

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SUPERCELLOY,
Petitioner,

v.

GREE, INC.,
Patent Owner.

Case PGR2020-00063
Patent 10,406,432 B2

Before LYNNE H. BROWNE, HYUN J. JUNG, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

BROWNE, *Administrative Patent Judge*.

DECISION
Denying Institution of Post-Grant Review
35 U.S.C. § 324(a)

I. INTRODUCTION

GREE, Inc. (“GREE”) is the owner of U.S. Patent No. 10,406,432 B2 (“the ’432 patent”). Supercell Oy (“Supercell”) filed a petition requesting post-grant review of claims 1–9 of the ’432 patent. Paper 2 (“Pet.”). GREE, in turn, filed a preliminary response. Paper 8 (“Prelim. Resp.”). After considering the petition and the preliminary response, as well as all supporting evidence, we determine the petition does not demonstrate that it is more likely than not that at least one of the challenged claims of the ’432 patent is unpatentable. 35 U.S.C. § 324(a). Thus, we do not institute post-grant review of claims 1–9 of the ’432 patent.

B. Related Proceedings

Petitioner indicates that there are no related matters involving the ’432 patent. Pet. 1. Patent Owner does not contest this assertion.

C. The ’432 Patent

The ’432 patent is directed to “a virtual image display program, a virtual image display apparatus, and a virtual image display method capable of providing information while reducing the loss of a sense of immersion in [the] virtual space.” Ex. 1001, 1:43–46. Reduction of the loss of a sense of immersion in the virtual space is achieved by eliminating the “need to display a button for executing information provision on an image of the virtual space.” *Id.* at 2:1–3.

The ’432 patent provides “a virtual image display program for displaying an image of virtual space on a display that displays an image by using a virtual image display apparatus, a detector for identifying a position and direction of a certain body part of a player, and the display.” Ex. 1001, 1:48–52. The ’432 patent identifies the certain body part of the player as

either the head or eyes of the player. *Id.* at 3:55–57, 60–62. The virtual image display apparatus includes “a controller and a storage unit where an information providing condition and to-be-provided information is recorded.” *Id.* at 1:53–55. The virtual image display program causes “the controller to function as a space image output unit and an information provider.” *Id.* at 1:56–57. The space image output unit displays “the image of the virtual space on the display in accordance with the position and direction of the certain body part of the player.” *Id.* at 1:58–60. The information provider outputs “the to-be-provided information when the information providing condition regarding the position and direction of the certain body part of the player is satisfied.” *Id.* at 1:61–63.

The virtual display program uses the gaze position of the player. *See, e.g.* Ex. 1001, 2:6–8. The gaze position of the player is “identified from the position and direction of the certain body part of the player.” *Id.* at 2:10–11. Such identification is determined by gaze identifying unit 24 which identifies “a gaze position P1 of the player 101 in the virtual space, on the basis of the calculated position and direction of the head” or by detecting the eyeball movement or light reflected from the interior of the iris of player 101. *Id.* at 6: 32–34, 45–46.

Figure 5, reproduced below, shows the virtual space displayed to the user.

