

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

IMMERSION CORPORATION,
Patent Owner.

Case IPR2023-00944
Patent 10,269,222

**PATENT OWNER'S PRELIMINARY RESPONSE
UNDER 35 U.S.C. §§ 311-19 AND 37 C.F.R. § 41.100, ET SEQ.**

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EXHIBIT LIST

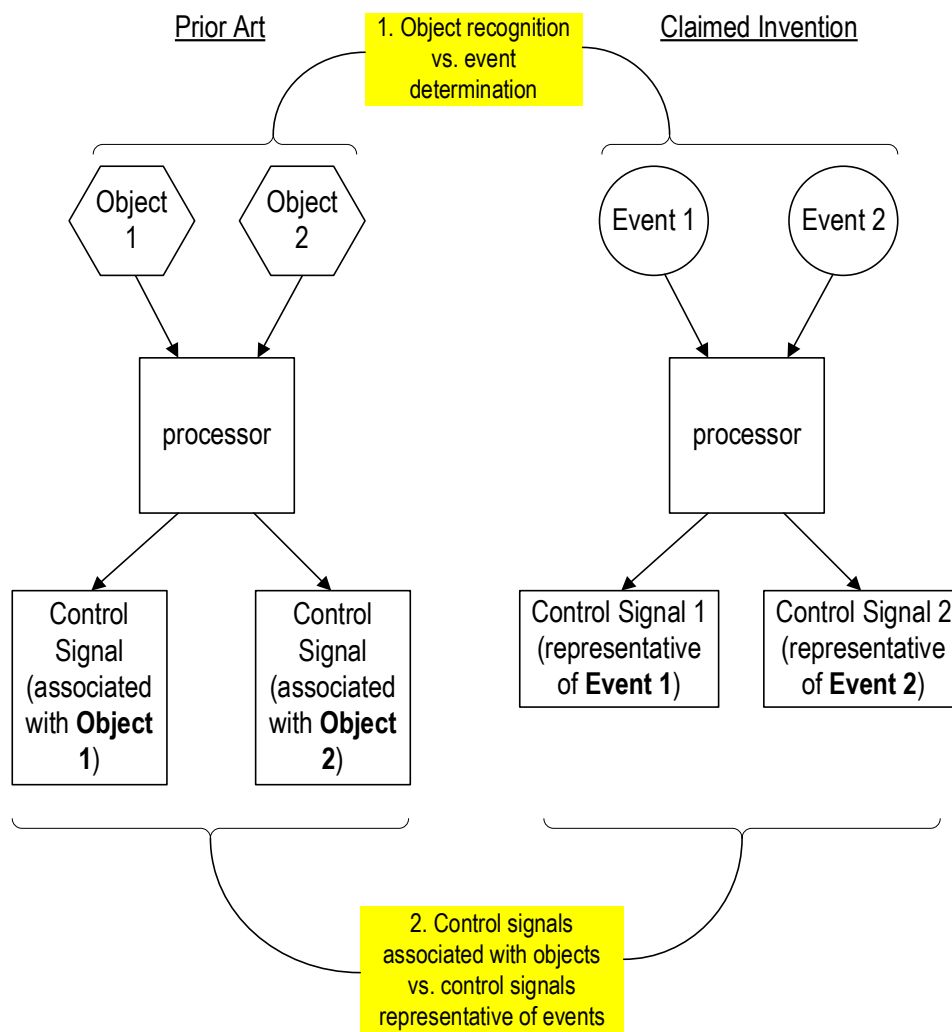
Exhibit No.	Exhibit Description
2001	Declaration of Dr. Gregory Abowd, D.Phil.
2002	U.S. Patent Application No. 2012/0242698 to Haddick et al. (Haddick)
2003	U.S. Patent Application No. 2012/0229264 to Company Bosch et al. (Company Bosch)
2004	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 6:22-CV-00541-ADA, Scheduling Order, Dkt. No. 28
2005	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 6:22-CV-00541-ADA, Defendant Meta Platforms, Inc.'s Motion to Transfer Venue to the Northern District of California (Redacted Version), Dkt No. 27
2006	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 1:23-CV-00623-ADA, Claim Construction Order, Dkt. No. 91
2007	Meta Platform, Inc.'s Final Invalidity Contentions
2008	<i>Immersion Corp. v. Meta Platforms, Inc.</i> , 1:23-CV-00623-ADA, Amended Scheduling Order, Dkt. No. 97
2009	Federal Court Management Statistics, June 2023

I. INTRODUCTION

The Petition's obviousness case is old news and fit for discretionary denial. During examination, the Examiner considered art that is substantially similar to Petitioner's. The Examiner also made the same *prima facie* mapping that Petitioner makes here, contending that the prior art's object recognition functionality met the claimed event determination functionality. The Examiner, however, ultimately concluded that object recognition and event determination are not the same. In the last office action response, Patent Owner compared a scenario with a stationary vehicle to a second scenario with a vehicle approaching dangerously fast. Applying object recognition, the prior art would recognize the same object in both—a vehicle. On the other hand, the claimed invention could determine different *events* from the two and notify the user accordingly. In response to this distinction, the Examiner reversed the original rejection. Notably, Petitioner does not contend the Examiner erred in this or any other respect. Discretionary denial under §325(d) is thus proper and there is no need to “readjudicate substantially the same prior art and arguments as those presented during prosecution and considered by the Examiner.” *Unified Patents Inc. v. Berman*, IPR2016-01571, Paper 10 at 12 (PTAB Dec. 14, 2016).

On the merits, the Petition fails in multiple ways that preclude institution. *First*, Petitioner makes the same obviousness mapping that the Examiner did (and later retracted), equating Douris's object recognition with event determination. As

the Examiner ultimately understood, the prior art's object recognition does not teach event determination because objects and events are necessarily different: objects are about things while events are about happenings, e.g., what is happening to specific things. Because Douris does not teach event determination, it also fails to teach generating control signals based on the events that were never taught. These two distinctions are shown below:



Further, the fact that the Petition presents an obviousness mapping that is the same as the one the Examiner ultimately withdrew highlights non-obviousness.

Second, Petitioner fails to demonstrate a motivation to combine Douris and Rodriguez. Specifically, Petitioner fails to show a POSA would have been motivated to modify Douris with Rodriguez, when Douris already provided the benefit Rodriguez is purported to supply. Petitioner also fails to show why a POSA would have been motivated to represent Douris's visual and semantically rich information with haptics. The Petition is silent with respect to a reasonable expectation of success in making the proposed combination, and specifically, why a POSA should expect success in representing Douris's visual and semantic information such as images, menus, and reviews using Rodriguez's haptics.

For these and other reasons detailed below, the Board should deny institution.

II. IMMERSION CORPORATION—THE HAPTICS COMPANY

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 required for the implementation of 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 area have generated over 3500 issued patents world-wide. Immersion’s patents have been proven novel

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

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.

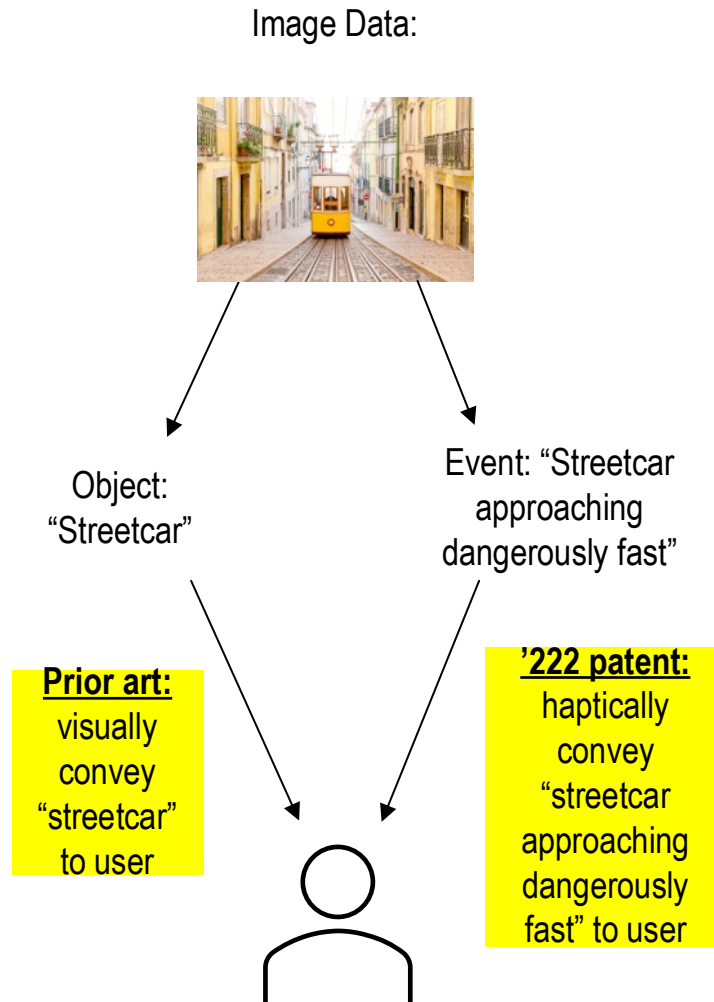
III. SUMMARY OF THE '222 PATENT

A. Overview

The '222 patent describes techniques for relating event determination with haptics to provide meaningful feedback to a user of a wearable device. Ex. 1001 at 1:14-18. In this context, “event determination” refers to determining what is happening in an environment, differing from object recognition, which refers to which objects are present in an environment. Ex. 2001 at ¶ 26. The inventors recognized that while prior art augmented reality (AR) devices could “recognize specific, known physical objects using image recognition . . . the ability to interact with an augmented virtual environment is limited [and] [p]roviding useful feedback to the user is also limited.” Ex. 1001 at 1:30-35. The inventors created an AR interaction technique that went above and beyond mere object recognition, leveraging the context richness of events and how they are handled to communicate with users. *Id.* at 1:42-44; Ex. 2001 at ¶ 26. This is shown in the below illustration

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.

distinguishing the prior art object recognition approach with the '222 patent's event determination technology:

