

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PLR WORLDWIDE SALES LIMITED,

Petitioner,

v.

FLIP PHONE GAMES INC.,

Patent Owner.

Case No. IPR2023-00133

U.S. Patent No. 8,688,089

PETITIONER'S REPLY

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THE PETITION CONSIDERS THE PRIOR ART AS OF THE INVENTION DATE.....	1
III.	DR. ZAGAL’S TESTIMONY SHOULD BE GIVEN DUE WEIGHT	2
IV.	CLAIM CONSTRUCTION: “NON-PROMOTIONAL BACKGROUND OBJECT”	2
A.	The Printed Matter Doctrine Applies	3
B.	If Construed, “Background” Must Be Limited to Objective Characteristics	6
1.	Construing “Background” Based on the Relative Distance of an Object Improperly Depends on Subjective Perception.....	7
2.	The Prosecution History Supports a Functional Construction of “Background”	12
V.	GROUND 1: HO/JIAU/CHOI.....	13
A.	“Non-Promotional Background Object”	13
B.	Claims 3/7.....	17
C.	Claim 8	19
VI.	GROUND 3: STURMAN/HO.....	20
A.	“Hot Spot Information”	20
B.	“Non-Promotional Background Object”	23
C.	Claims 3/7.....	26
D.	Claims 4/9.....	27
E.	Claim 8	27

VII. CONCLUSION.....	28
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EXHIBIT LIST

Ex.	Description
1001	U.S. Patent No. 8,688,089 to Hartwell
1002	Prosecution history for U.S. Patent No. 8,688,089
1003	Expert Declaration of Dr. José Zagal
1004	International Patent Publication WO 2008/008038 to Ho
1005	International Patent Publication WO 2000/070489 to Jiau <i>et al.</i>
1006	International Patent Publication WO 2006/071246 to Sturman
1007	U.S. Patent No. 8,825,521 to Ellis <i>et al.</i>
1008	U.S. Patent Publication No. 2007/0174490 to Choi <i>et al.</i>
1009	<i>Curriculum Vitae</i> of Dr. José Zagal
1010	Steven Kent, <i>The Ultimate History of Video Games</i> (2001)
1011	Frans Mayra, "Mobile Games," in <i>the International Encyclopedia of Digital Communications and Society</i> , 1 st ed. (2015)
1012	N. Leavitt, "Will wireless gaming be a winner?" in <i>Computer</i> , Vol. 36, No. 1, pp. 24-27 (Jan. 2003)
1013	Jason Soh & Bernard Tan, "Mobile Gaming," in <i>Communications of the ACM</i> , Vol. 51, No. 3, pp. 35-39 (Mar. 2008)
1014	Michael Zyda <i>et al.</i> , "Educating the Next Generation of Mobile Game Developers," in <i>IEEE Computer Graphics and Applications</i> , Vol. 27, No. 2, pp. 92-96 (Mar./Apr. 2007)
1015	Mark Andrejevic, "Productive Play 2.0: The Logic of In-Game Advertising" in <i>Media International Australia</i> , Vol. 130, No. 1, pp. 66-76 (Feb. 2009)

1016	Ilya Vedrashko, <i>Advertising in Computer Games</i> (Doc. No. 123290221) [Master's Thesis, Mass. Inst. of Technology], DSpace@MIT
1017	Exit Games, <i>In-Game Advertising Goes Mobile</i> [Press Release] (Mar. 21, 2006)
1018	Jussi-Pekka Partanen, <i>Mobile Gaming: A Framework for Evaluating the Industry 2000-2005</i> (2001)
1019	Exemplary infringement charts for U.S. Patent No. 8,688,089 served by Patent Owner in <i>Flip Phone Games Inc. v. PLR Worldwide Sales Ltd.</i> , No. 2:23-cv-139 (E.D. Tex.)
1020	Supplemental Expert Declaration of Dr. José Zagal
1021	U.S. Patent Publication No. 2006/0111979 to Chu

I. INTRODUCTION

PO primarily disputes whether the prior art discloses a non-promotional *background* object. But as the ID identified, this term (and the term “non-promotional”) should be afforded no patentable weight. But even if the term “background” is given any weight, the prior art nevertheless discloses the term, regardless of whether it is construed to cover only objective functional criteria (*i.e.*, whether the object is needed to play the game), or improperly construed based on the subjective appearance of an object to a particular player. PO's remaining arguments fail to address the substance of the theories presented in the petition, and have largely been rejected by the Board in other proceedings involving similar or related patents.

II. THE PETITION CONSIDERS THE PRIOR ART AS OF THE INVENTION DATE

PO argues that the Petition does not consider the state of the art as of June 26, 2007. POR 3-8. But the Petition expressly considered the state of the art as of June 2007. EX1003, ¶¶40-55. Further, PO concedes that the prior art of record discloses *every limitation* of the independent claims except for “background objects,” confirming that the '089 patent's use of downloadable hot spots was not unique in the art as of the priority date of the patent.

III. DR. ZAGAL'S TESTIMONY SHOULD BE GIVEN DUE WEIGHT

PO asserts that Dr. Zagal's testimony "is entitled little to no weight" because he "merely parrots the Petition." *See, e.g.,* POR 22 (quoting *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (PTAB Aug. 24, 2022)). The Board rejected an identical argument in its Institution Decision, and in other proceedings involving PO's patents. ID 27-29; *e.g., PLR Worldwide Sales Ltd. v. Flip Phone Games, Inc.*, IPR2024-00209, Final Written Decision (Paper 24) at 23, 30 (Apr. 24, 2025). As the Board noted, "much of Dr. Zagal's testimony cites to portions of the prior art and explains Dr. Zagal's reasoning." *Id.*, 28. PO adds nothing to its already-rejected argument that warrants a different conclusion here.

