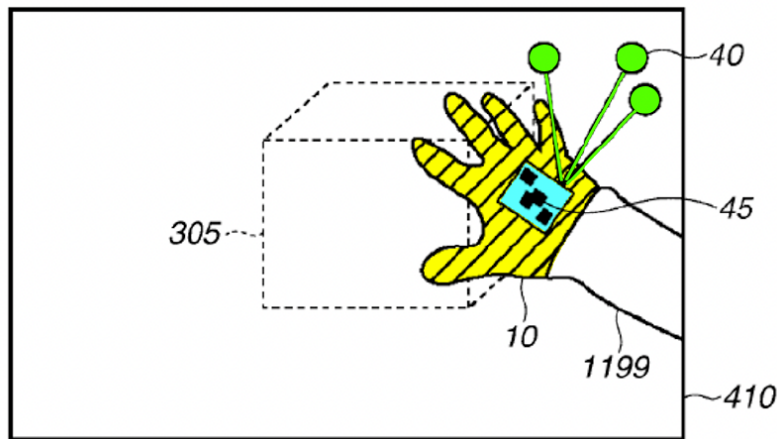
FIG.6



EX1003, Fig. 6 (annotations and colored highlights added by Petitioner in IPR2023-00945 at 35). Consistent with this concept, Nogami *uses bar code 45* mounted on the glove-like stimulation generation unit 10 to determine whether the unit is located within the user's attention range. EX2002, ¶ 47.

This, in fact, confirms that Nogami does not use bar code 45 to “**identify the peripheral from a plurality of possible peripherals**” according to the '298 patent's purpose of identifying the peripheral. *See, e.g.*, EX1001, 1:51-2:24, 5:11-30, 7:29-31. EX2002, ¶ 48. Rather, Nogami purportedly relies on bar code 45 to determine whether the stimulation generation unit 10 is located *inside or outside* the attention range as shown below. *Id.*

FIG.11



EX1003, Fig. 11. Nogami makes this clear in explaining its use of bar code 45:

In the example illustrated in FIG. 11, when the two dimensional bar code 45 is detected and recognized, the CPU 201 can determine that the two-dimensional **bar code 45 indicating the stimulation generation unit 10 is located within the real space image 410**. Thus, the CPU 201 sets the operation setting information for the contact within the attention range to the stimulation generation unit 10.

EX1003, ¶ [0029]. Indeed, the use of bar code 45 is strictly for determining whether the stimulation generation unit is inside or outside the attention range, not to identify the stimulation generation unit from a plurality of other possible stimulation generation units. EX2002, ¶ 48. This is further demonstrated in Nogami's explanation below:

For example, in the case where another real object is located between the stimulation generation unit 10 and the imaging unit 101 in FIG. 11, an image of the stimulation generation unit 10 is captured behind the real object. In this case, the two-dimensional bar code 45 is not recognized. **Accordingly, the CPU 201 determines that the stimulation generation unit 10 indicated by the two-dimensional bar code 45 is not located within the attention range.** In this case, the user cannot appropriately verify the position and orientation of the stimulation generation unit 10, which is located behind the real object. **Accordingly, the CPU 201 determines that the stimulation generation unit 10 is located outside the attention range.**

EX1003, ¶ [0213]; EX2002, ¶ 48.

A POSA would understand that Nogami's use of bar code 45 does not satisfy the claim limitation or its purpose of determining a feedback parameter depending on an identifier of the peripheral from a plurality of peripherals. EX2002, ¶¶ 49. Recognizing bar code 45 for the purpose of determining whether the stimulation generation unit 10 is *inside or outside* the attention range is not the same as identifying the stimulation generation unit from a plurality of possible stimulation generation units. EX2002, ¶ 49; EX1003, ¶ [0209] ("determine that the two-

dimensional bar code 45 indicating the stimulation generation unit 10 *is located within the real space image 410*”), ¶ [0213] (“determines that the stimulation generation unit 10 indicated by the two-dimensional bar code 45 *is not located within the attention range*”) (emphasis added).