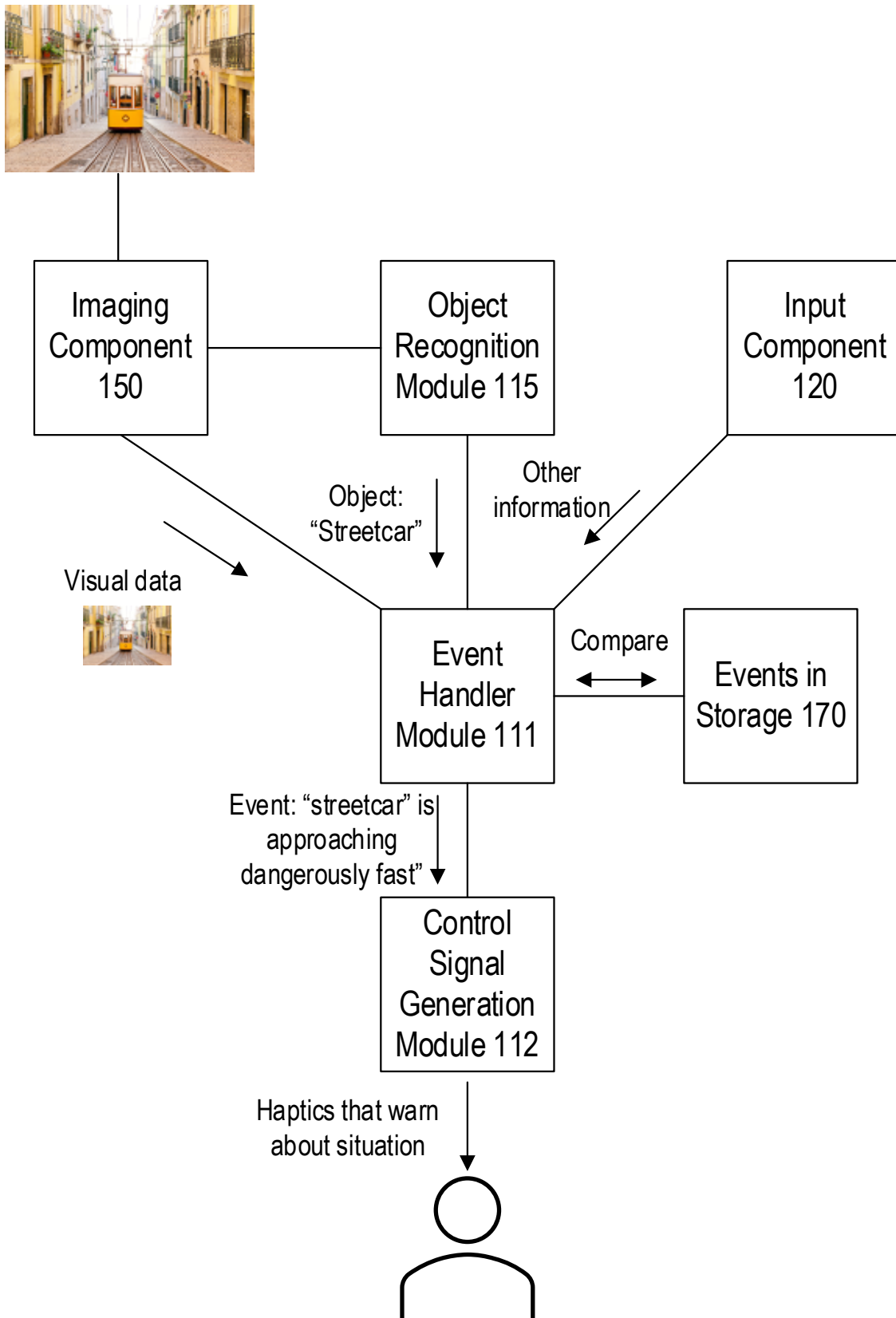


Pictorial based on Ex. 1001 at 1:30-35, 1:42-44; Ex. 2001 at ¶ 26 (FIG. A). As shown above, the prior art object recognition approach recognizes that there is a streetcar on the scene; in contrast, the techniques described in the '222 patent indicate not

only that the scene contains a streetcar, but that it is approaching at an unsafe speed.

Id. at ¶ 27.

Implementation-wise, the '222 patent contemplates a specific architecture for detecting whether and which events occur in the AR environment, including an event handler module 111, imaging component 150, object recognition module 115, input component 120, among others. Ex. 1001 at 8:4-10. The exemplary architecture and technique is illustrated below:



Pictorial based on *id.* at 8:11-9:59 and FIG. 2; Ex. 2001 at ¶ 28 (FIG. B). The '222 patent describes relating different events to different haptic effects, enabling users to be able to meaningfully understand events in their surroundings, rather than just which objects are present. Ex. 1001 at 8:61-9:24. For example, the system and methods described are able to discern between a streetcar that is approaching dangerously fast and that streetcar waiting at a station for the user. Ex. 1007 (File History) at 299. In this example, both scenarios involve the same object, but in differing contexts. Ex. 2001 at ¶ 29. While the prior art might only recognize the object streetcar in both scenes, the '222 patent improved upon this by determining different events between the two scenes, and conveying such information to the user haptically. *Id.*

B. Claims

Petitioner challenges claims 1, 2, 5, 7, 10, 11, 15, 17, 18, 21, and 23 of the '222 Patent, which includes independent claims 1, 10, and 27. Claim 1 recites:

1. A system comprising:
 - a wearable device;
 - a second device remote from and in communication with the wearable device;
 - a processor configured to generate at least a first control signal and a second control signal representative of a first event and a second

event, respectively, occurring in an environment related to the wearable device and/or the second device, the first event and the second event being different events; and

a haptic output device configured to provide a first haptic feedback signal and a second haptic feedback signal based on the first control signal and the second control signal, respectively.

Ex. 1001, cl. 1.

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

Petitioner proposes the following skill level of a person of ordinary skill in the art (“POSA”):

A person of ordinary skill in the art 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 for processing images captured by a device (such as detecting objects in digital images captured by a camera).

Pet. at 4-5. Patent Owner disagrees with this definition because it is not reasonable to expect an individual, after two years of practical or industry experience in HCI, to have two years of experience in both haptics and image processing. Ex. 2001 at ¶ 12. This would require the POSA to get parallel experience in two divergent fields

involving different technologies concurrently and appears to be more than required in this field. *Id.*

Instead, Patent Owner proposes the following: a POSA at the time of the '222 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, including implementation of computer-based systems and software for providing haptic feedback effects to a user. *Id.* at ¶ 12. Also, a person could have qualified as a POSA with more formal education and less practical or industry experience, or vice versa. *Id.*

V. CLAIM CONSTRUCTION

In the district court proceeding, the court agreed with Patent Owner and gave “augmented reality” its plain and ordinary meaning. Ex. 2004 (Claim Construction Order). Here, Petitioner believes no terms require construction. Pet. at 6. For institution purposes, Patent Owner believes that all terms may be given their ordinary and customary meaning, as understood by a POSA, in the context of the patent specification, and that no argument herein requires construction for any particular term. Ex. 2001 at ¶ 35.

VI. THE ASSERTED REFERENCES

A. Douris (Ex. 1003)

Douris (U.S. Patent Application Publication No. 2009/0289955 A1 to Stephan Douris et al., “Douris”) describes a reality overlay device that performs object recognition and superimposes overlay information onto those recognized objects. Ex. 1003, Abstract. Douris’s overlay device captures visual and audio information from the environment. *Id.* at ¶¶ 24-25. The overlay device then uses that information to recognize objects or entities in the environment, such as people, animals, buildings, businesses. *Id.* at ¶ 27. To obtain supplemental overlay information, Douris teaches that the overlay device communicates with a remote server to retrieve overlay information of a recognized object, such as a virtual billboard for a recognized restaurant entity. *Id.* at ¶¶ 28-29. Once the overlay device receives this information, it then superimposes onto a transparent overlay the overlay information in a way that visually associates the overlay information with the recognized object. *Id.* at ¶ 30. In this manner, the overlay device generates the augmented reality space perceived by the user, as shown below:

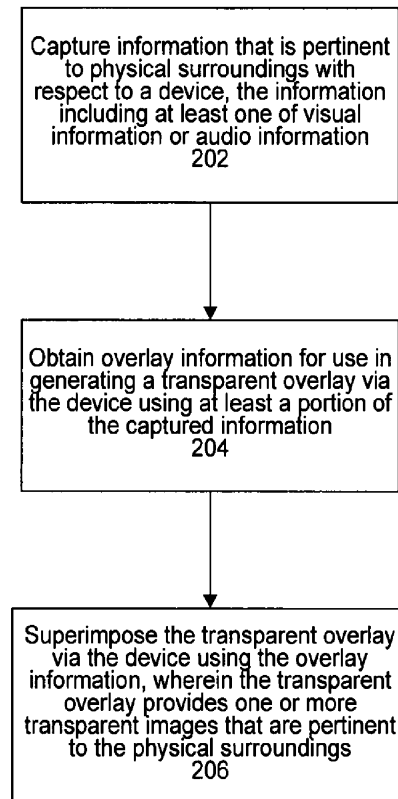


FIG. 2

Id., FIG. 2.

On the server side, the remote server receives an identification of objects captured and recognized by the overlay device. *Id.* at ¶ 46. In response, Douris's server retrieves overlay information associated with those identified objects, such as descriptions, offers, menus, and advertisements. *Id.* at ¶¶ 37, 47. Thus, the server sends to the overlay device the overlay information for the overlay device to use when generating the AR space, as shown below:

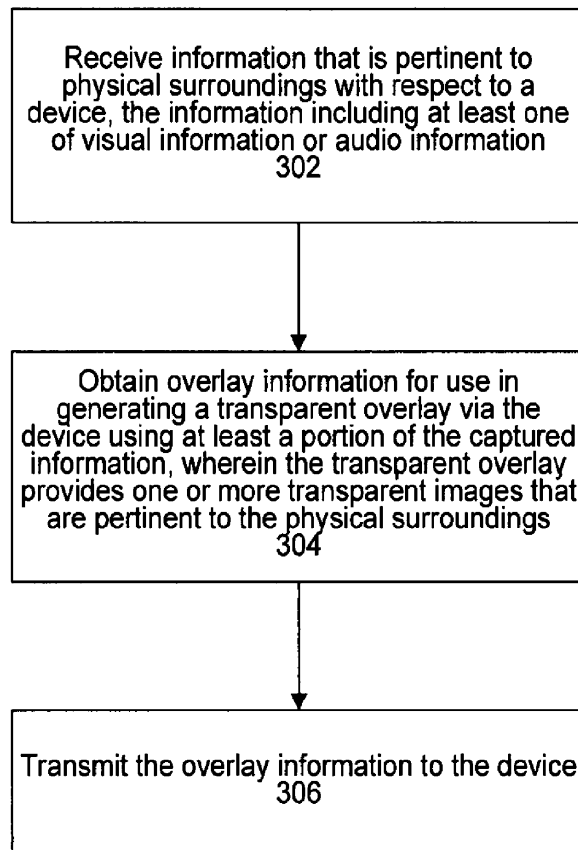


FIG. 3

Id., FIG. 3.

B. Rodriguez (Ex. 1004)

Rodriguez (U.S. Patent Application Publication No. 2012/0028577 A1 to Tony F. Rodriguez and William Y. Conwell, “Rodriguez”) describes a mobile device that employs haptics. Ex. 1004, Abstract. More specifically, Rodriguez teaches “object-associated haptic signatures” that relate visually detected objects with haptic signatures, for example, books (*id.* at ¶ 46), Coca-Cola® products (*id.* at ¶ 84),

friends (*id.*), and social media “likes” (*id.* at ¶ 86). To encode the disclosed haptic effects, Rodriguez teaches using Immersion’s haptic SDK for mobile platforms. *Id.* at ¶ 74.

VII. THE BOARD SHOULD DENY INSTITUTION PURSUANT TO 35 U.S.C. § 325(D)

Institution of an *Inter Partes* Review is discretionary. *See Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“the PTO is permitted, but never compelled, to institute an IPR proceeding”). In evaluating whether to use its discretion to deny institution under 35 U.S.C. § 325(d), the Board uses the *Advanced Bionics* framework: “(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate GMBH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (“*Advanced Bionics*”). The Board should deny institution because Petitioner’s references and arguments are the same or substantially the same as what the Examiner considered during prosecution, and Petitioner fails to demonstrate material error by the Examiner.

**A. The Office Considered Substantially the Same References
and Considered the Same Arguments Raised in the Petition**

The first part of the *Advanced Bionics* framework is met by either (a) the same or substantially the same prior art or (b) the same or substantially similar arguments were presented to the Office. *Advanced Bionics* at 8. “If [either] condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.” *Id.* at 8-9. The Board considers *Becton, Dickinson* Factors (a), (b), and (d) for this part: “(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination;” and “(d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art.” *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (Dec. 15, 2017) (“*Becton, Dickinson*”).

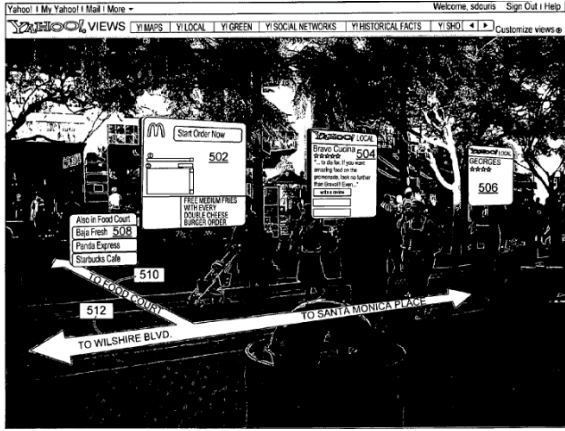
Here, all three factors weigh in favor of satisfying the first part of *Advanced Bionics*, i.e., the Examiner was presented with and considered substantially the same art *and* the same arguments Petitioner now offers. As described below, (1) Petitioner’s object recognition overlay device reference, Douris, is strikingly similar to the object recognition overlay device reference, Haddick, asserted by the

Examiner. Petitioner's haptics-enabled mobile device reference, Rodriguez, is also substantially similar to the haptics-enabled mobile device reference asserted by the Examiner, Company Bosch; (2) Petitioner's Douris and Rodriguez's references are cumulative of the references considered by the Examiner; and (3) Petitioner's current arguments overlap with arguments made and later retracted by the Examiner in response to Patent Owner's distinguishing arguments. There is no need to readjudicate these same arguments and prior art.