IV. CLAIM CONSTRUCTION: "NON-PROMOTIONAL BACKGROUND OBJECT"

The Board preliminarily construed "non-promotional background object" as "an object that is not in the foreground and does not display a promotional message unless a hot spot is activated." ID, 18. The Board also invited the parties to address whether the term should be given patentable weight. *Id.*, 19. Because "non-promotional" and "background" describe the non-functional appearance of an object in a game, those terms should receive no patentable weight under the printed matter doctrine. *See Praxair Distribution, Inc. v. Mallinckrodt Hosp. Prods. IP Ltd.*, 890 F.3d 1024, 1031-32 (Fed. Cir. 2018). Alternatively, to the extent "background" is given any patentable weight, it should be limited to the only ***objective*** characteristic

identified by the applicant during prosecution, *i.e.*, an object that is “not ... needed or required in order to play the game.” EX1002, 85.

A. The Printed Matter Doctrine Applies

Under the printed matter doctrine, limitations “directed to the content of information and lacking a requisite functional relationship are not entitled to patentable weight.” *Praxair*, 890 F.3d at 1032. The doctrine is not limited to textual information, and has been applied to visual content, such as “markings” on the face of a die. *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1161 (Fed. Cir. 2018); *see also Praxair*, 890 F.3d at 1032.

Whether an object in a game is “promotional” or “non-promotional” turns on its content—*i.e.*, whether it communicates information of a promotional or non-promotional nature to the user. EX1020, ¶12. And whether an object is in the “foreground” or “background” of a scene in a game communicates information to the player about the contents of the in-game location. *Id.*, ¶13. Both terms lack any ***functional or structural*** relationship to the underlying game: whether and how the user may interact with the object is dependent on programming that is separate and unrelated to any promotional content the object may communicate to the player and whether the object is perceived to be in the foreground or background of the scene. *Id.*, ¶¶12-13.

Importantly, the '089 patent does not identify any functional or structural differences between hot spots associated with an in-game location “represented by a non-promotional background object” and hot spots associated with a promotional or foreground object. EX1020, ¶¶12-16. The specification does not disclose any hot spots that are described as represented by a “background” object.¹ Only the prosecution history suggests that chalk board 220 shown in Figure 2A is “in the background of the gaming environment.”

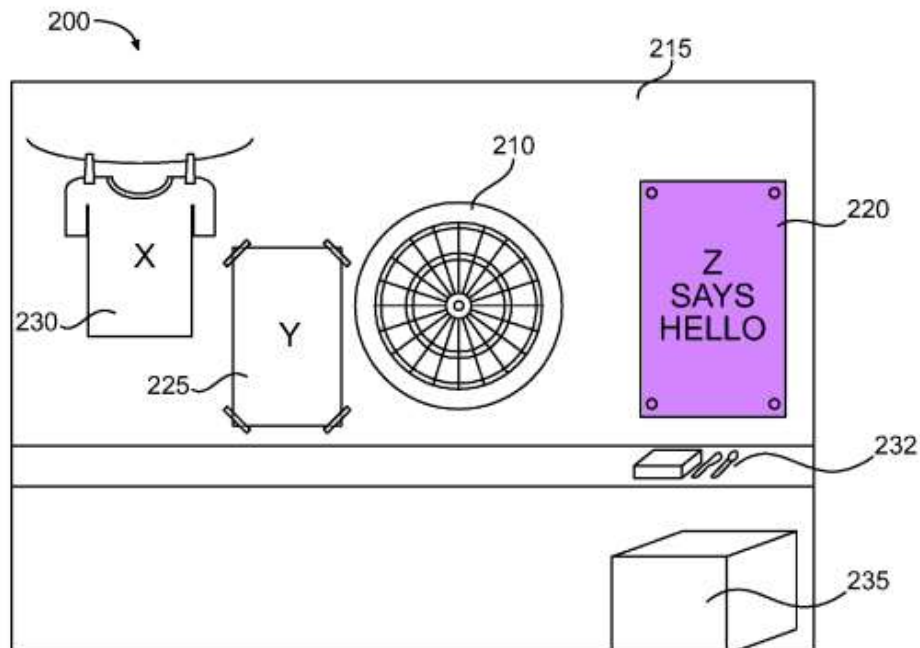


FIG. 2A

¹ The specification's only disclosure of “background” objects is a prior art “permanent advertisement” without hot spots in the “background of the video game.” EX1001, 1:55-57.

EX1001, Figs 2A; EX1002, 122. But the specification does not indicate any functional or structural difference between this purported “background” hot spot and any hot spots in the “foreground” of the scene. EX1001, 6:36-54. To the contrary, *all* hot spots “may be provided by designating a location in-game for activating the hot spot, detecting activation of the hot spot during operation of the mobile video game, and displaying content when the hot spot is activated.” *Id.*, 6:55-61.

As recognized by the dissent in the earlier Decision Denying Institution, based on the specification, the “process for displaying information on activation of a hot spot does not change” if the hot spot is associated with a promotional or non-promotional object. DDI (Paper 10), Dissent 12. Nor does the ’089 patent disclose any “techniques for programming a computer to present images that a user will perceive as in the background rather than in the foreground.” *Id.* Thus, based on the specification, any distinction between promotional and non-promotional or between foreground and background is not functional or structural—the terms merely describe content. This is precisely in accord with the Federal Circuit’s rulings. *Praxair*, 890 F.3d at 1032 (“Claim limitations directed to the content of information and lacking a requisite functional relationship are not entitled to patentable weight.”).