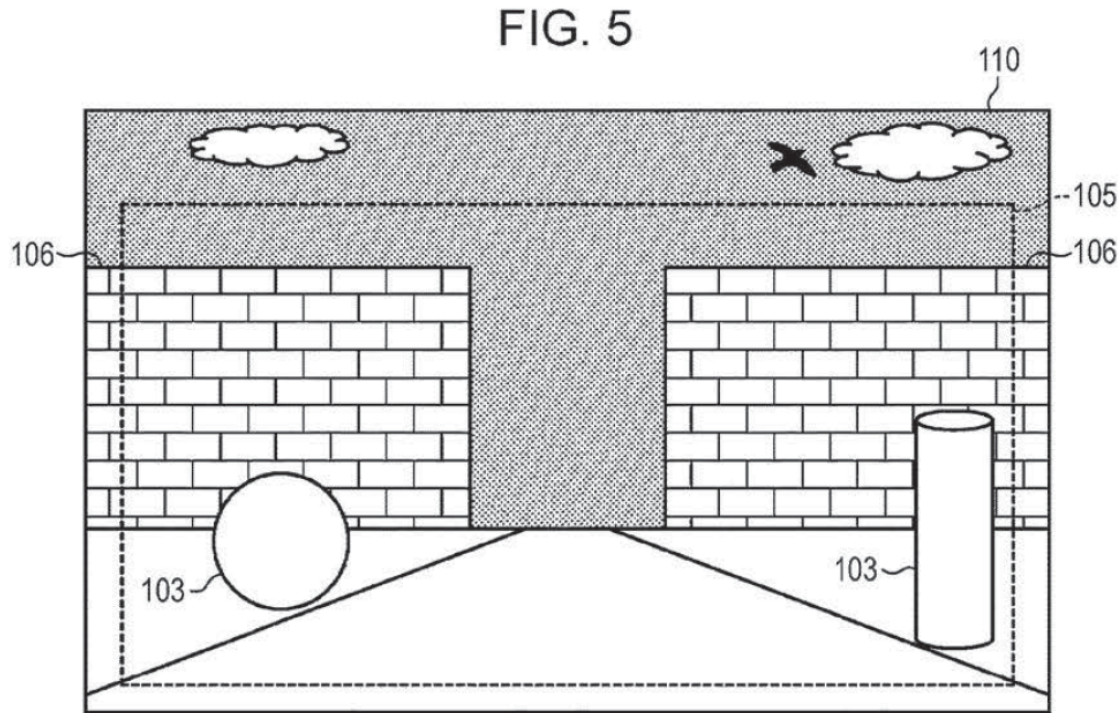


Figure 5 is “a schematic diagram illustrating an exemplary embodiment of an image that may be displayed on a virtual image display.” Ex. 1001, 3:19–21. The virtual space shown in Figure 5 includes virtual space image 110 including gameable area 105 (corresponding to the claimed first area) in the shape of a rectangle that covers most of virtual space image 110 surrounded by an area outside of gameable area 105 (corresponding to the claimed second area). Virtual space image 110 includes target objects 103 inside gameable space 105 and other objects 106 which appear in both gameable space 105 and the area outside of gameable space 105. It also includes moving body 112 (not labeled in this figure) “which may appear as a bird moving outside the gameable area 105.” *Id.* at 9:26–27.

In the claimed embodiment, the information providing condition is satisfied when the user's gaze position moves to the second area from the first area. Ex. 1001, 16:62–64. When the information providing condition is satisfied, the to-be-provided information is displayed in the second area. *Id* at 16:59–61.

D. Representative Claim

The '432 patent includes nine claims, of which claims 1, 8, and 9 are independent. All three independent claims recite similar limitations and vary only as to type, where claim 1 is directed to a “computer program product . . . executable by a virtual display apparatus,” claim 8 to a “virtual image display apparatus,” and claim 9 to a “virtual image display method.” Ex. 1001, 16:31–33, 17:61, 18:31. Representative claim 1 is reproduced below:

1. A computer program product embodied on a non-transitory computer-readable medium, comprising code executable by a virtual image display apparatus having at least a processor and a memory, the memory being configured to store an information providing condition of the virtual image display apparatus and being further configured to store to-be-provided information, to cause the virtual image display apparatus to carry out the following steps:

detecting, with a sensor operationally linked to the virtual image display apparatus, a movement of a body part of a player, the body part comprising at least one of a head of the player and an eye of the player, and the sensor being at least one of the set of: a gyro sensor configured to measure movement of the head of the player, an acceleration sensor configured to measure movement of the head of the player, a geomagnetic sensor configured to measure movement of the head of the player and a line-of-sight sensor configured to measure movement of the eye of the player; and

determining, based on the movement of the body part of the player, a position and direction of the body part of a player;
displaying, on a display operationally linked to the virtual image display apparatus, in accordance with the position and direction of the body part of the player, an image of a virtual space including a first area and a second area; and
with the virtual image display apparatus, providing, when the information providing condition is satisfied, the to-be-provided information to the player by displaying the to-be-provided information in the second area;
wherein the information providing condition is a condition of a gaze position moving to the second area from the first area, the gaze position being specified by at least one of the body part of the player being in a specified position or the direction of the body part of the player being at least a specified direction.