1. Petitioner's Douris and Rodriguez references are substantially similar to the Examiner's Haddick and Company Bosch references

Petitioner's Douris and Rodriguez references are substantially similar to the Examiner's Haddick (U.S. Patent Application No. 2012/0242698 to Haddick et al., Ex. 2002) and Company Bosch (U.S. Patent Application No. 2012/0229264 to Company Bosch et al., Ex. 2003) references, respectively. Both Haddick and Douris are directed to head-mounted displays that perform image overlay in response to object recognition. *Compare* Ex. 2002, Abstract *with* Ex. 1003, Abstract; Ex. 2001 at ¶ 39. Although Haddick refers to the head-mounted display as an augmented reality eyepiece (Ex. 2002 at ¶ 6) and Douris as a reality overlay device (Ex. 1003 at ¶ 5), both devices provide the same functionality (generate AR environments by overlaying images on a transparent lenses) using similar implementation details: (1) the head-mounted display performs object recognition on the surrounding

environment, (2) communicates with a remote sever to obtain supplemental overlay information relating to the recognized objects, and (3) generates the AR environment by rendering the received overlay information on a transparent display. Ex. 2001 at ¶ 39. In one example, devices from both Douris and Rodriguez overlay McDonald's® signage in response to recognizing that restaurant in real space:

Haddick, FIG. 19, ¶ 472	Douris, FIG. 5, ¶ 50
	
FIG. 19 illustrates two exemplary roadside billboards 1900 containing offers and advertisements from sellers or service providers that may be viewed in the augmented reality manner. The augmented advertisement may provide a live and near-to-reality perception to the user or the wearer.	FIG. 5 is a diagram illustrating an example local view that may be presented in accordance with various embodiments. As shown in the local view, the transparent overlay that is superimposed by a reality overlay device may include one or more virtual billboards. Each of the virtual billboards may be placed in close proximity to a business or entity with which it is associated. For instance, a virtual billboard may be placed such that it is overlaid next to and/or in front of a business in the user's field of vision. Thus, the overlay information may indicate placement of each of the virtual billboards with respect to a corresponding business.

Both Haddick and Douris implement this functionality in the same way. Specifically, both Haddick's and Douris's devices perform **object recognition** on captured images:

Haddick at ¶¶ 249, 448	Douris at ¶ 36.
In an embodiment, the eyepiece's object recognition software may process the images being received by the eyepiece's forward facing camera in order to determine what is in the field of view.	In order to obtain the overlay information, one or more entities in the surroundings or in nearby locations may be identified in the captured information. For example, entities such as businesses, other buildings or physical landmarks may be identified using pattern recognition software , RFID and/or GPS location. Similarly, individuals may be identified using technology such as RFID or other forms of signals transmitted by another individual's device.

Further, both reference's head-mounted displays obtain overlay information associated with recognized objects by requesting it from remote servers (e.g., stored in a database), which sends it in response:

Haddick at ¶ 249	Douris at ¶ 47
Using location or identification data, a database may be accessed by the eyepiece for information that may be overlaid , projected or otherwise displayed with what is being seen.	The server may obtain information that is pertinent to the identified entities (e.g., from one or more databases) and/or ascertain a desired placement of the overlay information with respect to the identified entities, where the overlay information indicates the desired placement of visual overlay information within the transparent overlay. The server may then transmit the overlay information to the device at 306.

Next, both the Haddick and Douris devices render the overlay information onto transparent display lenses to generate the AR space:

Haddick at ¶ 150	Douris at ¶ 29
The present disclosure relates to eyepiece electro-optics. The eyepiece may include projection optics suitable to project an image onto a see-through or translucent lens, enabling the wearer of the eyepiece to view the surrounding environment as well as the displayed image.	The reality overlay device may superimpose the transparent overlay via the device using the overlay information via one or more of the lenses 100, wherein the transparent overlay provides one or more transparent images (e.g., static or video) that are pertinent to the physical Surroundings. The positioning of the transparent images may depend upon the location of any identified entities in the user's field of vision (e.g., to reduce obstruction of the user's field of vision). The transparent images that are produced may include text, symbols, etc. The transparent images may be generated locally or remotely. In this manner, a user of the reality overlay device may view real world images through the lenses 100 while simultaneously viewing the transparent overlay.

With respect to the differences between Haddick and Douris, Haddick is generally more comprehensive in its use cases and hardware configurations. Ex. 2001 at ¶ 43. Douris does not disclose major functionality or use cases that Haddick does not contemplate, and therefore, the art considered by the Examiner, while presenting the same technology, was more extensively discussed than the Douris reference Petitioner raises here. *Id.*

Likewise, both the Examiner's Company Bosch reference and the Petitioner's Rodriguez reference are similarly directed to haptic actuators. *Compare* Ex. 2003 at ¶ 2 *with* Ex. 1004 at ¶ 2. Both references provide an electronic device with a haptics controller that generates signals based on a desired haptic effect. *Compare* Ex. 2003 at ¶ 36 *with* Ex. 1004 at ¶¶ 63, 68.

2. Petitioner's References Are Cumulative

“A reference is cumulative when it teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO.” *Roku, Inc. v. Universal Electronics, Inc.*, IPR2019-01619, Paper 11 at 16 (quoting *Regeneron Pharm., Inc. v. Merus N.V.*, 864 F.3d 1343, 1350 (Fed. Cir. 2017)). As discussed above, because Douris is almost identical to Haddick in its functionality and implementation details, Douris “teaches no more than what a reasonable examiner would consider to be taught by [Haddick] already before the PTO.” *Roku*,

Inc. v. Universal Electronics, Inc., IPR2019-01619, Paper 11 at 16 (PTAB Apr. 2, 2020); Ex. 2001 at ¶ 44.

Conclusion as to whether (a) the same or substantially the same art were previously presented to the Office: Based on *Becton, Dickinson* factors (a), “the similarities and material differences between the asserted art and the prior art involved during examination,” and (b), “the cumulative nature of the asserted art and the prior art evaluated during examination,” the first part of *Advanced Bionics* is satisfied because substantially the same art was previously presented to the Office. *See Advanced Bionics* at 20 (“Accordingly, the first condition of the first part of the framework is satisfied, and we need not reach whether the ‘same or substantially the same arguments’ previously were presented to the Office.”).

3. Petitioner’s obviousness arguments overlap with arguments made—and later retracted—by the Examiner

Petitioner’s obviousness arguments overlap with those made during examination. Ex. 2001 at ¶ 45. Indeed, Petitioner’s obviousness case is predicated on the *same* obviousness mapping and arguments the Examiner made during prosecution, which was later withdrawn in response clarifying amendments and remarks. *Id.* In the office action, the Examiner rejected claim 1 as obvious over Haddick in view of Company Bosch, arguing that Haddick’s *object detection* combined with Company Bosch’s control signals renders obvious the claimed

functionality of event determination and generating control signals based on determined events:

Regarding claim 1: Haddick et al. disclose see-through near-eye display glasses with a multi-segment processor-controlled optical layer comprising a wearable device; a second device remote from and in communication with the wearable device (paragraph 0365, lines 21-23); a processor configured to generate a control signal representative of an event occurring in an environment related to the wearable device and/or the second device; the processor configured to detect **a plurality of events** (e.g., a curb, doorway, or other object, para. 0422 lines 17-18) that occur in the environment related to the wearable device; and a haptic output device configured to provide haptic feedback based on the control signal (paragraph 0231, 0370, and 0422). Haddick

Ex. 1007 at 278-79 (Office Action dated Feb. 14, 2018) (highlighting added). In response, Patent Owner explained that using object recognition to determine that a user is “approaching” *different objects* is not the same as detecting a “variety of *different events*”:

Haddick discloses a device that generates a haptic vibration upon recognizing an object. It discloses, “In other examples, object recognition may determine the user is approaching a curb, doorway, or other object and the glasses or controller would audibly or haptically warn the user.” *Haddick at ¶ [0422]*. Haddick does not disclose a system programmed to generate different control signals upon detecting different events, or detecting a *variety of different events* and responds accordingly with *different haptic* signals for the different events. Haddick does not disclose this level of flexibility.

Ex. 1007 at 298 (Applicant Arguments/Remarks dated Feb. 14, 2018) (highlighting added). Nevertheless, Petitioner here re-argues the *exact same* traversed mapping of

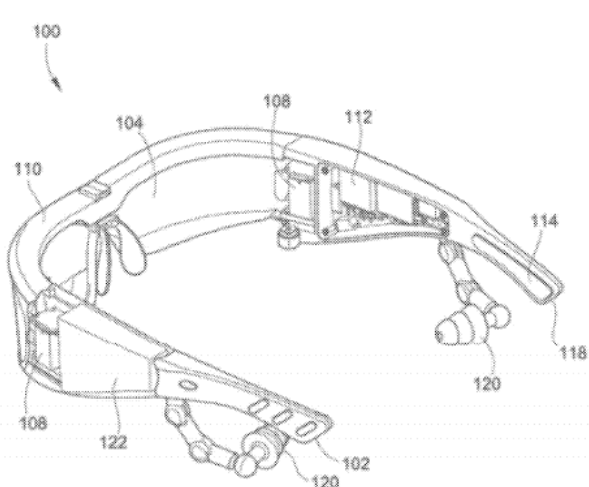
“vicinity of different types of objects”—*i.e.*, “approaching” different types of objects—to the claimed “different events”:

persons (“**second event**”). It would have been obvious that these qualify as “**different events**” because they could have occurred at different places and/or different times, and the events involve the wearer being in the vicinity of different types of objects (*e.g.*, businesses vs. persons). (Cooperstock, ¶62.) Both of these

Thus, the Examiner already considered this mapping and agreed with Patent Owner—the disclosure of different types of *events* is not the same as “approaching,” or “being in the vicinity of,” different types of *objects*. Ex. 2001 at ¶ 47.

Accordingly, the Examiner withdrew the pending *prima facie* obviousness mapping and sent a Notice of Allowability three months later. Ex. 1007 at 325. After considering additionally submitted references, the Examiner sent the final Notice of Allowability on January 30, 2019. *Id.* at 964. In the Notice, the Examiner specifically reversed his earlier—and Petitioner’s current—mapping, stating in the “reasons for allowance” section that “patentability resides in ‘a processor configured to generate at least a first control signal and a second control signal representative of a first event and a second event respectively, occurring in an environment related to the wearable device and/or the second device, the *first event and the second event being different events*[.]’” *Id.* at 969 (emphasis added).

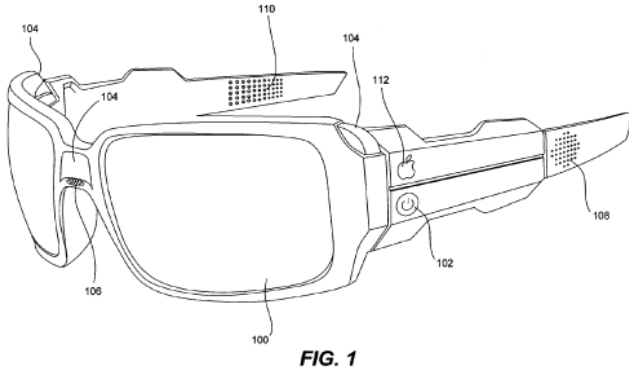
More generally, the Examiner already made the same overall obviousness mapping that Petitioner makes here, as shown below.