PO relies on *In re Distefano*, 808 F.3d 845, 848 (Fed. Cir. 2015) and *IOENGINE, LLC v. Ingenico Inc.*, 100 F.4th 1395, 1404 (Fed. Cir. 2024), POR 16-

17, but both cases are inapposite. Although the Federal Circuit recognized that the web assets in *Distefano* and the encrypted communications in *IOENGINE* may convey information, the **content** of that information was not claimed; in *Distefano*, the assets' source or "origin" was claimed, and in *IOENGINE*, the "form" of the communications was claimed. *Distefano*, 808 F.3d at 851; *IOENGINE*, 100 F.4th at 1404-1405. Here, however, the terms "non-promotional" and "background" describe and claim the **content** of the claimed "objects," not their origin or form.

PO alternatively argues that the "non-promotional background object" has a "functional and structural relationship" to the claimed "hot spot" because it is the "location in-game associated with activating the hot spot." POR 17. But as the specification makes clear, **any** object may be specified as the in-game location associated with a hot spot using the same process. EX1001, 6:55-61. Whether the object is "non-promotional" or "background" does not change the function or structure of the object or the hot spot; only the content is different. EX1020, ¶¶14-16.

B. If Construed, "Background" Must Be Limited to Objective Characteristics

To the extent the Board determines that the term "background" should be given any patentable weight, the term should be limited to objective **functional**

characteristics described by the applicant during prosecution, not subjective characteristics relating to appearance.²

1. Construing “Background” Based on the Relative Distance of an Object Improperly Depends on Subjective Perception

As the Director acknowledged in the Remand Decision, a claim term cannot be construed in a manner that depends on “the subjective views of the user.” Remand Dec. (Paper 12), 7 (citing *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1353 (Fed. Cir. 2001); *see also Cochlear Bone Anchored Solutions AB v. Oticon Medical AB*, 958 F.3d 1348, 1356 (Fed. Cir. 2020). Thus, “background” cannot be construed to depend on the player’s subjective perception.³ If the term is given any patentable weight, it should thus be limited to objective criteria.

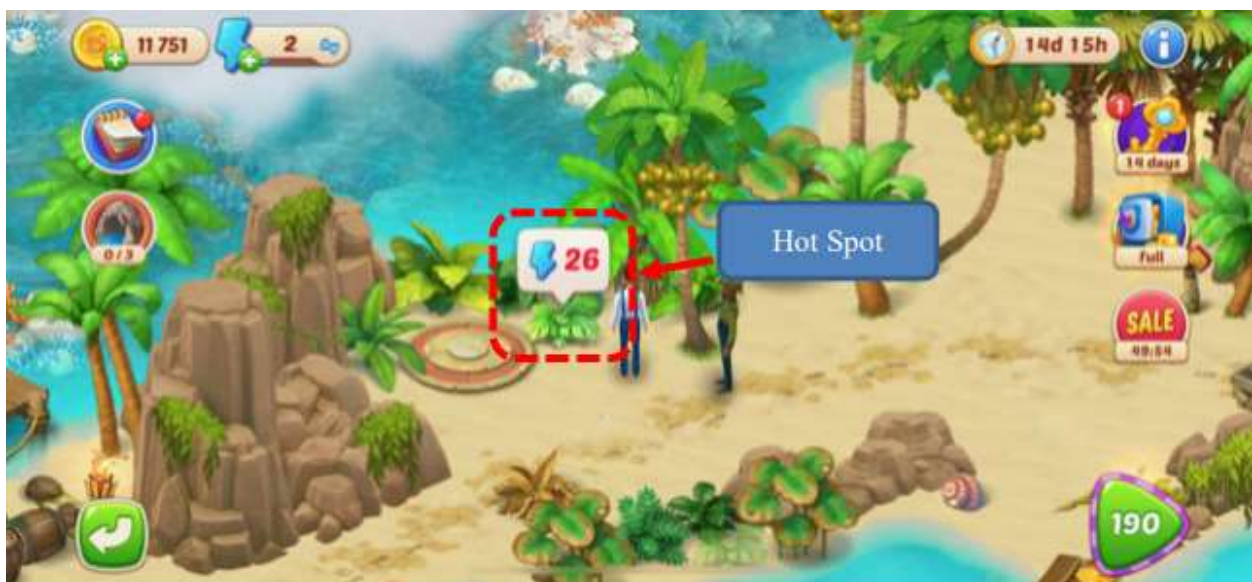
The ID acknowledged that the sole disclosure of “background” in the specification is “of no assistance in understanding the term.” ID 12-13. The prosecution history’s description of a background object as “outside the primary

² To the extent the Board gives patentable weight to “non-promotional,” Petitioner does not challenge the Board’s preliminary construction of a “non-promotional ... object” as an object that “does not display a promotional message unless a hot spot is activated.” ID 18.

³ Indeed, if the term were “completely dependent on a person’s subjective opinion” the claims would be indefinite. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350-51 (Fed. Cir. 2005); *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (similar).

focus of game play and as unexpectedly interactive” similarly cannot be relied on because “what one user may consider a primary focus or expected object, another might consider outside the primary focus and unexpected.” *Id.*, 15. The Board’s construction, however—“the part of a pictorial representation that is not in the foreground”—equally relies on the subjective perception of a player as to whether or not a particular object is in the “foreground” or “background” of a scene. EX1020, ¶¶18-19. That is particularly true in the context of interactive video games: because players may be able to move about the game world, whether an object is in the foreground or background will often depend on the player’s current position in the game, not any objective property of the object. *Id.*, ¶20.

For example, in its infringement contentions in the related district court case, PO points to the following scene as showing a hot spot assigned to a “non-promotional background object.” EX1019 at 7-8.