Furthermore, a POSA would understand that Nogami's bar code 45 is not used to *identify* the physical objects from a plurality of objects or to distinguish one object from the others because Nogami only discloses that single stimulation generation unit 10 contains bar code 45. EX1003, ¶¶ [0206]-[0213]; EX2002, ¶¶ 50-51. In fact, Nogami only discloses a single glove. *Id.* There is no disclosure of stimulation generation unit 11 or 12 or any other peripheral having bar code 45, nor would there be any need for those other peripheral units to have a bar code 45. *Id.* This is because, Nogami does not disclose the identification of peripherals to distinguish it from a plurality of other peripherals for the purpose of determining haptic feedback. *Id.* As explained above, Nogami is only concerned with determining whether the single glove-like stimulation generation unit 10 is inside or outside of the attention range by way of detecting bar code 45 on the unit. EX2002, ¶ 51; EX1003, ¶¶ [0209], [0213]. Indeed, Nogami does not disclose or have the need for identification of the glove to distinguish it from another glove as Nogami only discloses a system with a

single glove. EX2002, ¶ 51. Therefore, Nogami fails to disclose this claim limitation.⁴

2. Nogami does not teach, suggest, disclose, or render obvious Claims 2-3, 6, 10-11, 14, 18-19 and 22

Claims 2-3 and 6 depend from independent claim 1. Claims 10-11 and 14 depend from independent claim 9. Claims 18-19 and 22 depend from independent claim 17. As described above in § **Error! Reference source not found.**, Nogami does not teach, suggest, disclose, or render obvious those independent claims. For example, Nogami fails to disclose “determine a first feedback parameter that depends on the identifier of the peripheral.” As such, Petitioner fails to show a reasonable likelihood of success that Nogami teaches, suggests, discloses, or renders

⁴ Additionally, Petitioner states “Nogami explains that in Step S4006, ‘CPU 201 generates operation setting information for controlling an operation of the stimulation generation unit corresponding to the region virtual object contacting the background virtual object.’ (Nogami, ¶ 0120.)” Pet., 30. Nogami's erroneous disclosure of “contacting” rather than “virtually contacting” should be noted. Since it is not possible for Nogami's region virtual object to contact the background virtual object, step S4006 is flawed and cannot occur.

obvious dependent claims 2-3, 6, 10-11, 14, 18-19, and 22 for the same reasons as those articulated in above in § **Error! Reference source not found..**

B. Nogami in view of Nelson does not teach, suggest, disclose, or render obvious the Challenged Claims of the '298 Patent

Ground 2 combines Nogami and Nelson to address dependent claims 5, 13, and 21 that all recite in similar manner: “wherein the peripheral is a consumer product.”

Claims 5, 13, and 21 depend from independent claims 1, 9, and 17, respectively. And as described above in § VII.A.1, Nogami does not teach, suggest, disclose, or render obvious those independent claims, including their failure to disclose the claim limitation ““determine a first feedback parameter that depends on the identifier of the peripheral.” As such, dependent claims 5, 13, and 21 are also not obvious for the same reasons as those articulated in Ground 1. Therefore, the Board should deny institution of Ground 2.

C. Nogami in view of Moriya does not teach, suggest, disclose, or render obvious the Challenged Claims of the '298 Patent

Ground 3 combines Nogami and Moriya to address dependent claims 8, 16, and 24 that all recite in similar manner: “wherein the peripheral comprises a wearable computer.”

Claims 8, 16, and 24 depend from independent claims 1, 9, and 17, respectively. And as described above in § VII.A.1, Nogami does not teach, suggest,

disclose, or render obvious those independent claims, including their failure to disclose the claim limitation “determine a first feedback parameter that depends on the identifier of the peripheral.” As such, dependent claims 8, 16, and 24 are also not obvious for the same reasons as those articulated in Ground 1. The Board should deny institution of Ground 3.

VIII. INSTITUTION SHOULD BE DENIED UNDER 35 U.S.C. § 314(a)

As explained above, Petitioner fails to set forth evidence establishing even a reasonable likelihood that it will prevail, much less that such evidence is “compelling” under the Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, PTO Director’s Memorandum (June 21, 2022) (“Interim Guidance”). As Director Vidal recently clarified, “the compelling merits standard is a higher standard than the standard for institution set by statute,” and is met only “if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *CommScope Technologies LLC, v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23, 3-4 (PTAB Feb. 27, 2023). Moreover, a compelling merits inquiry is not a substitute for a full *Fintiv* analysis. *Id.*, 4.