Claim language	Examiner's Mapping
a wearable device;	The Examiner mapped the base reference's head-mounted display to the claimed wearable device. <i>Id.</i> at 278 ("Haddick et al. disclose see-through near-eye display glasses with a multi-segment processor-controlled optical layer comprising a wearable device[.]"). The base reference's head-mounted display is shown below:  Ex. 2002 (Haddick), FIG. 1.

a second device remote from and in communication with the wearable device;	The Examiner mapped a data receiver or eyepiece of a second user to the claimed second device. Ex. 1007 at 278.
A processor configured to generate a control signal representative of an event occurring in an environment related to the wearable device and/or the second device, the processor configured to detect a plurality of events that occur in the environment related to the wearable device; and	The Examiner mapped the base reference's teaching of object recognition onto the claimed "processor configured to detect a plurality of events." <i>Id.</i> at 278 ("a processor configured to generate a control signal representative of an event occurring in an environment related to the wearable device and/or the second device; the processor configured to detect a plurality of events (e.g., a curb, doorway, or other object, para. 0422 lines 17-18) that occur in the environment related to the wearable device;"). Examiner Nguyen cited Haddick's example of recognizing "a curb, doorway, or other object" as support for this mapping.

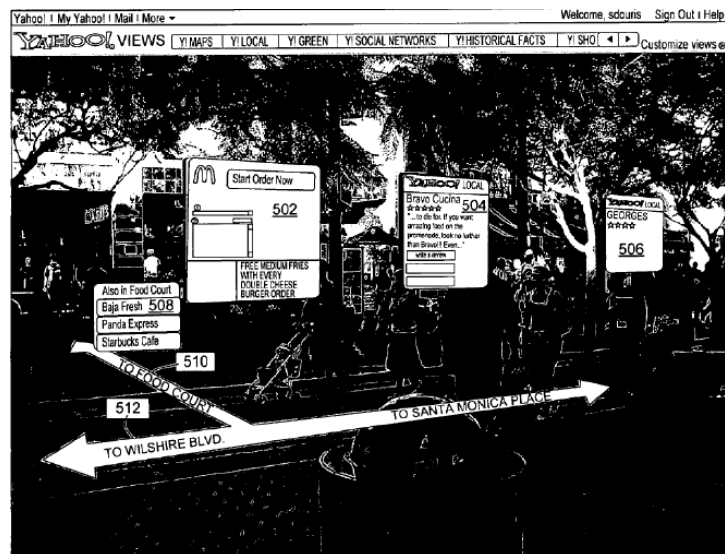
a haptic output device configured to provide a plurality of haptic feedback signals based on the generated control signal.	The Examiner mapped the secondary reference's haptics controller to the claimed haptic output device. <i>Id.</i> at 278 (“Haddick et al. do not disclose a plurality of haptic feedback signals as claimed. However, providing a plurality of haptic feedback signals is old and well known in the art as taught by Company Bosch et al. (paragraph 0040).”).
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As shown below, Petitioner's arguments and mapping (e.g., “the manner in which petitioner relies on the prior art”) nearly perfectly overlaps with the Examiner's:

Claim language	Petitioner's Mapping
a wearable device;	Just like the Examiner's mapping, Petitioner maps the base reference's head-mounted display onto the claimed wearable device. Pet. at 9-10. The base reference's head-mounted display is shown below:  Ex. 1003 (Douris), FIG. 1.
a second device remote from and in communication with the wearable device;	Just as in the Examiner's mapping, Petitioner maps a second user's device (e.g., a second reality overlay device) to the claimed second device. Pet. at 11 ("the 'second device' corresponds to a second reality overlay device worn by a second user.").

a processor configured to generate a control signal representative of an event occurring in an environment related to the wearable device and/or the second device, the processor configured to detect a plurality of events that occur in the environment related to the wearable device; and

Just like the Examiner, Petitioner maps the primary reference's device's ability to perform **object recognition** onto the claimed "processor configured generate a [first/second] control signal representative of a [first/second] event." Pet. at 15. Specifically, Petitioner argues that the base reference's ability to **recognize "a particular person, business or other entity"** correspond to the claimed "events." *Id.* Petitioner cites FIG. 5 of the base reference as support, which shows virtual billboards displayed in response to object recognition. *Id.* at 16. FIG. 5 of the base reference is shown below.



Ex. 1003, FIG. 5.

	This argument is precisely the one made by the Examiner in the Office Action of February 14, 2018. There, the Examiner argued that the primary reference's device's ability to perform object recognition mapped onto the claimed "processor configured to generate a control signal representative of an event" Ex. 1007 at 278. Specifically, the Examiner argued that the base reference's device's ability to recognize an entity such as a "curb, doorway, or other object" reads on the claimed "processor configured to generate a control signal representative of an event" <i>Id.</i> Yet, as detailed above, Examiner would withdraw this argument and <i>prima facie</i> mapping after considering Patent Owner's distinguishing remarks and corresponding amendatory clarifications.
a haptic output device configured to provide a plurality of haptic feedback signals based on the generated control signal.	As in the Examiner's mapping, Petitioner maps the secondary reference's (Rodriguez's) haptic output device onto the claimed haptic output device. Pet. at 25.

In sum, Petitioner's arguments and manner of reliance on the prior art squarely overlap those the Examiner used during the original prosecution of the '222 patent.

In the Office Action Response of May 18, 2018, Patent Owner responded to the Examiner's *prima facie* obviousness assertion by showing that in claim 1, the processor generates first/second control signals based on differing first/second events. Ex. 1007 at 290. This was accompanied by two distinguishing arguments. First, Patent Owner argued that the primary reference's object detection does not teach the claimed events. *Id.* at 299. Specifically, Patent Owner argued that identifying different objects (as in the prior art) was not the same thing as identifying different events:

Haddick discloses a device that generates a haptic vibration upon recognizing an object. It discloses, "In other examples, object recognition may determine the user is approaching a curb, doorway, or other object and the glasses or controller would audibly or haptically warn the user." *Haddick at* ¶ [0422]. Haddick does not disclose a system programmed to generate different control signals upon detecting different events, or detecting a variety of different events and responds accordingly with different haptic signals for the different events. Haddick does not disclose this level of flexibility.

Id. at 298 (highlighting added).

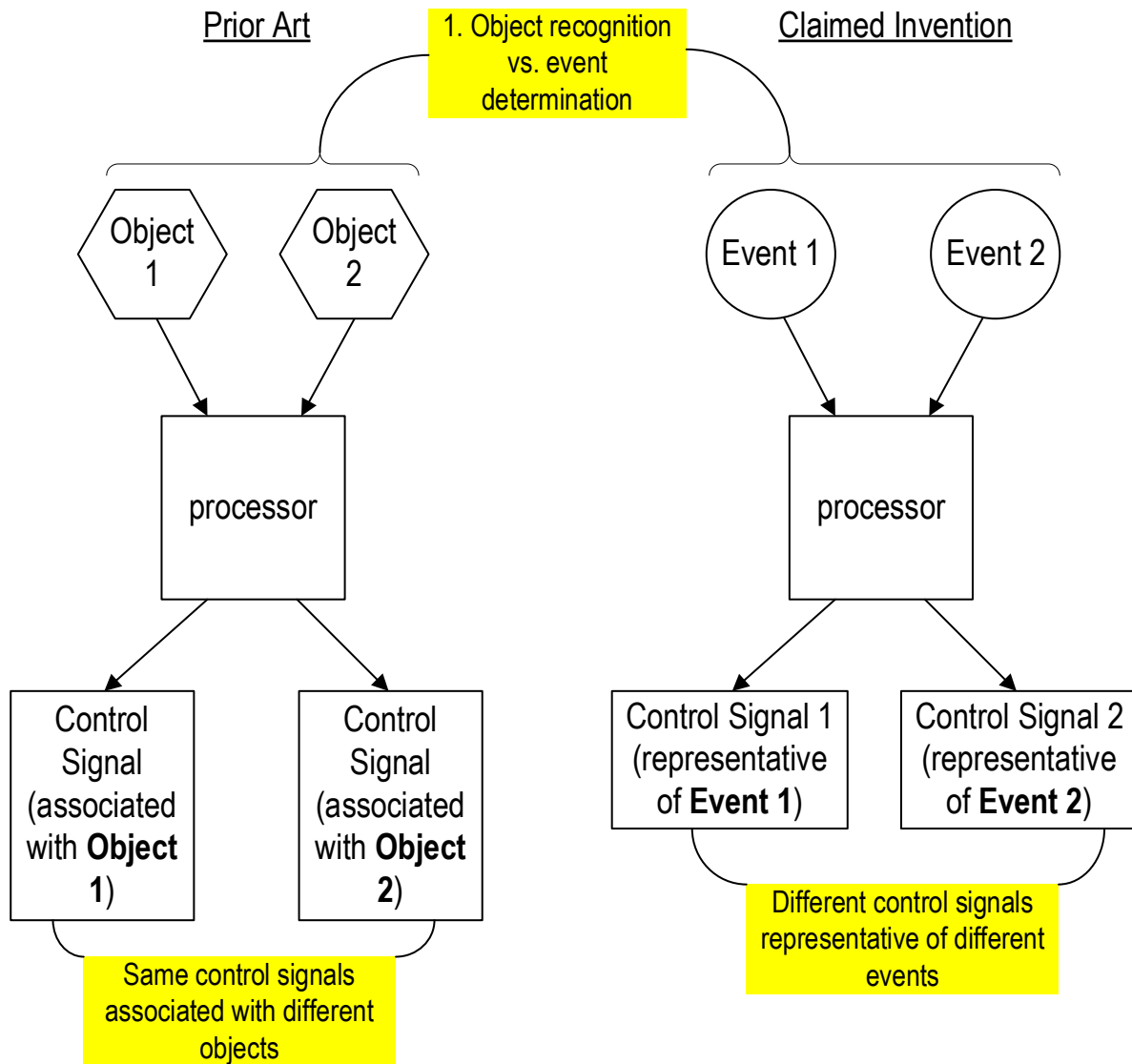
Patent Owner continued: "the system can deliver one haptic effect for an approaching stationary object and a different haptic event for a rapidly approaching object such as a car in an intersection." *Id.* at 299. Thus, Patent Owner distinguished recognizing *different objects* from distinguishing between *different event types*,

exemplified by the scenario where the *same object* can give rise to very *differing events* (stationary object versus that same object rapidly approaching):

even a total loss of eyesight. For example, the system can distinguish between different types of events and the potential danger associated with an event. For example, the system can deliver one haptic effect for an approaching stationary object and a different haptic event for a rapidly approaching object such as a car in an intersection. Therefore, one skilled in the art would not look to combine Haddick and Company Bosch in an effort to arrive at the systems and methods recited in the pending claims.

Id. (highlighting added).

Second, Patent Owner argued that the primary reference's object recognition also fails to teach generating different control signals based on different events. *Id.* at 298. Specifically, Patent Owner argued that "Haddick does not disclose a system programmed to generate different control signals upon detecting different events, or detecting a variety of different events and responds accordingly with different haptic signals for the different events. Haddick does not disclose this level of flexibility." *Id.* These distinctions are shown in the below illustration that shows the event-driven system creating different control signals whereas the object-driven system providing only two of the same control signals.



Pictorial based on Ex. 1007 at 298-99 (Office Action Response of May 14, 2018).

Conclusion as to whether (b) the same or substantially similar arguments were presented to the Office: The Examiner previously made the same mapping and reliance on prior art that Petitioner now makes. The first part of the *Advanced Bionics* framework is thus (doubly) satisfied. Board is not compelled to “readjudicate substantially the same prior art and arguments as those presented

during prosecution and considered by the Examiner.” *Unified Patents Inc.*, IPR2016-01571, Paper 10 at 12.