However, nothing in the '089 patent indicates an objective way to determine, based on appearance, which objects in this scene (if any) are in the “background.” Because the scene is shown from an overhead view, there is no conventional “foreground” or “background” as might exist in a three-dimensional scene. EX1020, ¶¶21-22. Instead, objects are drawn at the same relative distance from the viewer regardless of where they are located on the screen. *Id.* Further, even if this scene could be divided into “foreground” and “background,” the location of the objects on the screen will change as the player character moves through the game. *Id.*, ¶22. Thus, whether or not any element is a “background” object would rely on the subjective perception of a player, based on the player's position in the game world at a specific point in time—not any objective characteristic of the objects themselves.

The examples in the '089 patent further demonstrate the lack of an objective way to determine whether objects are in the “foreground” or “background” of a scene based on their appearance. For example, Figures 2A and 2B show scenes from a “darts game,” which include various objects that may have associated hot spots (highlighted in purple below).

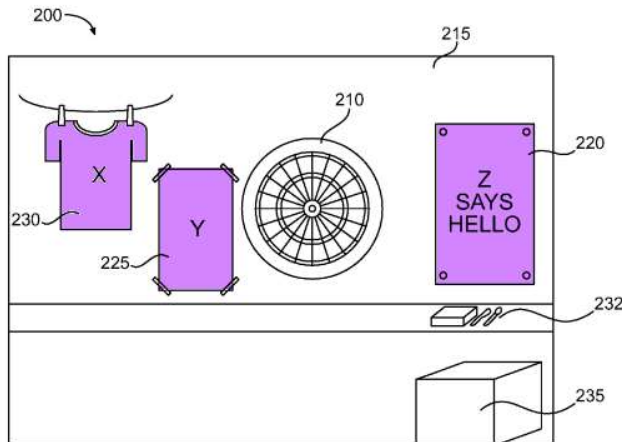


FIG. 2A

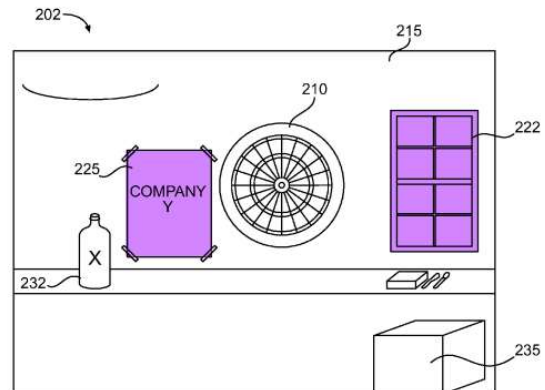


FIG. 2B

EX1001, Figs. 2A, 2B; *see also id.*, 6:36-54, 7:12-24. Based on the applicant's representations during prosecution, dartboard 210 would be part of the foreground because it is "featured in the forefront of game play as [a] primary object[] to be manipulated or used during game play." EX1002, 85 (distinguishing background objects on this basis); EX1020, ¶24. But whether the remaining objects in the scene are part of the "foreground" or "background" cannot be determined based on objective criteria. *Id.*, ¶¶23-25. For example, during prosecution, the applicant described chalk board 220 as being "in the background of the gaming environment." EX1002, 122. But the chalk board and the dartboard are both depicted on the same wall, and are thus at the same depth in the player's field of view. There is no objective basis to characterize the blackboard as part of the "background" based on its appearance.

Other disclosures in the prosecution history make clear that the applicant did not use the term “background” to refer to the objects “in the distance” or “behind something.” *See* ID 15-16 (quoting dictionary definitions). For example, when identifying support in the specification for the term “background,” the applicant cited the disclosure of “a ‘hidden’ area’ within a game” where “hidden features may be placed ... so that the user has something new to look at or trigger (sometimes unexpectedly).” EX1002, 83-84 (quoting EX1001, 4:17-31). But whether an object may be triggered “unexpectedly” has no connection to whether that object is shown in the foreground or background of a scene. EX1020, ¶26. Similarly, the applicant argued that Chu’s “pit stop” and “treasure chest” are not “background” objects because “they are featured in the forefront of game play as primary objects to be manipulated or used during game play.” EX1002, 85. But Chu never describes *where* in the scene its pit stop and treasure chest are located—much less indicates they are in the “foreground” of a scene. EX1021 (Chu), ¶¶63-65. Moreover, Chu *does* disclose other objects that are shown in the distance of a scene, such as the billboard in the scene below. EX1021, Fig. 2, ¶¶38-39. That the billboard is in the distance is apparent from the path shown in the scene, which extends from the foreground (where local character 205 is located) to the background (where the billboard 220 is located). EX1020, ¶27.