Ex. 1001, 16:31–67.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–9 are unpatentable based on the following grounds.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–9	101	Ineligible Subject Matter
1–9	112(a)	Inadequate Written Description
1, 2, 4, 5, 8, 9	102(b)	Ross ¹
3	103(a)	Ross
3	103(a)	Ross, Lankford ²
6	103(a)	Ross, Rimon ³

¹ US 9,392,212 B1, issued July 12, 2016 (Ex. 1004, “Ross”).

² “Eye Tracking Research & Applications Symposium 2000” (Ex. 1005, “Lankford”).

³ US 2016/0093105 A1, published Mar. 31, 2016 (Ex. 1006, “Rimon”).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
7	103(a)	Ross, ObjectLabel ⁴
1, 2, 4, 5, 8, 9	102(b)	Ballard ⁵
3	103(a)	Ballard, Lankford
6	103(a)	Ballard, Rimon
7	103(a)	Ballard, ObjectLabel

Petitioner relies on the Declaration of Joseph J. LaViola, Ph.D. (Ex. 1003). In its response, Patent Owner relies on the Declaration of Michael Shamos, Ph.D., J.D. (Ex. 2001).

III. ANALYSIS

A. Discretion Under 35 U.S.C. § 325(d)

1. Principles of Law

Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. As stated in 35 U.S.C. § 325(d), in pertinent part:

In determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or *arguments* previously were presented to the Office.

The Board recently explained a two-part framework that the Board uses under § 325(d):

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or

⁴ “ObjectLabel” (Ex. 1007, “ObjectLabel”).

⁵ US 2015/0153913 A1, issued June 4, 2015 (Ex. 1008, “Ballard”).

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 Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). The Board further explained that “[i]f a 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.” *Id.* at 8–9. “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.” *Id.* at 9. The *Becton, Dickinson*⁶ factors, which address discretion to deny when a Petition presents the same or substantially the same prior art or arguments previously presented to the Office, are instructive. *Id.* (“[T]he *Becton, Dickinson* factors provide useful insight into how to apply the framework under 35 U.S.C. § 325(d).” (Footnote omitted)).

In this case, the ground of unpatentability relevant to the § 325(d) inquiry is not based on prior art. Rather, it is based on unpatentability of the challenged claims under 35 U.S.C. § 101. Thus, an issue relevant to this case is whether the arguments presented in the Petition as to unpatentability of the challenged claims under 35 U.S.C. § 101 are the same or substantially the same arguments previously presented to the

⁶ *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”).

Office. *See Becton, Dickinson*, IPR2017-01586, Paper 8 at 17–18 (identifying factors that compare a petition’s arguments with issues and arguments raised in the prosecution history). To answer this question, we compare the issues addressed by the Office during examination in this case with the arguments presented in the Petition.

2. *Prosecution History of the ’432 Patent*

During prosecution of the ’432 patent, the Examiner rejected the original claims under 35 U.S.C. § 101. Ex. 1002, 71–76. Specifically, the Examiner determined that original claims 1–9 were directed to “the abstract idea of conducting a game by collecting, analyzing and displaying games data.” *Id.* at 72. Having determined that original claims 1–9 were directed to an abstract idea, the Examiner analyzed them “to determine whether there were additional limitations recited that amount to significantly more than the abstract idea.” *Id.* The Examiner determined that there were additional limitations, but that the additional limitations were directed to “computer components [that were] generically claimed to enable the management of the game by performing the basic functions of: (i) receiving, processing, and storing data.” *Id.* According to the Examiner “[a]dding hardware that performs ‘well understood, routine, conventional activit[ies]’ previously known to the industry’ will not make claims patent-eligible.” *Id.* at 72–73 (citing *In re TLI Communications*, 823 F.3d 607, 612 (Fed. Cir. 2016)). The Examiner also determined that original claims 1–9 do not “recite a technological solution to a technological problem” and that “[t]aking the additional elements individually and in combination, the additional limitations of [original] Claims 1 to 9 do not add significantly more because they are simply an attempt to limit the abstract idea to a particular

technological environment.” *Id.* at 73–75. In accordance with these determinations, the Examiner rejected original claims 1–9 as not being directed to patent-eligible subject matter. *Id.* at 76.