B. Petitioner Cannot Demonstrate the Office Erred

Petitioner has not and cannot demonstrate that the Office erred in a manner material to patentability. *Advanced Bionics* at 8. In evaluating the second part of the Advanced Bionics framework, the Board considers *Becton*, *Dickinson* factors (c), (e), and (f), which are:

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; . . . (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Becton, *Dickinson* at 17-18. These factors weigh against institution. *First*, as to (c), the cited reference of Haddick, which is substantially similar to Petitioner's Douris reference, was extensively evaluated during examination. Specifically, the Examiner cited Haddick as the base reference in the § 102 rejection of all pending claims in the Office Action dated November 2, 2016 (Ex. 1007 at 101-109), the § 102 rejection of all pending claims in the Office Action dated July 20, 2017 (*id.* at 229-39), and the § 103 rejection of all pending claims in the Office Action dated February 24, 2018 (*id.* at 274-83). In response to each rejection, Patent Owner made substantive

arguments distinguishing over Haddick accepted by the Examiner, as discussed above.

Second, as to (e), Petitioner does not even argue that the Examiner erred in allowing the challenged claims, providing only a single sentence with respect to § 325(d) that its references were not presented during prosecution. Pet. at 4 (“None of the prior art cited in any of the grounds identified in Part III.B above was previously presented during prosecution of the ’222 patent.”). In any event, Petitioner cannot show that the Examiner erred because the Examiner was reasonable in finding that the prior art’s object recognition did not teach the same functionality as the claim’s ability to generate different control signals from different *events*. *Advanced Bionics* at 9 (“If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.”). Petitioner has not and cannot show that the Examiner was unreasonable or applied the wrong patentability standard in finding that Haddick’s object recognition did not teach this limitation.

Third, as to (f), Petitioner presents no additional evidence or facts to warrant reconsideration of the prior art or arguments.

Conclusion as to § 325(d). All factors point toward discretionary denial. First, both (a) substantially the same prior art **and** (b) similar arguments were presented to the Office. Petitioner’s obviousness case was already rejected. Second,

Petitioner has presented no evidence of material error by the Office. Indeed, the Examiner was reasonable in withdrawing his own rejection when provided with evidence that Haddick's object recognition does not reasonably teach differing control signals based on different events. Ex. 2001 at ¶ 51. The Petition invites the Board to second guess the Examiner's judgment. This is contrary to the Board's "commitment to defer to previous Office evaluations of the evidence of record unless material error is shown." *Advanced Bionics* at 9.

VIII. PETITIONER FAILS TO SHOW ANY OF THE CHALLENGED CLAIMS ARE UNPATENTABLE.

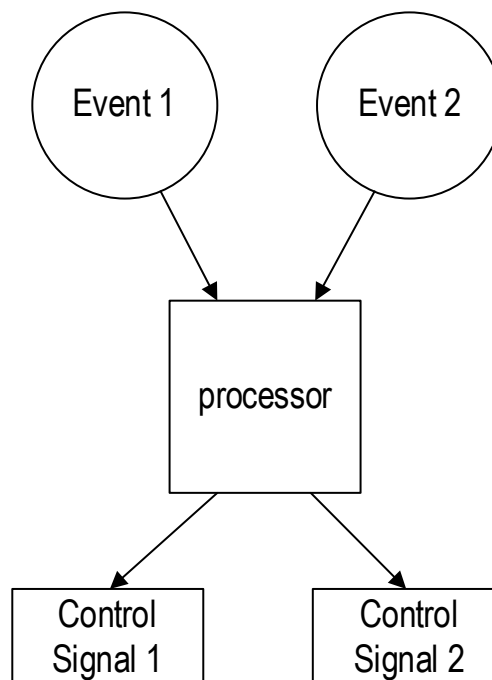
A. Claim 1

1. 1[c]: The Douris-Rodriguez combination does not disclose "a processor configured to generate at least a first control signal and a second control signal representative of a first event and a second event, respectively, occurring in an environment related to the wearable device and/or the second device, the first event and the second event being different events"

The Board should reject Petitioner's mapping—that the Douris-Rodriguez combination's object recognition discloses generating different control signals for different events—the same one the Examiner previously rejected during prosecution. *Supra* VII.A.3. Haptics based on object recognition are not the same thing as haptics based on *events*. As Patent Owner remarked during prosecution, the '222 patent deals with events, not static objects: "the system can deliver one haptic effect for an approaching stationary object and a different haptic event for a rapidly approaching

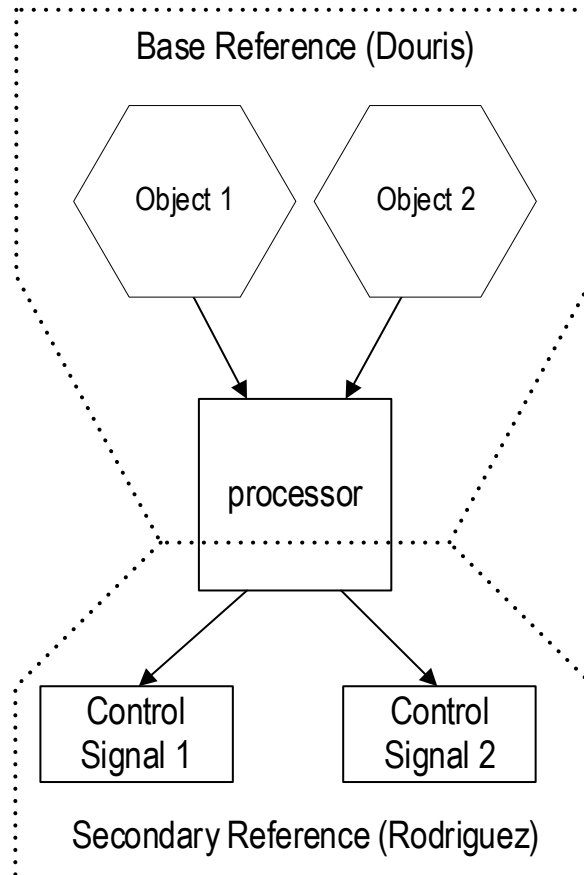
object such as a car in an intersection.” Ex. 1007 at 299. The Examiner agreed with Patent Owner, finding that **haptics based on object recognition** does not render obvious **haptics based on events**. MPEP § 2141 (“Office personnel fulfill the critical role of factfinder when resolving the *Graham* inquiries. It must be remembered that while the ultimate determination of obviousness is a legal conclusion, the underlying *Graham* inquiries are factual.”). The Board need not disturb this finding of fact.

Limitation 1[c] requires “a processor configured to generate . . . [first/second] control signal[s] representative of [] [differing first/second] event[s].” This is illustrated as follows:



Pictorial based on Ex. 1001, cl. 1.

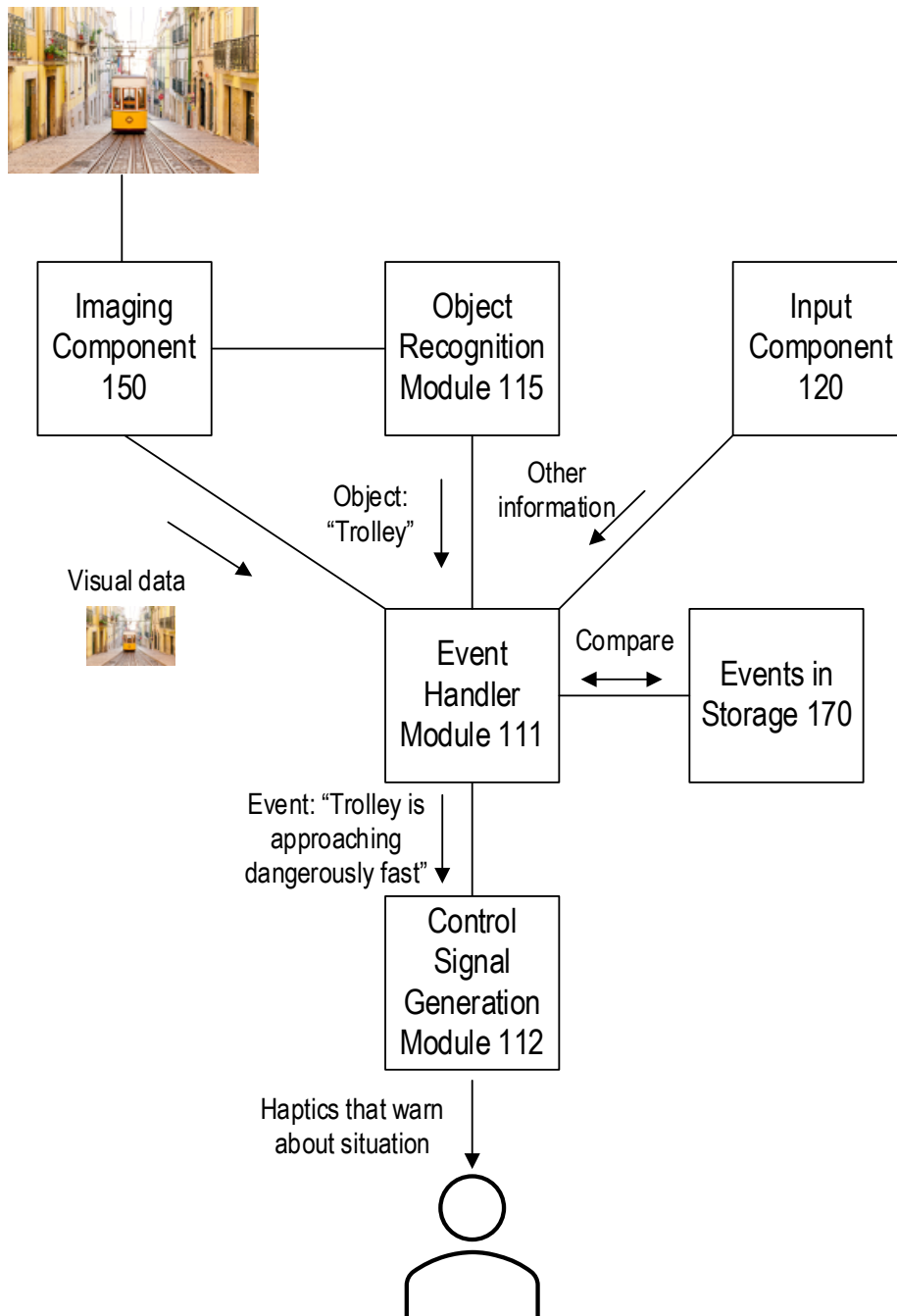
Petitioner maps its base reference's (Douris's) object recognition functionality and its secondary reference's (Rodriguez's) first and second control signal onto limitation 1[c]. Pet. at 18 ("It would have been obvious that these qualify as **"different events"** because they could have occurred at different places and/or different times, and the events involve the wearer being in the vicinity of different types of objects (*e.g.*, businesses vs. persons)."). Petitioner's combination is shown below:



Pictorial based *id.* at 14-21.

However, generating control signals based on recognized objects does not disclose or render obvious generating controls signals based on *events*. Ex. 2001 at ¶ 54. At a fundamental level, objects and events are different. *Id.* For example, objects and events have different ontologies, with objects answering, “what is there?” and with events answering, “what has happened?” and “how do we handle it?” *Id.* While events may include information about objects, it necessarily includes more information about the activity of the objects and subsequent differentiated handling of those events. *Id.* In the example of a streetcar, knowing the event “the streetcar is approaching dangerously fast” includes information about the object “streetcar,” but it necessarily includes more information than the streetcar is present and includes different event handling based on different event types. *Id.*

Thus, implementing events requires completely different structure than implementing object recognition, such as shown in the example below:



Pictorial based on *id.* at 8:11-9:59 and FIG. 2; Ex. 2001 at ¶ 55 (FIG. B). Douris discloses none of this structure because it does not disclose different “event” types.

Id.

Douris never discusses the concept of events and is instead directed to objects only. For example, Douris exclusively discusses retrieving overlay information based on **entities**, i.e. objects:

- In order to obtain the overlay information, **one or more entities** in the surroundings or in nearby locations may be identified in the captured information. For example, entities such as businesses, other buildings or physical landmarks may be identified using pattern recognition software, RFID and/or GPS location. Similarly, **individuals** may be identified using technology such as RFID or other forms of signals transmitted by another individual's device. Ex. 1003 at ¶ 36.
- The overlay information that is obtained may include information that is pertinent to the identified entities. For instance, the overlay information may include directions to the **identified entities**, maps, descriptions, reviews, advertisements, menus, offers, etc. *Id.* at ¶ 37 (emphasis added).
- The overlay information may identify one or more entities such as physical locations, buildings, or individuals, as well as information associated with these entities. *Id.* at ¶ 39 (emphasis added).