Here, the merits of the Petition are not compelling. As discussed above in §VII, Grounds 1 and 2 asserted by the Petition suffers from several deficiencies fatal to the merits of Petitioner’s arguments, including, for example, Nogami’s failure to

disclose determination of a first feedback parameter that **depends on an identifier of the peripheral**.

Patent Owner acknowledges that the recent Interim Guidance notes that a petition should not ordinarily be denied in accordance with the *Fintiv* factors where (as here) Petitioner has offered a *Sotera* stipulation “that if the IPR is instituted, the Petitioner will not pursue in the District Court Litigation any ground raised or that could have been reasonably raised in an IPR for the challenged patent.” But this Petition otherwise merits denial under a holistic analysis of the *Fintiv* factors due to the advanced stage of the parallel District Court proceedings and the duplication of the invalidity grounds asserted therein. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) at 2-3; *see also Cisco Sys., Inc. v. Oyster Optics, LLC*, IPR2021-00238, Paper 10 (Jun. 1, 2021) (Panel exercising discretion to deny institution after holistic analysis of *Fintiv* factors).

Indeed, prior to the Interim Guidance, the Board did not find a *Sotera* stipulation proffered under similar circumstances to overcome trial dates scheduled significantly before the due date of the Final Written Decision. *Cisco Sys., Inc. v. Esteche Sys., Inc.*, IPR2021-00329, Paper 13 (July 6, 2021) at 13 (*Sotera* stipulation insufficient to overcome a time gap of 11 months between the Eastern District of Texas trial date and the Final Written Decision, a 7 month gap between the Western District of Texas trial date and the Final Written Decision, and where claim

construction and fact and expert discovery had already completed prior to the Institution Decision date).

A. Whether the Court Granted a Stay or Evidence Exists That One May Be Granted if a Proceeding Is Instituted

The first *Fintiv* factor addresses the likelihood of a stay if this proceeding is instituted. Here, the District Court in the Western District of Texas has not considered a motion to stay, and therefore, this factor is neutral at best. *Cisco Sys., Inc. v. Oyster Optics, LLC*, IPR2021-00238, Paper 10 at 11. It should, however, be noted that the Federal Circuit has denied multiple petitions for *mandamus* relief on the grounds that the District Court had not abused its discretion in denying motions to stay pending *inter partes* review or post-grant review. *See In re Sand Revolution LLC*, 823 F. App'x 983, 984 (Fed. Cir. 2020); *In re Vulcan Indus. Holdings, LLC*, 830 F. App'x 318 (Fed. Cir. 2020).

B. Proximity of the Court's Trial Date to the Board's Projected Deadline for a Final Written Decision

In the parallel Western District of Texas litigation, the Court has already issued a trial date of February 20, 2024 (EX2003, 4; EX2007, 2), approximately 10 months before the expected Final Written Decision date in December 2024. This gap is significant given that by the time a Final Written Decision is likely to issue in this proceeding, the District Court trial will have concluded almost a year earlier, resolving both infringement and validity of the '143 patent.

Also, the Interim Guidance notes “the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.” Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, PTO Director’s Memorandum (June 21, 2022) at 3. The parallel litigation in the Western District of Texas was filed on May 26, 2022, and the median time to trial in that district is 26.4 months (EX2008, 37); therefore, under the median time-to-trial statistics, the putative trial date is in October 2024, which is still two months before the Final Written Decision in this proceeding. This factor should weigh in favor of denial.

Further, Petitioner’s tacit agreement for the parallel litigation to proceed in the Western District of Texas cannot be overlooked. EX2004, fn.1, 15. Although Petitioner unsuccessfully moved for transfer of venue to the Northern District of California, it also moved in the alternative for transfer to the Austin Division in the Western District of Texas as convenient. *Id.* Now that the case is in the Austin Division, due in part to its own admission, Petitioner has knowingly committed to a District Court for which the trial date is considerably earlier than the Final Written Decision date. Thus, Petitioner should be held to its admissions and the resulting time gap between the District Court trial date and the Final Written Decision date.