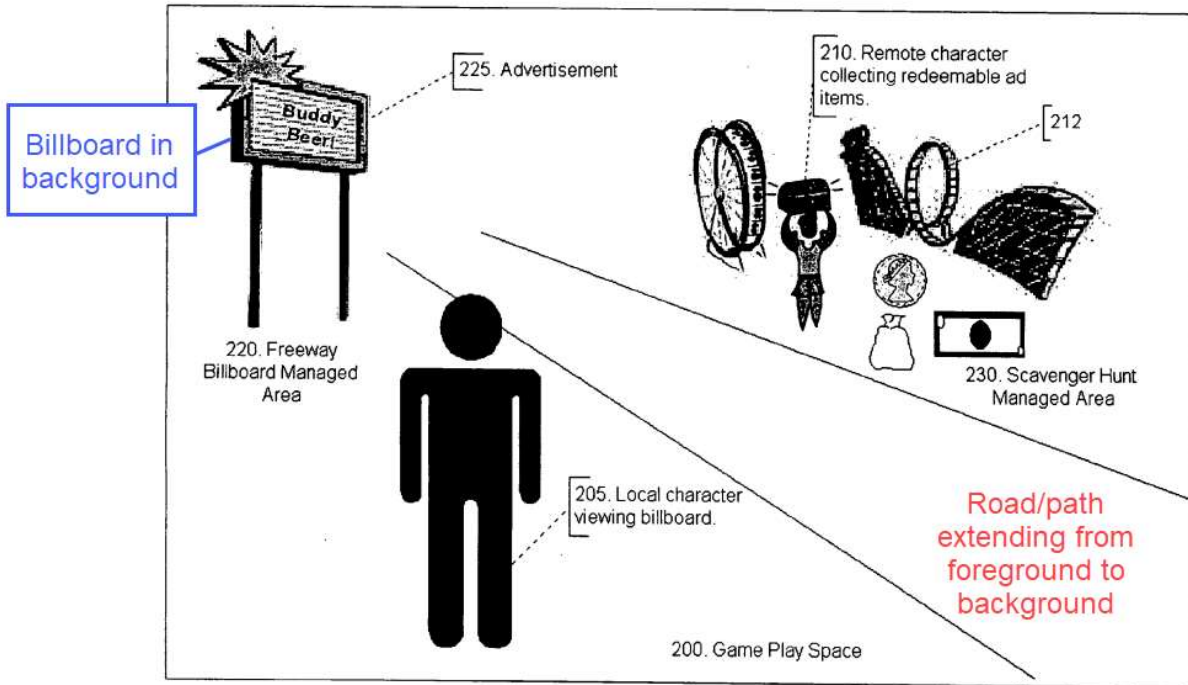


Fig. 2

2. The Prosecution History Supports a Functional Construction of “Background”

The only construction of “background” that does not rely on subjective perception *and* is supported by the intrinsic evidence is a construction directed to the functionality of “background” objects. As explained in the Petition, during prosecution, the applicant distinguished Chu’s objects not based on their visual location within the scene, but based on their in-game functionality—namely, that they are “primary objects to be manipulated during gameplay” and “are not themselves needed or required in order to play the game.” EX1002, 85-86. To the extent the term “background” is given patentable weight, it should thus be construed based on the applicant’s stated functional requirements during prosecution, *i.e.*, “not

needed or required in order to play the game.” *Id.*; EX1020, ¶¶28-29. That is the interpretation adopted in the Petition. Pet. 31-32, 57-58.

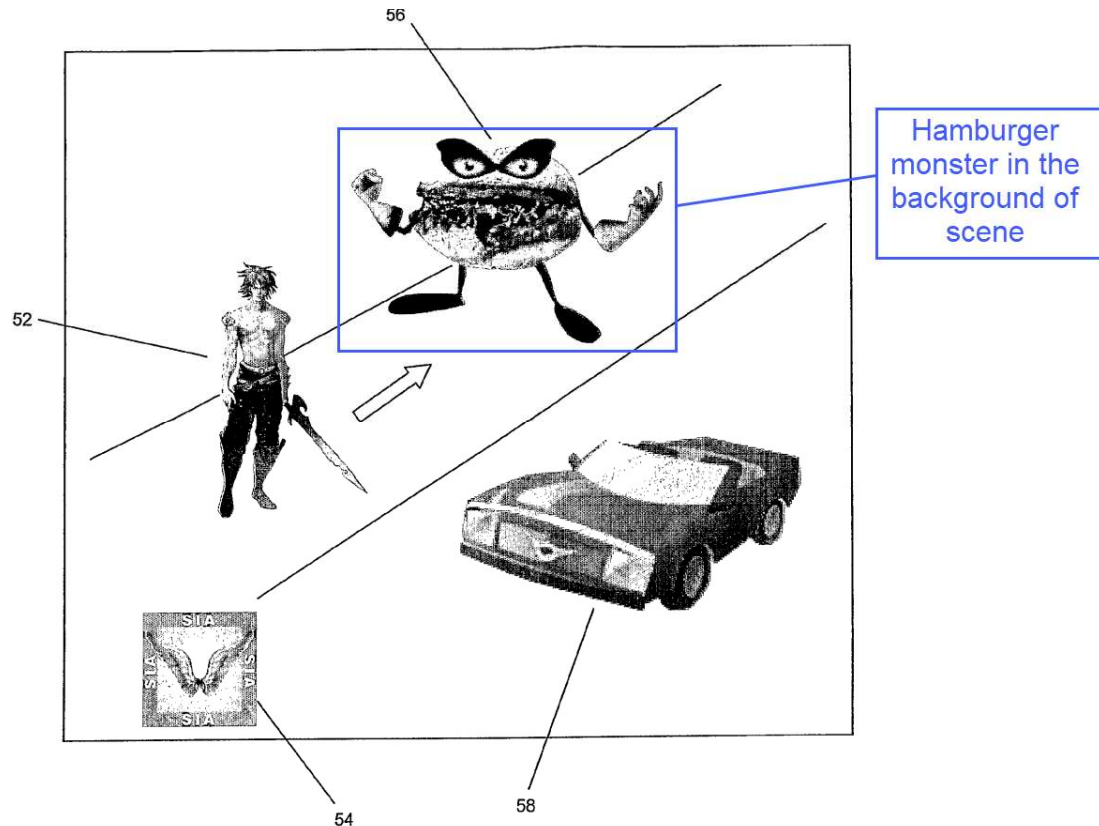
V. GROUND 1: HO/JIAU/CHOI

A. “Non-Promotional Background Object”

PO’s only argument with respect to Ho is that Ho’s “interactive information element(s)” are not “background” objects. POR 18-24. If the term “background” is not given patentable weight, as discussed, PO does not dispute that Ho discloses this limitation.