- As shown in this example, the maps view can indicate a distance and/or direction to a **destination** (e.g., wavepoint) via text and/or symbols. *Id.* at ¶ 49 (emphasis added).
- Each of the virtual billboards may be placed in close proximity to a **business or entity** with which it is associated. *Id.* at ¶ 50 (emphasis added).
- As shown in this example, the information that is provided in the transparent overlay may include the name of one or more individuals being viewed, enabling the user to easily identify the individuals without remembering their names. *Id.* at ¶ 58 (emphasis added).

Thus, Douris only teaches the concept of entities or objects—not events. For this reason, Petitioner's combination of Douris's object recognition with Rodriguez's first/second control signals does not teach generating first/second control signals representative of differing first/second events.

While Petitioner does not map Rodriguez onto claim 1's "representative of first/second events[.]" Rodriguez likewise teaches only object recognition, not events (and therefore not control signals representative of events). *See generally* Ex. 1004. For example, Rodriguez exclusively discusses rendering haptic signals based on recognized **objects**:

- One aspect of the present technology concerns a mobile device, e.g., an iPhone or Nokia phone, which recognizes a **physical object** in its environment, and identifies and renders a particular haptic signature corresponding to that object. *Id.* at ¶ 43 (emphasis added).
- **Recognition** can be performed by known techniques, including visual search technology. Nokia's Point & Find application is illustrative. Such technology can distinguish, for example, **two different books**, or two different cans of soda, by reference to their visual appearance. *Id.* at ¶ 44 (emphasis added).
- As standardized **object-associated** haptic signatures become more widespread, centralized registries may arise, e.g., servers that store signature data for a variety of **different objects**. *Id.* at ¶ 54 (emphasis added).
- When interacting a recognized **object or locale** (regardless of how it was recognized—visually, by RFID chip, by GPS location, etc.) haptic feedback may be provided to indicate transitory digital information that is crowd-sourced, or made available from existing social networks. *Id.* at ¶ 85 (emphasis added).

Rodriguez therefore does not cure the deficiency in Douris.

Further, Petitioner argues that Douris discloses “different events” by disclosing “being in the vicinity of *different types of objects* (e.g., businesses vs. persons).” Pet. at 18. This mapping fails for three reasons. *First*, this is the exact same argument that Patent Owner traversed during prosecution. As shown below, Patent Owner distinguished the claimed events from the prior art’s concept of “approaching”—or as Petitioner frames it, “being in the vicinity of”—different objects, because different *objects* do not equate to different variety, or types, of *events*:

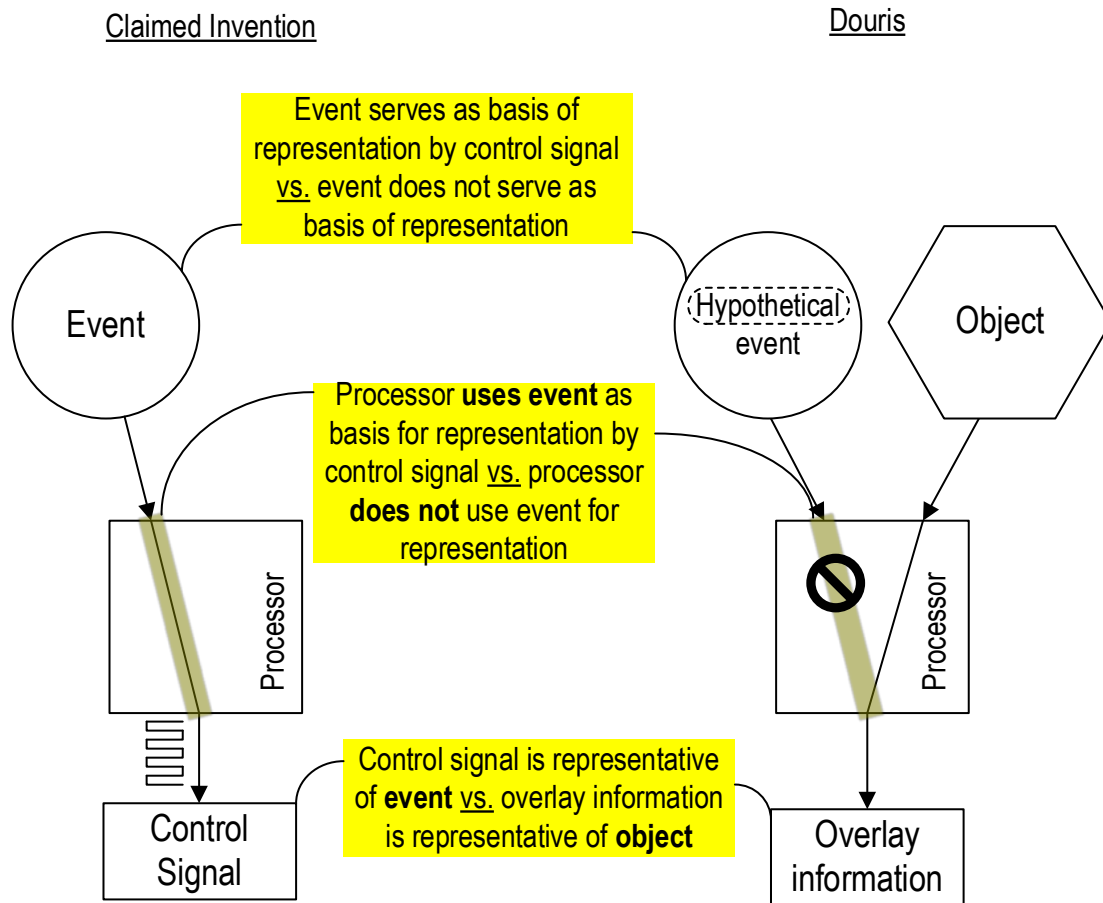
Haddick discloses a device that generates a haptic vibration upon recognizing an object. It discloses, “In other examples, object recognition may determine the user is approaching a curb, doorway, or other object and the glasses or controller would audibly or haptically warn the user.” Haddick at ¶ [0422]. Haddick does not disclose a system programmed to generate different control signals upon detecting different events, or detecting a variety of different events and responds accordingly with different haptic signals for the different events. Haddick does not disclose this level of flexibility.

Ex. 1007 at 298 (highlighting added).

Second, the concept of the “reality overlay device **being in proximity** of a particular [object]” is entirely Petitioner’s; Douris never teaches “being in the proximity of a particular [object]” as a concept at all. *See generally* Ex. 1003. A search for this concept in Douris returns nothing. Douris teaches performing object recognition and retrieving overlay information based on identified objects. *Id.* at ¶ 27. The fact that the user is in proximity to a recognized object is incidental and

irrelevant to Douris's system. The system never knows, and never needs to know, that the wearable device is in proximity to any object, only what is present in captured images. Ex. 2001 at ¶ 61. Thus, Douris never discloses Petitioner's concept of "being in proximity of a particular [object]" as being an "event." *Id.*

Finally, even assuming for the sake of argument that Petitioner's "being in proximity to a particular [object]" qualified as an event—which has already been rejected, Douris never teaches that "the reality overlay device being in proximity of a particular [object]" serves as the basis of representation of control signals. Limitation 1[c] requires that the first/second events serve as the basis of representation by the first/second control signals. Ex. 1001, cl. 1 ("a first control signal and a second control signal **representative** of a first event and a second event, respectively"). That is, because the first/second event are represented by first/second control signals, the first/second events necessarily **serve as the basis for representation**. This distinction over Petitioner's combination, which never teaches that "being in proximity to a particular [object]" serves as the basis of representation, is shown below.



Pictorial based on Ex. 1001, cl. 1, Ex. 1003 (Douris), Pet. at 14-21; Ex. 2001 at ¶ 62 (FIG. E). Hypothetically, as shown above, even if Douris taught that “being in proximity to a particular [object]” is an event, Douris never teaches what to do with that fact. Ex. 2001 at ¶ 63. Indeed, Douris never teaches that the fact of proximity serves as the basis of representation of overlay information. *Id.* Rather, **all** of Douris’s overlay information is representative of objects (e.g., restaurants, people, cars, etc.), **never** the fact of proximity. *See, e.g.*, Ex. 1003, FIG. 5, 6, 7. In FIG. 5, for example, only restaurant objects serve as the basis of representation by overlay

information. Ex. 1003, FIG. 5, ¶¶ 50-57. In FIG. 6, only persons serve as the basis of representation, never events. *See* Ex. 1003 at FIG. 6, ¶¶ 58-60. Finally, in FIG. 7, only objects such as cars, trees, and recycling locations serve as the basis of representation. *See* Ex. 1003 at FIG. 7, ¶ 61. There is no teaching that the fact of “proximity” serves as the basis of representation—only the different object types. *See id.*

In sum, Petitioner's mapping of “being in proximity to a particular person, business or other entity” onto this limitation fails.

2. There is no motivation to combine Douris with Rodriguez

a) Petitioner fails to demonstrate a valid reason to modify Douris with Rodriguez

Petitioner fails to demonstrate motivation to combine. “Obviousness [...] requires ‘a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.’” *Johns Manville Corp. v. Knauf Insulation, Inc.*, IPR2018-00827, Paper 9 at 13 (PTAB Oct. 18, 2018) (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)) (informative).

Specifically, a POSA would not have been motivated to modify Douris with Rodriguez because Douris achieves its stated objective of providing overlaid information on a display without the need for additional feedback in the form of

haptics. Ex. 2001 at ¶ 64. For example, a POSA would understand that Douris's objective was a device "capable of generating an overlay in correlation with physical surroundings being viewed through the device." *Id.* A POSA reading the Douris disclosure would have observed that it sufficiently taught how to achieve that objective, leaving no gap or deficiency. *Id.* Specifically, a POSA would have understood that Douris teaches, for example, how to capture visual inputs (Ex. 1003 at ¶ 24), audio inputs (*id.* at ¶ 25), and location inputs (*id.* at ¶ 26), how to obtain overlay information (*id.* at ¶ 28-30), how the reality overlay device superimposes the overlay information onto the device's lenses (*id.* at ¶ 30) and the audio overlay via speakers (*id.* at ¶ 31). Further, Douris expressly stated that requiring interaction from a device—such as Rodriguez—may be "difficult or unsafe for the user." *See id.* at ¶ 3. Instead, Douris taught passively receiving information—everything else was a distraction. *See id.* at ¶ 4. Thus, a POSA reading Douris would not have seen a gap or deficiency in its disclosure to be motivated to look to a secondary reference, since Douris already teaches sufficiently how to provide visual and audio overlays. Ex. 2001 at ¶ 64. *See In Re Nuvasive, Inc.*, 842 F.3d 1376, 1384 (Fed. Cir. 2016) ("the PTAB never articulated why the **additional information** [provided by the secondary reference] **would benefit a PHOSITA** when implanting a posterior lumbar interbody fusion implant") (emphasis added).