C. Investment in the Parallel Proceeding by the Court and the Parties

The third *Fintiv* factor addresses the District Court's and parties' investments into the parallel proceeding. Here, the parties have already invested a great deal of time and effort in the District Court such that Institution would be very inefficient. The parties have already served final invalidity and infringement contentions over five months ago (EX2003, 3), completed claim construction two months ago EX2005. Fact discovery in the parallel litigation will be complete by October 6, 2023—approximately two months before the Institution Decision in this proceeding. EX2007, 1.

In fact, Petitioner has already served thousands of pages of invalidity contentions including the same Nogami reference that is asserted in this IPR, as well as similar references with cumulative subject matter. EX2006. And by December 1, 2023—before the expected date for the Institution Decision, the parties will have served expert invalidity and rebuttal reports and conducted expert depositions concerning prior art, including the Nogami reference. EX2007, 1. Therefore, given the impending deadlines in the parallel litigation and the progress that has already accrued and will continue to accrue in that litigation before the date of the Institution Decision, this factor also weighs in favor of denial.

D. Overlap Between the Issues Raised in the Petition and the Parallel Proceeding

The fourth *Fintiv* factor, which addresses the overlap between the issues raised in the Petition and the parallel proceeding, should also weigh in favor of denial. In the parallel litigation, Petitioner has attacked the validity of the challenged claims in view of the same prior art addressed in the Petition. *See, e.g.*, EX2006, 57-59 (Final Invalidity Contentions asserting Nogami against the asserted claims of the '298 patent). While this Petition challenges claims not at issue in the District Court litigation, that mere fact is not enough to favor institution without some explanation as to why the additional claims are impactful. *Cisco Sys., Inc. v. Oyster Optics, LLC*, IPR2021-00238, Paper 10 at 16.

Petitioner's offer to reduce its invalidity assertions based on the outcome of the Board's institution decision rings hollow, because Petitioner has sought two bites at the invalidity apple and is offering to discard one of its attempts only where the other shows promise. This violates the fundamental tenet of *inter partes* reviews, which is that a litigant cannot simply hedge its bets on the forum in which to pursue invalidity until it can better weigh its chances, but instead should make a concerted decision regarding where it wishes to litigate its invalidity challenges, and then honor that decision. *See* 77 Fed. Reg. 48680-01 (Aug. 14, 2012) (IPRs are intended "to create a timely, cost-effective **alternative** to litigation") (emphasis added). And

as explained above, by the time the Institution Decision is rendered in this IPR, expert discovery will be complete and Immersion's expert will have rebutted Petitioner's invalidity arguments based on the same references asserted here. This factor weighs in favor of denial.

E. Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party

The fifth *Fintiv* factors addresses whether the Petitioner and the defendant in the parallel proceeding are the same party. Petitioner admits that it is the defendant in the parallel litigation. Pet., 1. As a result, this factor weighs in favor of denial. *Cisco Sys., Inc. v. Oyster Optics, LLC*, IPR2021-00238, Paper 10 at 16-17.

F. Other Circumstances That Impact the Board's Exercise of Discretion, Including the Merits

Finally, the sixth *Fintiv* factor addresses other circumstances that impact the Board's exercise of discretion. As explained above, Patent Owner raises substantive reasons why the Petition should be denied on the merits and has demonstrated those merits are far from "compelling." These reasons also serve as factors relevant to discretionary denial under this sixth *Fintiv* factor.

IX. CONCLUSION

Petitioner has not established a reasonable likelihood that it will prevail on Grounds 1-3 to establish unpatentability of the challenged claims of the '298 Patent,

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and therefore the Board should decline to institute *inter partes* review.

Respectfully Submitted,

Dated: September 12, 2023

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(Case No. IPR2023-00947)

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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 Preliminary Response totals 6,827 words per Microsoft Word, which complies with the requirement of 14,000 words allowed under 37 C.F.R. § 42.24(d).

Dated: September 12, 2023

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CERTIFICATE OF SERVICE

As authorized by Patent Owner's Mandatory Notice, I hereby certify that on September 12, 2023, a copy of this document has been served in its entirety by electronic mail on Petitioner's lead and backup counsel.

Dated: September 12, 2023

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