In response to this rejection, Patent Owner amended claims 1–9 to overcome the rejection under § 101 and presented extensive arguments explaining how the proposed amendments rendered amended claims 1–9 patent-eligible. Ex. 1002, 30–53. In response the Examiner issued a Notice of Allowability. *Id.* at 11. The Notice of Allowability included an Examiner’s Reasons for Allowance. *Id.* at 12. In the Reasons for Allowance, the Examiner explicitly stated that “[c]laims 1 to 9 have been reviewed and found to not be directed towards an abstract idea under [2019 Revised Subject Matter Eligibility Guidance] [(“]2019 PEG[”)]. Claims 1 to 9 do not recite mathematical concepts, mental processes or certain methods of organizing human activity as outlined in the 2019 PEG.” *Id.* The Examiner also stated that even if these claims were directed to patent-ineligible subject matter, they “recite additional elements which would apply or use the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment (i.e., integrate the abstract idea into a practical application under 2019 PEG).” *Id.*

3. Arguments Presented in the Petition

In the Petition, Petitioner asserts that the 2019 PEG was not addressed during prosecution. Pet. 24. “A Notice of Allowance issued on May 2, 2019 with Reasons for Allowance which merely provided a conclusory statement that the claims were patent eligible under the 2019 PEG.” *Id.* According to Petitioner, “[t]he Reasons for Allowance were devoid of any

analysis as how the claims ‘integrate the abstract idea into a practical application.’” *Id.* (citing Ex. 1002, p. 12). Petitioner asserts further that “[h]ad a proper analysis under the 2019 PEG framework as described above been undertaken, it is more likely than not a Notice of Allowance would not have issued.” *Id.* at 24–25.

4. Patent Owner’s Response

Patent Owner contends Petitioner “fails to demonstrate (1) that its § 101 arguments are not substantially the same as those already considered by the Office and (2) that the Office erred.” Prelim. Resp. 21. Patent Owner provides a table comparing Petitioner’s arguments to those considered by the Office. *Id.* at 23. Patent Owner contends further that even though “[t]he second prong of Step 2A need not even be reached given the absence of an abstract idea,” the Office considered whether the claims recited additional elements that integrate the abstract idea into a practical application. *Id.* at 24. In addition, Patent Owner contends that “[i]n the first Office Action, the Examiner expressly considered cases cited by Petitioner” and “under Step 2B, the Office considered whether the Claims provide an ‘inventive concept.’” *Id.* (comparing Pet. 38 with Ex. 1002, 12).

Regarding Office error, Patent Owner contends that Petitioner fails to demonstrate that the Office erred. Prelim. Resp. 25. According to Patent Owner, “Petitioner only generically alleges that the Office did not perform a ‘proper analysis’ under the 2019 PEG, even though the Examiner specifically referenced doing so in the Notice of Allowance.” *Id.* (comparing Pet. 24 with Ex. 1002, 12). Patent Owner notes that “Petitioner also disagrees with arguments that Patent Owner made during prosecution,” but “Petitioner does not assert that the Office erred because the Office never

accepted Patent Owner’s reasoning as its own.” *Id.* (citing Pet. 34–37; Ex. 1002, 12).

In addition, Patent Owner contends that “Petitioner has not presented any ‘additional evidence [or] facts’ to support that the previously considered § 101 arguments warrant reconsideration” per the last relevant *Becton, Dickinson* factor (i.e. whether additional evidence or facts presented in the petition warrant reconsideration). Prelim. Resp. 26. According to Patent Owner, “Petitioner has only made pure attorney arguments.” *Id.*

5. *Whether the Same or Substantially the Same Arguments were Presented to the Office*

On the record before us, we agree with Patent Owner that the Petition raises substantially the same arguments as were presented to the Office. Although, the 2019 PEG issued after the first Office Action, the Examiner clearly considered the relevant case law in the Non-Final Office Action and in the Interview conducted on Monday October 22, 2018. Ex. 1002, 71–76, 62–68. Further, the Examiner gave clear indication in the Reasons for Allowance that the same arguments were considered. *Id.* at 12.