Even if a POSA saw some gap or deficiency in Douris, he or she would not look to Rodriguez because Douris already possesses the benefit provided by Rodriguez. Ex. 2001 at ¶ 66. When the base reference already possesses the alleged benefit of the secondary reference, that evidences no motivation to combine. *See Cisco Systems, Inc. v. K.Mizra LLC*, IPR2021-00593, Paper 41 at 30 (PTAB Sep. 19, 2022) (“we find that Petitioner does not explain sufficiently why a person of ordinary skill in the art would have looked to [secondary reference] to modify [the base reference], as proposed, when [the base reference] provides all of the Petitioner-identified benefits or advantages of the proposed combination of [the base reference] and [the secondary reference].”). Petitioner claims Rodriguez would supply Douris with the benefit of Rodriguez’s “additional modality – the sense of touch . . . provid[ing] an effective way of getting the user’s attention which, in some situations, would have been superior to the video overlay information disclosed in Douris.” Pet. at 23. According to Petitioner, the “haptic feedback could have been provided without impacting the user’s field of vision and would have been useful for vision-impaired users.” *Id.*

As Petitioner acknowledges, however, Douris already possessed this benefit, since Douris teaches using an audio overlay for the very purpose of providing overlay information without disrupting the user’s field of vision. Ex. 1002 at ¶ 31 (“audio overlay information may be provided via one or more audio outputs (e.g.,

speakers) of the reality overlay device. In this example, the reality overlay device includes a headphone 110 that includes a speaker on the internal side of both the left and right arms of the reality overlay device. In this manner, a user may receive audio overlay information such as directions that would **not impact the user's field of vision.**"). Petitioner argues that "haptic feedback would have been superior when a quiet environment must be observed or when it was too noisy to hear audio." Pet. at 24. But it is unsupported speculation on Petitioner's declarant's part that a POSA reading the Douris disclosure would have thought of these extreme use cases. *See* Ex. 1002 at ¶ 73.

Notably, none of Douris's use cases, e.g., on street with restaurants, in a company's common area, etc., suggest that the overlay device is to be used in a quiet area such as a library or movie theater or in overly loud area such as a concert. Ex. 2001 at ¶ 67. Indeed, not even Petitioner's declarant claims that a POSA reading Douris would envision using the overlay device in a quiet or noisy environment, as Petitioner's motivation to combine rationale requires. *See* Ex. 1002 at ¶ 73 (silent as to whether a POSA would contemplate to use the overlay device in overly quiet or noisy environments). In sum, a POSA would not have seen a benefit to modifying Douris's overlay device with Rodriguez's haptics signals because Douris already possessed the benefit Rodriguez would have provided for all reasonably understood

use cases and Petitioner cannot show that its fabricated corner case would have been contemplated by the POSA without the benefit of hindsight bias. Ex. 2001 at ¶ 67.

Even if Petitioner could show that (1) a POSA would have seen a gap or deficiency in Douris to prompt looking to a secondary reference and (2) the POSA, without the benefit of hindsight bias, somehow envisioned using Douris's overlay device in a quiet or overly noisy environment, Petitioner nevertheless cannot show the POSA would have sought to use haptics to represent the Douris's overlay information. Ex. 2001 at ¶ 68.

Douris teaches that the retrieved overlay information is visual or semantically dense information. Ex. 1003 at ¶¶ 29 (visual information), 30 (text, symbols, images), 37 (maps, descriptions, reviews, advertisements, menus, offers), 40 (menus, advertisement), 41 (images, video, menu), 49 (maps, text, symbols, road signs), 50-51 (virtual billboards, ordering interface), 52-57 (virtual billboard, reviews), 58-60 (social network information, connections), 61 (environmental information, nature facts), 62 (social, weather, instant messaging).

Petitioner and its declarant neglect to show why a POSA would choose to represent any of these classes of information haptically. *See generally* Pet. at 21-24 (silent as to why a POSA would choose to represent Douris's information haptically); *see also generally* Ex. 1002 at ¶¶ 71-74 (same). To the contrary, a POSA reading Douris would not think to represent Douris's visual and semantically dense

overlay information using haptics. Ex. 2001 at ¶ 68. Petitioner should not be allowed to fix these deficiencies on reply. *See Merck Sharp & Dohme Corp. v. Microspherix LLC*, IPR2018-00393, Paper 21 at 3 (PTAB Sept. 10, 2018) (denying motion to submit supplemental information where petitioner seeking to bolster its petition by responding to issues raised in the patent owner's preliminary response and issues raised in the institution decision, and where petitioner was further trying to modify the reason to combine the references disclosed in the petition).

b) Petitioner fails to demonstrate a reasonable expectation of success

Finally, Petitioner also fails to show a reasonable expectation of success in encoding Douris's overlay information using Rodriguez's first and second control signals. "An obviousness determination requires finding that [an ordinarily skilled artisan] would have been motivated to combine or modify the teachings in the prior art *and would have had a reasonable expectation of success in doing so.*" *Regents of Univ. of Cal. v. Broad Inst., Inc.*, 903 F.3d 1286, 1291 (Fed. Cir. 2018) (emphasis added). "Whether the prior art discloses a claim limitation, whether a skilled artisan would have been motivated to modify or combine teachings in the prior art, and whether she would have had a reasonable expectation of success in doing so are questions of fact." *Univ. of Strathclyde v. Clear-Vu Lighting LLC*, 17 F.4th 155, 160 (Fed. Cir. 2021) (emphasis added).

Petitioner appears to take for granted this required showing, stating generically that a POSA “would have found the disclosures of Douris and Rodriguez more than sufficient to implement the relied-upon teachings, using conventional techniques and without undue experimentation[.]” (Pet. at 24) and not much more. This conclusory statement is insufficient to meet Petitioner’s burden of pointing out with particularity the evidence supporting its grounds. *See* 35 U.S.C. § 312(a)(3) (The Petition must identify “with particularity ... the evidence that supports the grounds for the challenge to each claim.”); *Eli Lilly & Co. v. Teva Pharms. Int’l GmbH*, 8 F.4th 1331, 1348–49 (Fed. Cir. 2021) (“[I]t was, at all times, [petitioner’s] burden to show that the claims would have been obvious, including that a skilled artisan would have had a reasonable expectation of success in achieving the claimed invention.”); *see also Juniper Networks, Inc. v. Correct Transmission, LLC*, IPR2021-00682, Paper 26 (PTAB Oct. 3, 2023) (“the burden of proving a reasonable expectation of success is on Petitioner.”).

Affirmative evidence of reasonable expectation of success in the Petition is not optional. *See Wasica Finance GmbH v. Continental Automotive Systems, Inc.*, 853 F.3d 1272, 1286–87 (Fed. Cir. 2017) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify with particularity the evidence that supports the grounds for the challenge to each claim. . . . [T]he expedited nature of IPRs bring with it an obligation for

petitioners to make their case in their petition to institute.”). Petitioner’s failure to adduce any affirmative evidence of a POSA’s reasonable expectation of success of representing Douris’s overlay information with Rodriguez’s control signals dooms its motivation to combine argument. Petitioner should not be allowed to backfill this evidence on reply. *See Merck Sharp & Dohme*, IPR2018-00393, Paper 21 at 3.

Petitioner’s declarant quotes Rodriguez for the proposition that “use of control signals to provide haptic feedback was well-known before March 2013.” Ex. 1002 at ¶ 74 (citing various passages of Rodriguez for the proposition that delivering haptic feedback through control signals was within the skill of a POSA). But Petitioner’s declarant fails to address the expectation of success of making the combination, i.e., modifying Douris’s overlay device with Rodriguez’s control signals. *See id.* Importantly, Petitioner’s declarant never mentions that representing Douris’s visual and semantically dense overlay information using haptic control signals carried with it a reasonable expectation of success. *See id.*

To the contrary, a POSA understanding the visual and semantic nature of Douris’s overlay information would not have reasonably expected to be successful in representing such information using Rodriguez’s haptic control signals. Ex. 2001 at ¶ 70. This is because attempting to represent Douris’s visual and semantic information, e.g., maps, menus, and billboards, using haptic control signals would require the invention of new techniques to communicate visual and semantic

information through touch. *Id.* This would have required substantial experimentation, research and development, and risk of failure. *Id.*

In conclusion, Petitioner fails to meet its burden of demonstrating a motivation to combine Douris with Rodriguez.

3. Dependent claims 2, 5, & 7

Dependent claims 2, 5, and 7 are not unpatentable for the same reasons independent claim 1 from which they depend is not unpatentable.

B. Claim 10 and dependent claims 11 & 15

1. 10[b]: The Douris-Rodriguez combination does not teach “a processor configured to generate the augmented reality space coincident with the physical space”

The asserted combination does not teach “a processor configured to **generate** the augmented reality space coincident with the physical space” because Douris’s remote server, which Petitioner maps to claim 10’s processor, is never taught to generate the augmented reality space. Limitation 10[b] requires a processor of the augmented reality device to be configured to **generate** the **augmented reality space**. Petitioners map a processor in Douris’s remote server to the claimed processor. Pet. at 43 (“A skilled artisan would have understood and found it obvious that the server’s processor – as the component responsible for executing the instructions of computer programs – would have been configured to carry out the functions of limitation 10[b].”).

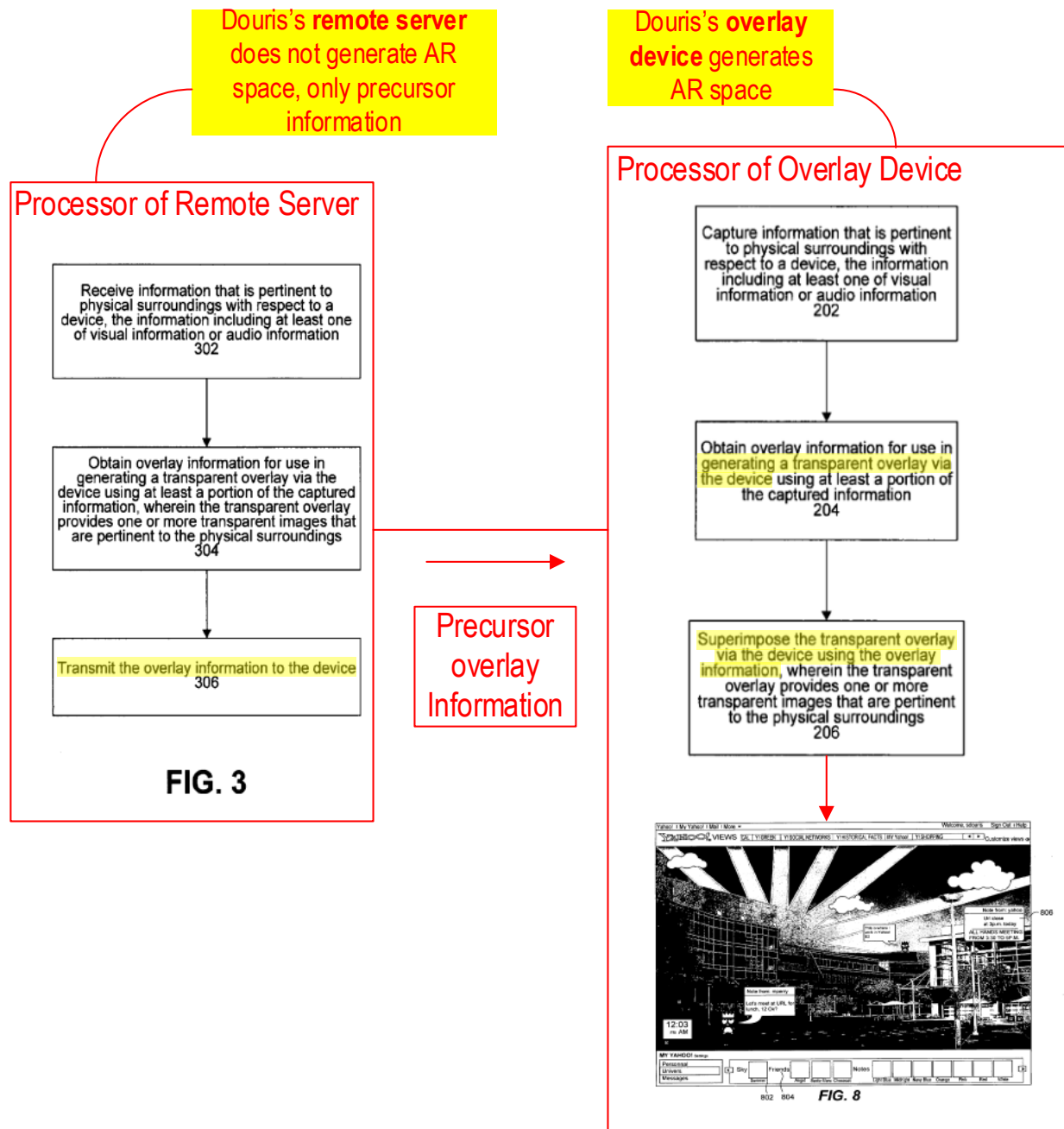
To succeed at showing obviousness, Petitioner therefore must show that Douris's remote server's processor is configured to “**generate** the augmented reality space[.]” However, Douris never teaches that its remote servers generate augmented reality space. *See* Ex. 1003 at ¶ 46-47; Ex. 2001 at ¶ 71. Rather, Douris teaches that its wearable device generates the augmented reality space, with its remote servers merely obtaining precursor overlay information for the wearable device to subsequently use when generating augmented reality space. Ex. 1003 at ¶ 46-47; Ex. 2001 at ¶ 71. Douris makes this explicit, stating:

The server may obtain (e.g., retrieve and/or generate) overlay information for use in generating a transparent overlay via the device using at least a portion of the captured information and/or at least a portion of any user information that has been received at 304, wherein the transparent overlay provides one or more transparent images that are pertinent to the physical Surroundings. For instance, the server may identify one or more entities in the visual information using at least a portion of the received information. Thus, the server may support pattern recognition, as well as other features. The server may obtain information that is pertinent to the identified entities (e.g., from one or more databases) and/or ascertain a desired placement of the overlay information with respect to the identified entities, where

the overlay information indicates the desired placement of visual overlay information within the transparent overlay. The server may then transmit the overlay information to the device at 306.