PO also does not dispute that under Petitioner’s construction of “background”—*i.e.*, “not needed or required in order to play the game”—Ho discloses hot spots associated with background objects. Ho expressly teaches that “engagement of the at least one interactive information element *may not be mandatory for the continuation of gameplay.*” EX1004, 4:26-28; Pet. 24-25.

Even under the ID’s preliminary construction, Ho discloses interactive information elements that are in the *background* of a scene. The evidence cited in the Petition demonstrates that Ho discloses hot spots associated with objects that “appear[] to be in the distance” of a scene. ID 15 (quoting EX3002). For example, Figure 3 of Ho shows an interactive information element in the form of a “hamburger monster” (56) that appears in the background of the scene relative to other objects in the foreground (such as wings 54, car 58, and player character 52).



EX1004, Fig. 3, 4:1-16; EX1020, ¶31. In addition, Ho mentions that “the hamburger monster 56 may be engaged only when the character 52 fights and successfully slays the hamburger monster 56.” EX1004, 5:9-10. Figure 3 depicts an arrow indicating that the player character 52 must approach the hamburger monster as the character travels down the pathway indicated by the parallel lines. Accordingly, a POSITA would understand that, since the player character is always on screen, the hamburger monster began as a background object as the player travels down the pathway. EX1020, ¶32.

Jiau provides an alternative disclosure of a “background” object under the Board’s preliminary construction. For example, Figure 11(d) of Jiau shows two

objects: object 320, which “has a pop-up advertisement 1182 that is activated when the user’s location becomes within a predetermined virtual distance in the virtual world,” and a “static object 1184” that “is always visible when it comes into view.” EX1005, 15:3-17. As shown in Figure 11(d), object 320 and its associated hot spot appear in the background of the scene relative to static object 1184:

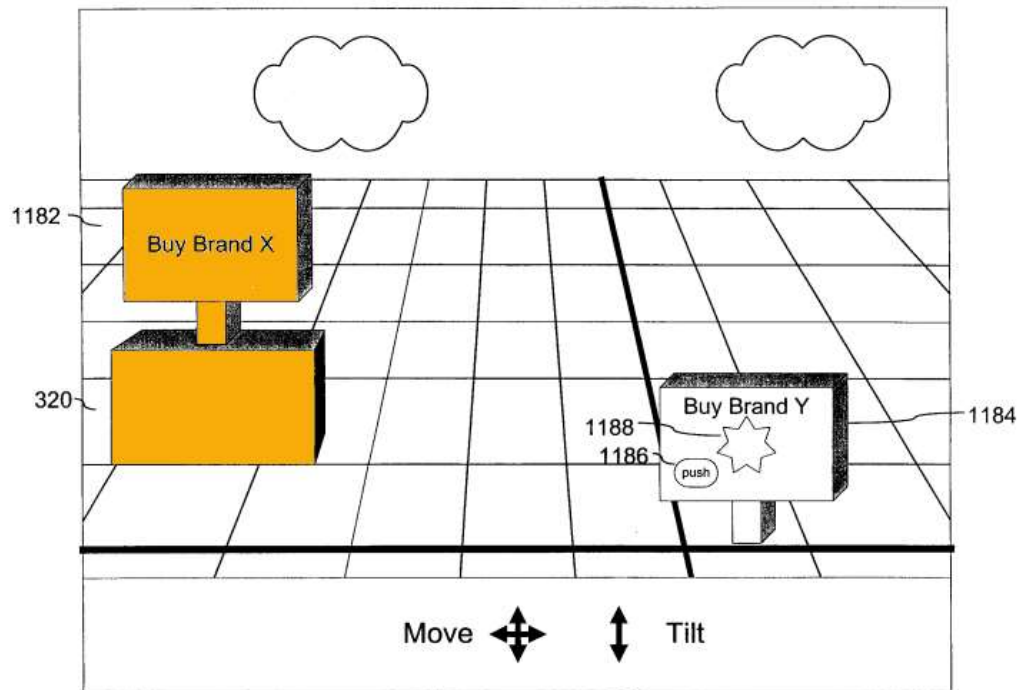


Fig. 11(d)

EX1005, Fig. 11(d); EX1020, ¶33. The grid shown on the ground of the play area leaves no doubt as to the relative positioning of the objects in the foreground and background. See EX1005, 8:14-9:12 (discussing the “grid” representing the virtual world area); EX1020, ¶33.

PO's arguments are not based on the appearance of Ho's interactive information elements (such as the hamburger monster) or Jiau's objects within the game scene. PO first asserts—without explanation or support—that every object in Figure 3 is in the “foreground”—notwithstanding the fact that different objects are illustrated at different distances from the viewer. POR 19. Similarly, PO asserts that both objects in Figure 11(d) of Jiau are “in the *forefront* of the environment,” without explanation, and notwithstanding the fact that object 320 is shown at a distance relative to static object 1184, particularly when viewed in the context of the grid representing the virtual world area.

PO's remaining arguments are not tied to the Board's preliminary construction (or any construction) at all. Specifically, PO argues that Ho's interactive information elements are not “background” objects because the user is “encouraged to engage and interact with” them. POR 20. But PO does not propose or identify any construction that limits the term “background” based on whether a user is “encouraged” to interact with an object.⁴ As discussed above, the closest support in the prosecution history indicates that the relevant question is whether engagement is “needed or required in order to play the game”—which Ho expressly teaches is not the case. EX1002, 85-86; EX1004, 4:26-28. PO then argues that Ho's

⁴ Such a construction would not be viable because, similar to the question of whether an object is “unexpectedly interactive,” whether the game “encourages” interaction with an object depends on a player's subjective experience.

interactive information elements are “featured in the forefront of game play as primary objects to be manipulated or used during game play.” POR 21 (quoting EX1002, 85). But the Board expressly did **not** base its construction of “background” on that quotation from the file history because it correctly noted that whether an object is in the “primary focus” of game play is “based solely on the subjective perspective of the user.” ID 14-15. PO does not otherwise offer any support for its assertion that Ho’s interactive information elements are in any way comparable to Chu’s “game component[s].” POR 20-21.