6. *Conclusion*

For these reasons, we do not institute review of claims 1–9 under 35 U.S.C. § 101 because, under 35 U.S.C. § 325(d), the same or substantially the same arguments previously were presented to the Office, and Petitioner has not shown that the Office erred in a manner material to patentability.

B. *Written Description Requirement*

Petitioner contends that claims 1–9 do not comply with the written description requirement. Pet. 41–45. Specifically, Petitioner contends that “the specification of the ’432 patent fails to provide adequate written

description of ‘first area’ and ‘second area’ as recited in the claims” and that the Specification “fails to provide adequate written description of determining a ‘position and direction’, ‘reference range’, and “‘predetermined movement’ of the ‘body part of the player.’” Pet. 42–43. Patent Owner disagrees. Prelim. Resp. 11–16.

1. First Area and Second Area

Petitioner asserts that “[t]he claims recite a ‘first area’ and a ‘second area,’ but these are never disclosed in the specification, and these terms were not part of the originally filed claims.” Pet. 42 (citing Ex. 1002, 246–51). According to Petitioner, “the specification only describes ‘when the gaze position is moved to a position outside the gameable area 105, an information provision display 111 may be output.’” *Id.* at 42–43 (citing Ex. 1001, 9:6–8). Petitioner asserts further that “while the specification describes a single gameable ‘area’ and a single ‘position,’ the claims [do not] recite two ‘areas.’” *Id.* Based on these assertions, Petitioner argues that “[a] one dimensional ‘position’ is not the same as a two dimensional ‘area.’” *Id.*

Patent Owner responds that Petitioner’s argument is baseless because “the disclosure as originally filed does not have to provide in *haec verba* support for the claimed subject matter at issue.” Prelim. Resp. 11 (citing *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000). “Rather, ‘the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had ‘possession’ of the claimed subject matter as of the filing date.’” *Id.* (citing *Ariad Pharms, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)).

Turning to Petitioner’s specific assertions, Patent Owner argues that “the virtual space has two areas—‘an area including the target object’ and another area ‘outside the area [that has the target object].” Prelim. Resp. 12 (citing Ex. 1001, 2:6–18; Ex. 2001 ¶¶ 57–62, 80). In support, Patent Owner directs our attention to Figure 5 as showing “a virtual space that includes a first area, i.e. ‘a gameable area 105’ that includes ‘target objects 103,’ and a second area, i.e. the area ‘outside the gameable 105’ that includes ‘a moving body 112, which may appear as a bird.’” *Id.* at 12–13 (Ex. 1001, 9:1–29; Ex 2001 ¶¶ 57–62, 80).

Patent Owner’s characterization of the relevant law is correct. Moreover, we agree with Patent Owner that the Specification provides sufficient disclosure to reasonably convey to those skilled in the art that Patent Owner had possession of first and second areas as claimed.

Thus, Petitioner has failed to demonstrate a likelihood of prevailing with respect to this challenge.

2. Position and Direction, Reference Range, and Predetermined Movement of the Body Part of the Player

Petitioner asserts that “the specification is silent on how the position and direction of the other body parts of a player (e.g., legs, chest, hands, etc.) would be determined.” Pet. 44. Thus, according to Petitioner, “the claims are improperly broad in covering the genus of ‘body part.’” *Id.*

Patent Owner responds that the claim terms at issue appear “in the Claims as originally filed” and the originally filed claims provide written description support for these terms. Prelim. Resp. 14. Patent Owner notes that “Petitioner does not dispute that the head and eyes are body parts” or that the Specification provides support for these body parts. *Id.* With this in

mind, Patent Owner argues that “[t]he teaching examples of the specification are not limited to a specific body part,” and “[t]herefore, support exists for a ‘position and direction’ and a ‘body part.’” *Id.* at 14–15. For similar reasons, Patent Owner asserts that the Specification, including the originally filed claims, provide support for “reference range,” and “predetermined movement” of a “body part.” *Id.* at 15–16.