The reality overlay device may be used to generate a transparent overlay for use in a variety of contexts. Examples of some of these uses will be described in further detail below with reference to FIGS. 4-8.

Ex. 1003 at ¶¶ 47-48 (emphasis added). Thus, Douris's server obtains overlay information and Douris's wearable device generates the transparent overlay. Douris's FIGS. 2-3, which describes the processing flow of the reality overlay device (*id.* at ¶ 35) and the remote server (*id.* at ¶ 46) respectively, confirms that the former generates the augmented reality space while the latter merely sends the overlay information for use by the wearable device in rendering it.



Ex. 1003 at FIGS. 2-3, 8 (annotated in red); Ex. 2001 at ¶ 72 (FIG. F). As shown, the processor of the remote server, which Petitioner argues meets the processor in limitation 10[b], only obtains and transmits precursor overlay information to the wearable device. *See id.*, FIG. 3. It is never taught to generate the augmented reality

space, as required by this limitation. Ex. 2001 at ¶ 72. As a result, Petitioner has failed to meet their burden of demonstrating that Douris discloses this limitation.

Petitioner argues that “by positioning imagery of the transparent overlay information so that the imagery is displayed in association with identified physical objects, the server ‘generates the augmented reality space coincident with the physical space.’” Pet. at 45 (citing Ex. 1003 at ¶ 47, 29, 30). None of these paragraphs discloses the server positioning any imagery. In ¶ 47, Douris teaches that the server only retrieves or **generates overlay information, which are the images subsequently used by overlay device to generate the augmented reality space:** “server may obtain (e.g., retrieve and/or generate) overlay information.” Ex. 1003 at ¶ 47. But there is no disclosure of the server “positioning imagery of the transparent overlay information.” In fact, Douris teaches that its overlay device positions the imagery: “The **reality overlay device may superimpose** the transparent overlay via the device using the overlay information via one or more of the lenses 100, wherein the transparent overlay provides one or more transparent images (e.g., static or video) that are pertinent to the physical surroundings. The positioning of the transparent images may depend upon the location of any identified entities in the user's field of vision (e.g., to reduce obstruction of the user's field of vision).”).

Further, in ¶¶ 29-30, Douris describes the augmented reality generating function of the overlay device, not the server: “The **reality overlay device may**

superimpose the transparent overlay via the device using the overlay information via one or more of the lenses 100, wherein the transparent overlay provides one or more transparent images (e.g., static or video) that are pertinent to the physical surroundings.” *Id.* at ¶ 30 (emphasis added). Therefore, Petitioner has not met their burden of demonstrating that Douris teaches limitation 10[b].

2. 10[b][1]: The Douris-Rodriguez combination does not teach “a processor configured . . . augment the at least one physical object with one or more virtual objects in the augmented reality space”

Petitioner’s asserted combination does not disclose limitation 10[b][1] for the same reasons it does not disclose limitation 10[b], because Petitioner again conflates functionality of Douris’s server with that of its overlay device. Limitation 10[b][1] requires the processor of the augmented reality device to be configured to “augment the at least one physical object with one or more virtual objects in the augmented reality space.” Petitioner again argues that the *server* in Douris “augment[s] the at least one physical object with one or more virtual objects in the augmented reality space[.]” Pet. at 47. As demonstrated above, *supra* VIII.B.1, Douris’s server at most generates overlay information that is later used for augmenting physical objects, but does not itself augment physical objects. Ex. 1003 at ¶¶ 46-47. None of Petitioner’s cited paragraphs demonstrate otherwise.

- ¶¶ 29-30: These paragraphs discuss the overlay functionality of a different reality overlay device, not the server that Petitioner asserts

meets limitation 10[b][1]. *Id.* at ¶¶ 29 (describing overlay information obtained by the reality overlay device but never mentioning a server), 30 (describing the reality overlay device to “superimpose the transparent overlay via the device using the overlay information via one or more of the lenses 100, wherein the transparent overlay provides one or more transparent images (e.g., static or video) that are pertinent to the physical surroundings.”).

- ¶ 41: This paragraph continues to describe the overlay functionality of the reality overlay device, not the server that Petitioner asserts meets limitation 10[b][1]. *Id.* at ¶ 41 (“The reality overlay device may then superimpose the transparent overlay via the device using the overlay information, wherein the transparent overlay provides one or more transparent images that are pertinent to the physical surroundings at 206.”).
- ¶ 47: While this paragraph refers to the Douris’s server, it never describes such server to augment at least one physical object with one or more virtual objects. Instead, Douris describes its server to merely retrieve or generate the precursor information for the reality overlay device to use when augmenting physical objects. *Id.* at ¶ 47 (“The server may obtain (e.g., retrieve and/or generate) overlay information

for use in generating a transparent overlay via the device using at least a portion of the captured information and/or at least a portion of any user information that has been received at 304, wherein the transparent overlay provides one or more transparent images that are pertinent to the physical surroundings.”).

- FIGS. 5 & 6: These figures show the display images generated by the reality overlay device, not the server. *Id.* at ¶¶ 50 (“FIG. 5 is a diagram illustrating an example local view . . . [using] the transparent overlay that is **superimposed by a reality overlay device** [which] may include one or more virtual billboards.”), 58-60 (describing FIG. 6 as illustrating a social view using that the reality overlay device renders using precursor information retrieved from remotely located server or local devices).

For these reasons, Petitioner fails to meet its burden of showing that Douris’s server’s processor, which is the only component Petitioner maps to limitation 10[b][1], augments the at least one physical object with one or more virtual objects in the augmented reality space.

3. 10[b][2]: The Douris-Rodriguez combination does not teach “determine an event associated with the augmented reality environment”

As demonstrated above, *supra* VIII.A.I, the Douris-Rodriguez combination does not teach the concept of events. For similar reasons, the combination cannot teach to “determine an event associated with the augmented reality environment.”

4. 10[b][3]: The Douris-Rodriguez combination does not teach “generate a control signal based on the determined event”

Again, as demonstrated above, *supra* VIII.A.I, the Douris-Rodriguez combination does not teach the concept of events, nor generating control signals representative of them. For similar reasons, the combination cannot teach to “generate a control signal based on” events that were never taught.

Setting aside the concept of events, Petitioner also confuses the functionality of Douris's server with that of a different disclosed device. Limitation 10[b][3] requires the processor of the augmented reality device “generate a control signal based on the determined event.” Ex. 1001, cl. 10. Petitioner maps Douris's server to the claimed augmented reality device, arguing that “[t]he ‘control signal’ for purposes of limitation 10[b][3], under the proposed combination, corresponds to the signal generated and transmitted by the server in Douris.” Pet. at 49. To succeed in meeting its burden, Petitioner must show there is a reasonable likelihood that Douris discloses that its server generates some control signal. Petitioner admits in its

Petition addressing claim 1 that it is Rodriguez's mobile device generates control signals, not Douris's server: "Rodriguez further teaches that, in order to output haptic feedback in accordance with a haptic signature, **the mobile device's processor is configured to generate 'control signals'** that instruct the device's haptic output device (such as an actuator) to provide feedback in accordance with the haptic signature" Pet. at 21 (citing Ex. 1004 at ¶¶ 50, 63, 71, 74, 92). Since, in Petitioner's own words, Rodriguez's "mobile device's processor is configured to generate 'control signals[,]' " (*id.*), the combination would have Rodriguez's mobile device generate the control signal rather than Douris's remote server. Ex. 2001 at ¶ 77. Petitioner does not argue that a POSA combining Douris with Rodriguez would have a reason to modify where the control signals are generated. *Id.* Indeed, a POSA would not have considered implementing control signal generation in Douris's server rather than locally at the mobile device because of issues with network lag and jitter. *Id.*

Petitioner cites Dr. Cooperstock's declaration at ¶¶ 87-89 for support, but Dr. Cooperstock is silent in these paragraphs about Douris's server generating any control signal. Ex. 1002 at ¶¶ 87 (alleging with respect to claim 7 that the processor of the reality overlay device receives "a signal representative of the first and second events" but silent about Douris's server generating control signals), 88 (alleging with respect to claim 7 that it would have been obvious that the processor in the reality

overlay device would have “**generate[d] the control signal based on the received signal,**” but silent as far as Douris’s server generating the control signal), 89 (alleging with respect to claim 7 that a POSA “could have carried out [the Douris-Rodriguez] combination in a number of straightforward ways[,]” but silent about Douris’s server generating any control signal). Moreover, Petitioner’s citation to Rodriguez at ¶¶ 18-19 only confirms that a POSA would be taught to implement control signal generation using Rodriguez’s mobile phone rather than Douris’s server. Ex. 1004 at ¶¶ 18-19 (describing the disclosed mobile device to generate the control signals that render haptic signatures).

Petitioner, through its mapping choice, is required to show that Douris’s server generates the claimed control signal. Pet. 49-50. Because Petitioner has not shown that Douris’s server generates any control signal, it cannot succeed at meeting its burden.

5. Dependent claims 11 & 15

Dependent claims 11 and 15 are not unpatentable for the same reasons independent claim 10 from which they depend is not unpatentable.

C. Independent claim 17 and dependent claims 18, 21, & 23

1. Independent claim 17

Independent claim, which recites similar limitations as independent claims 1 and 10, is not unpatentable for the same reasons those claims are not unpatentable.

2. Dependent claims 18, 21, & 23

Dependent claims 18, 21, and 23 are not unpatentable for the same reasons independent claim 17 from which they depend is not unpatentable.

IX. 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, the sole Ground asserted by the Petition suffers from several deficiencies fatal to the merits of Petitioner’s arguments, including, for example, the Douris-Rodriguez combination’s failure to disclose generating a first/second control signal representative of a first/second event and Petitioner’s deficient motivation to

combine analysis.

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 (Ex. 2004, 4; Ex. 2008, 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 '222 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 (Ex. 2009, 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. Ex. 2005, n. 1, 15. Although Petitioner unsuccessfully moved for transfer of venue to the Northern District of California, it also admitted that 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 in 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 (Ex. 2004, 3), completed claim construction two months ago (Ex. 2006). Fact discovery in the parallel litigation will be complete by October 6, 2023—approximately two months before the Institution Decision in this proceeding. Ex. 2008, 1.

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. Ex. 2008, 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 similar prior art addressed in the Petition. *See, e.g.*, Ex. 2007, 101-102.

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.

X. CONCLUSION

Petitioner has not established a reasonable likelihood that it will prevail in establish unpatentability of any challenged claim of the '222 Patent, and therefore the Board should deny institution of *inter partes* review of the '222 Patent.

Respectfully Submitted,

Dated: September 12, 2023

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Patent Owner's Preliminary Response
IPR2023-00944 (U.S. Patent No. 10,269,222)

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(Case No. IPR2023-00944)

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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 13,002 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.

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