B. Claims 3/7

The Petition explains that Choi renders obvious dependent claim 3 and 7’s requirement of “pre-select[ing]” promotional content “based on the proximity of the mobile communication device to a physical location related to the hidden promotional content” because Choi discloses targeting advertisements using “location-specific advertising content” based on the “GPS location information” of the user. Pet. 36; EX1008, ¶43; EX1003, ¶31.

PO argues, without explanation, that Choi’s disclosure of location-specific advertising content is “irrelevant to whether content is ‘*pre-selected*.’” POR 30. PO does not propose a construction of pre-selected or explain why Choi’s teaching of designated specific advertisements for use in specific locations would not qualify as “pre-selected.” In IPR2024-00171, the Board addressed a similar dispute in another

of PO's patents with a substantially overlapping specification, and that also involved the term "pre-selected." *PLR Worldwide Sales Ltd. v. Flip Phone Games, Inc.*, IPR2024-00171, Final Written Decision (Paper 31) at 18-19 (Apr. 24, 2025). In that case, the Board found that a similar disclosure of "target[ing] the delivery of ... advertisement campaigns" based on criteria such as "time of day" or "game play date" discloses pre-selection of advertisements. *Id.* at 18-20 ("Hays's disclosure of selecting ads to serve from a pool of ads that are selected ahead of time are consistent with the written description of the [patent at issue]."). The same reasoning applies here: Choi expressly discloses that "location-specific advertising content" is stored at a "network server," and is subsequently requested by an "Ad Manager module" using a user's "GPS location information" to specify the desired location. EX1008, ¶43. Thus, like the relevant disclosure in the -00171 proceeding, Choi teaches pre-selection—*i.e.*, that ads are selected (by the Ad Manager) from a pool of ads selected ahead of time (*i.e.*, the location-specific ads stored at the network server).

PO also argues, without explanation, that there is "no description at all that this content is 'based on the proximity of the mobile communication device to a physical location related to the hidden promotional content.'" POR 30. But that is expressly what Choi teaches. In the proposed combination, Choi's advertisements are the hidden promotional content; and, specifically, its "location-specific advertising content" are ads that are related to a specific location, and that are stored

to be served to users that are within a certain proximity of that location (based on GPS information). EX1008, ¶43. Nothing more is required by the claim.

C. Claim 8

The Petition explains that Choi renders obvious dependent claim 8's requirement of "pre-select[ing]" hot spot information based on several factors—including the model type of the user's mobile device and the service provider. Pet. 40. EX1003, ¶¶141-142. In particular, Choi discloses that advertisements may be targeted based on demographic information that is inferred from a user's service provider—thereby pre-selecting ads based on a service provider. EX1008, ¶¶83, 86. Choi also discloses selecting ads from a pool of advertisements based on the "capabilities," and in particular the "model," of the user's device. EX1008, ¶¶89-90. As noted above, the Board already determined in a related proceeding that a pool of ads from which a specific ad is later selected is sufficient to demonstrate pre-selection. *PLR*, IPR2024-00171, Final Written Decision at 18-19.

PO argues that Choi discloses pre-selecting advertising content and not hot spot information. POR 32. But in the context of the challenged claims, advertising content *is part of* the hot spot information. *E.g.*, EX1001, cl. 1 (reciting "hot spot information comprising: ... hidden promotional content"). In addition, PO ignores the fact that Choi is relied on as part of an *obviousness* combination with Ho and Jiau—which undisputedly disclose hot spot information. The Petition expressly

argues that in the proposed combination, “Choi’s advertisement delivery techniques represent known techniques that POSITA would be motivated to apply to *Ho’s interactive information elements* [*i.e.*, hot spots].” Pet. 21-22 (emphasis added); *see also* EX1003, ¶¶98-100. PO does not dispute this statement in the Petition. Thus, whether Choi only teaches pre-selecting advertisements, and not hot spots specifically, is irrelevant.

VI. GROUND 3: STURMAN/HO

A. “Hot Spot Information”

PO spends several pages arguing that Sturman does not itself disclose “hot spot information.” POR 34-37. The Petition is clear that Ground 3 is an obviousness-based ground that relies on Ho’s interactive information elements as disclosing the claimed “hot spot information. Pet. 49 (“Ho’s teachings relating to interactive information elements are then applied to make Sturman’s advertisements interactive, such that they are provided as a hot spot...”). The Board acknowledged this theory in its Institution Decision. ID 34 (“Petitioner argues that Ho teaches the recited ‘hot spot’ and ‘hot spot information.’”).

PO next argues that Petitioner “offers no sufficient motivation for why a POSITA would ... modify Sturman based on Ho.” POR 38. In fact, however, the Petition provides multiple reasons, supported by expert testimony, as to why a POSITA would be motivated to apply Ho’s teachings about interactive information

elements to Sturman's advertisement delivery system, including (1) the threshold fact that both references are directed to advertisement delivery systems and are analogous; (2) the fact that both references are directed to the same types of improvements in game design and monetization (namely, improving in-game advertising); and (3) Ho's express teachings for improving advertisements that are applicable to Sturman's system. Pet. 50-52; EX1003, ¶¶156-160.