Patent Owner is correct that the claims as originally filed can provide written description support of claim terms. There is a presumption that an adequate written description of the claimed invention is present when the application is filed. *In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976). Presence of the claim terms in the original claims does not, however, end the written description inquiry. In this case, however, it is dispositive because each of the independent claims defines the claims “body part” as “one of the head of the player and an eye of the player” and the fact that the Specification provides adequate written description support for the head of the player and the eye of the player is not in dispute. Rather, Petitioner admits that the Specification provides support for these body parts.

Thus, Petitioner fails to demonstrate that it is more likely than not that it will prevail with respect to this challenge.

C. Anticipation by Ross

Petitioner asserts that Ross anticipates claims 1, 2, 4, 5, 8, and 9. Pet. 45–59. Patent Owner disagrees. Prelim. Resp. 46–56.

1. Claims 1, 8, and 9

Petitioner addresses claims 1, 8, and 9 together and asserts that Ross discloses each and every limitation of these claims. Pet. 46–53. In particular, Petitioner asserts that Ross discloses the limitation “wherein the

information providing condition is a condition of a gaze position moving to the second area from the first area, the gaze position being specified by at least one of the body part of the player being in a specified position or the direction of the body part of the player being at least a specified direction” as required by claims 1, 8, and 9. Pet. 52–53; Ex. 1001, 16:62–67, 18:25–30, 58–63.

Specifically, Petitioner asserts that “Ross discloses wherein the information providing condition is a condition of a gaze position moving to the second area from the first area” in that, in Ross, the “user may interact with the **secondary . . . virtual reality content** and then **return his view back** to the movie **wherein the movie has been adjusted** to reflect the user’s interaction with the secondary, tertiary, etc., virtual reality content.” Pet. 52. According to Petitioner, “while a user **views primary virtual reality content**, system 10 may be configured to **display a ‘pop-up’** cue indicating that additional virtual reality content . . . is available in a different . . . content area.” *Id.* at 52–53 (citing Ex 1004, 7:41–50; Ex. 1003 ¶ 73). Thus, in Ross, “[t]he user moves his view, i.e., his gaze position, from the secondary area to the primary area in Ross, after which a pop-up, i.e., a to-be-provided information, is shown to the user in the primary area.” *Id.* at 53. Petitioner also notes that “[a]lthough the ordinals for the areas are swapped between Ross and the claims, the claimed limitations provide no distinction between the first and second areas, and therefore they are interchangeable.” *Id.* In addition, Petitioner asserts that Ross “discloses that the gaze position is specified by at least one of the body part of the player being in a specified position or the direction of the body part of the player being at least a specified direction.” *Id.*

Patent Owner contends that the cited portions of Ross do not support Petitioner's assertions. Prelim. Resp. 48. According to Patent Owner, "Ross does not disclose that the 'pop-up' cue is displayed in response to the user moving his view back to the primary content area from the secondary content area or that the 'pop-up' cue is displayed in the primary content area, as Petitioner contends." *Id.* at 49 (emphasis omitted). Rather, according to Patent Owner, "Ross merely discloses displaying a 'pop-up' to indicate that additional content is available . . . or to 'facilitate communication via chat applications that utilize pop-up windows.'" *Id.* (citing Ex. 1004, 7:45–50, 17:35–41). Patent Owner contends that "[i]n fact, Ross discloses displaying the 'pop-up' cue 'while a user views primary virtual reality content'" such that "[n]o rational reading of this citation leads to the conclusion that the disclosed system displays the 'pop-up' cue in response to the user changing the direction of her gaze from one content area to another." *Id.* at 49–50 (citing Ex. 1004, 7:46–48; Ex. 2001 ¶¶ 106–108).

In reference to its "pop-up" cue, Ross describes virtual reality content (the example of a movie is used) displayed to a user as appearing in a first field of view. Ross, 7:11–21. Ross describes "secondary, tertiary, etc." virtual reality content that may be presented to the user when a condition is met. *See id.* at 7:29–33. Ross indicates that this content "may be determined by system 10 based on the user's progression through the movie (e.g., as characters are introduced in the movie they may be added to the secondary, tertiary, etc., virtual reality content)" or "based on a user's interaction with the movie (e.g., a user may repeatedly look over to a particular character in the movie which the user is then able to interact with as secondary, tertiary, etc., virtual reality content), and/or based on other

information.” *Id.* at 7:34–41. In particular, Ross explains that “[t]he user may interact with the secondary, tertiary, etc., virtual reality content and then return his view back to the movie wherein the movie has been adjusted to reflect the user’s interaction with the secondary, tertiary, etc., virtual reality content.” *Id.* at 7:41–45. Ross explains further that “while a user views primary virtual reality content, system 10 may be configured to display a ‘pop-up’ cue indicating that additional virtual reality content (e.g., additional characters) is available in a different (e.g., secondary, tertiary, etc.) content area.” *Id.* at 7:46–50.

Thus, we understand Ross to disclose a system wherein a user can turn their gaze from a primary area to a secondary, tertiary, etc., area to view content related to the content in the primary area. *See* Ross, 7:21–33 (“Responsive to the user turning his view from the primary virtual reality content . . . a sensory cue comprising . . . secondary, tertiary, etc., . . . may be displayed to the user.”). Further, we understand Ross to disclose a system wherein the user’s focus on an item *in the primary area* may activate a “pop-up” cue *in the primary area* directing the user to additional virtual reality content in a secondary, tertiary, etc., area. *See id.* at 7:46–50 (“[W]hile a user views primary virtual reality content, system 10 may be configured to display a ‘pop-up’ cue indicating that additional virtual reality content . . . is available in a different (e.g., secondary, tertiary, etc.) content area.”). We do not, however, understand Ross’ “pop-up” cue to be activated in a secondary, tertiary, etc. area based on the user’s gaze position moving to the second area from the first area as required by claims 1, 8, and 9. *See id.*

Therefore, because Ross describes displaying a “pop-up” cue while a user is viewing primary virtual reality content (*see* Ross, 7:46–50),

Petitioner does not show persuasively that Ross discloses that “a gaze position moving to the second area from the first area” is an “information providing condition.” Furthermore, Petitioner’s cited testimonial evidence does not explain sufficiently how Ross discloses the recited “information providing condition.” *See* Ex. 1003 ¶ 73. For the reasons above, Petitioner does not show adequately that Ross discloses an “information providing condition [that] is a condition of a gaze position moving to the second area from the first area.”

2. Claims 2, 4, and 5

Petitioner asserts that Ross anticipates claims 2, 4, and 5. Pet. 54–59. As these claims depend from claim 1, the deficiencies discussed above apply to the challenge as it pertains to claims 2, 4, and 5. Petitioner’s challenge to the dependent claims does not cure these deficiencies.

3. Conclusion

Petitioner fails to demonstrate that it is more likely than not that claims 1, 2, 4, 5, 8, and 9 are anticipated.

*D. Obviousness Based on Ross,
Ross and Lankford,
Ross and Rimon, and
Ross and ObjectLabel*

Claims 3, 6, and 7 depend from claim 1. The proposed rejection of claim 3 as unpatentable over Ross, the proposed rejection of claim 3 as unpatentable over Ross and Lankford, the proposed rejection of claim 6 based on Ross and Rimon, and the proposed rejection of claim 7 based on Ross and ObjectLabel, all suffer from the same deficiencies as the proposed rejection of claim 1 discussed in Section III.B above. Pet. 59–68. Petitioner’s challenge to the dependent claims does not cure these deficiencies. Accordingly, Petitioner fails to demonstrate that it is more likely than not that claims 3, 6, and 7 are unpatentable.

E. Anticipation by Ballard

Petitioner asserts that Ballard anticipates claims 1, 2, 4, 5, 8, and 9. Pet. 69–74. Patent Owner disagrees. Prelim. Resp. 56–62.

1. Claims 1, 8, and 9

Petitioner addresses claims 1, 8, and 9 together and asserts that Ballard discloses each and every limitation of these claims. Pet. 69–74. In particular, Petitioner asserts that Ballard discloses “displaying, on a display operationally linked to the virtual image display apparatus, in accordance with the position and direction of the body part of the player, an image of a virtual space including a first area and a second area” as required by claim 1. Pet. 72–73; Ex. 1001, 16:52–57. Petitioner also asserts that Ballard discloses the similar processor limitations in claims 8 and 9. Pet. 72–73; Ex. 1001, 18:16–20, 49–52.

Specifically, Petitioner asserts that “Ballard discloses displaying, on a display operationally linked to the virtual image display apparatus, in accordance with the position and direction of the body part of the player” an image of a virtual space. Pet. 72 (citing Ex. 1008 ¶ 6; Ex. 1003 ¶¶ 94–95). Petitioner asserts further that Ballard “discloses displaying an image of a virtual space including a first area and a second area.” *Id.* at 73.

Patent Owner contends that Ballard fails to disclose displaying an image of a virtual space. *See* Prelim. Resp. 56. According to Patent Owner, “Ballard discloses an ‘augmented reality’ (‘AR’) [device] with a ‘virtual menu’ that presents users with various options,” which is different from an image of a virtual space. *Id.* (citing Ex. 1008, Fig. 5A, ¶ 120). Petitioner contends further that “Ballard does not even disclose a ‘virtual reality’ system that displays ‘an image of a virtual space’—it discloses an ‘augmented reality’ system.” *Id.* at 58 (citing Ex. 1008, Abstract, ¶¶ 5–6; Ex. 2001 ¶¶ 116, 118–119). Patent Owner directs our attention to Dr. Shamos’ testimony [that] “‘augmented reality’ is not a virtual space, but a computer-generated image superimposed on the viewer’s visual field.” *Id.* With this distinction in mind, Patent Owner argues that “[s]uch an AR system is in fact designed to be obtrusive and display content overlaid on top of the user’s visual field of reality—as opposed to a virtual reality system’s *virtual space*—thereby reducing the user’s immersion in his visual field,” thus, according to Patent Owner, “creating the type of problem that the ’432 Patent solves.” *Id.* (citing Ex. 1001, 1:28–38; Ex. 2001 ¶ 119).

We credit Dr. Stamos’ testimony as it is supported by Ballard’s disclosure. Ballard “relates generally to an *augmented reality* device and, more particularly, to methods and systems for representing and interacting

with *augmented reality* content using the *augmented reality* device.” Ballard ¶ 2 (emphases added). Ballard discloses “an apparatus and methods for representing and interacting with augmented reality content.” *Id.* ¶ 5. Specifically, Ballard discloses “a wearable device [that] provides a virtual menu to a user.” *Id.* ¶ 6. Providing a virtual menu to a user of an augmented reality device does not meet the limitations requiring display of an image of a virtual space including a first area and a second area as set forth in claims 1, 8, and 9. Ex. 1001, 16:53–57, 18:16–20, 49–52.

2. Claims 2, 4, and 5

Petitioner asserts that Ballard anticipates claims 2, 4, and 5. Pet. 74–77. As these claims depend from claim 1, the deficiencies discussed above apply to claims 2, 4, and 5. Petitioner’s challenge to the dependent claims does not cure these deficiencies.

3. Conclusion

Petitioner fails to demonstrate that it is more likely than not that it will prevail with respect to this ground of unpatentability with respect to claims 1, 2, 4, 5, 8, and 9.

*Obviousness Based
Ballard and Lankford,
Ballard and Rimon, and
Ballard and ObjectLabel*

Claims 3, 6, and 7 depend from claim 1. The proposed rejection of claim 3 as unpatentable over Ballard and Lankford, the proposed rejection of claim 6 based on Ballard and Rimon, and the proposed rejection of claim 7 based on Ballard and ObjectLabel all suffer from the same deficiencies as the proposed rejection of claim 1 discussed in Section D above. Pet. 78–81.

Accordingly, Petitioner fails to demonstrate that it is more likely than not that these claims are unpatentable.

III. CONCLUSION

Having determined that we should exercise our discretion under § 325(d) and not institute post-grant review of claims 1–9 based on Petitioner’s challenge under § 101, and having determined that Petitioner has not demonstrated that it is more likely than not that the challenged claims are unpatentable, we deny institution. Accordingly, the Petition is denied, and no trial is instituted.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied, and no trial is instituted.

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