PO separately argues that Ho's interactive information elements are "inconsistent" with Sturman's invention and goals. POR 39. But PO only reaches this conclusion by (1) referring to isolated examples of non-limiting potential ad campaign goals described by Sturman, and (2) misinterpreting Sturman's disclosures about audience reach. Nowhere does Sturman teach that ads must be immediately displayed to users without any engagement or interaction by the user, or otherwise discourage the use of interactive ads (such as Ho's interactive information elements). *See Univ. of Maryland Biotechnology v. Presens Precision Sensing GmbH*, 711 Fed. Appx. 1007, 1011 (Fed. Cir. 2017) ("mere disclosure of alternative designs does not teach away" absent "clear discouragement" of a particular implementation (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) and *In re Ethicon, Inc.*, 844 F.3d 1344, 1351 (Fed. Cir. 2017))). Rather, Sturman explains that "hard coded" advertisements that are "built in to the game code" limit the "reach" of ads because "there is no way to aggregate the audience

across game titles to deliver large audiences or ‘quick reach’ over a short time frame.” EX1006, ¶¶3-4. Sturman also describes the need to “implement[] an *effective* advertisement campaign.” *Id.*, ¶5 (emphasis added). All of these goals are entirely consistent with Ho’s interactive information elements, which are not hard coded into a game and are instead distributed by downloading them from a server. EX1004, 9:25-10:25.

PO selectively quotes isolated examples from Sturman’s specification that refer to reaching large audiences “simultaneously,” and describe exemplary ad campaign goals of reaching “millions of game players in a single night.” POR 40. But none of these statements stand for the proposition that advertisements must be static and always displayed without interaction. Rather, Sturman discusses the need to be able to increase the size of the audience that ads are *delivered to*, match ads to appropriate locations in the game, and increase flexibility for delivering the ads to audiences (*e.g.*, based on time, location, and audience characteristics). EX1006, ¶¶18, 21-22, 24. None of these goals are undermined by making ads interactive, such that they only display in the game in response to a user action. This is particularly true in light of Sturman’s acknowledgement that advertisers are interested in “implementing an effective advertisement campaign.” *Id.*, ¶5. Ho expressly teaches that “static advertisements” are less “engag[ing]” and thus less effective, and thus provides a clear motivation to combine. EX1004, 1:26-37; *see*

also EX1003, ¶¶156-160. In any event, making ads more engaging certainly does not render Sturman's ad delivery service "inoperable," as PO argues. POR 42. And Sturman itself recognizes the value of interactive ads. *See* EX1006, ¶20. The fact that Sturman's examples of interactive ads do not specifically include hot spots does not support PO's conclusion that Sturman somehow discourages or teaches away from hot spots. *See* POR 43.

B. "Non-Promotional Background Object"

PO again begins by arguing that Sturman alone does not disclose hot spots that are represented by non-promotional background objects. POR 44-45. However, the Petition relies on the combination of Ho and Sturman for this limitation. Pet. 55-57.

In particular, the Petition notes that Sturman teaches several examples of non-promotional background objects that, in the combined system, may be associated with a hot spot, including background elements such as storefront signs, Jumbotron screens, posters, and t-shirts on characters. Ex. 1006, ¶19. PO argues that Sturman's advertisements are "directly displayed in each of Sturman's 'ad units.'" POR 45. But PO fails to respond to the proposed combination, in which a hot spot is associated with these elements so that hidden content (*i.e.*, an advertisement) is only displayed when the hot spot is activated. Pet. 49-50, 55-57; EX1003, ¶¶173-178. To the extent PO contends that Sturman's ad units cannot be "non-promotional"

because they have an “area” in which advertisements *can* be displayed, that argument is contrary to the Board’s preliminary construction and the intrinsic evidence. The Board’s preliminary construction only requires a non-promotional object to “not display a promotional message unless a hot spot is activated” (ID 18), which is true of Sturman’s ad units in the proposed combination. The ’089 specification similarly discloses examples of objects that can be activated by a hot spot that have a designated area for displaying content—such as blackboard 220 in Figure 2A. ID 16-17; EX1002, 113-125; EX1001, 6:44-54.

PO also argues that Sturman’s ad units are not “background” objects under the Board’s preliminary construction. POR 46-47. However, as the Board recognized in its Institution Decision, Petitioner’s expert explained that Sturman’s ad units are described as corresponding to various objects that are conventionally part of the background of a scene, such as storefront signs, jumbotron screens, and posters. ID 39-40; EX1003, ¶¶174-180; EX1020, ¶35. Indeed, even in the earlier Decision Denying Institution, the majority tacitly acknowledged that at least *some* of these objects are “background objects.” DDI, 29 (stating that it is “unclear that *all* of the ad units that Petitioner relies on are background objects” (emphasis added)). PO argues that Sturman does not expressly describe its “ad units” as “background objects.” POR 45-46. But PO does not even contend that a POSITA would expect objects such as storefront signs, jumbotron screens, and posters to be

in the foreground of a scene. PO's only response to Dr. Zagal's testimony on this issue is that it "repeats" the Petition.⁵ As discussed above in Section II, that alone is not a basis to disregard Dr. Zagal's testimony.

PO separately argues that a POSITA would not be motivated to apply Ho's teachings to Sturman's non-promotional background objects. POR 48-49. Separate from its arguments on motivation to combine (which are addressed above), PO argues that Ho only discloses interactive elements "in the *foreground* of the game for user engagement." POR 49. As discussed above in Section III, PO is incorrect: Ho expressly discloses examples of hot spots on background objects, such as a hamburger monster shown in the background of the scene. EX1004, Fig. 3, 4:1-16; EX1020, ¶¶31-32. PO also conflates the location of an object in the foreground or background of a scene with its interactivity, which is inconsistent with the Board's preliminary construction, and not based on any construction that PO has offered. Finally, PO offers no reason why a POSITA could not or would not apply Ho's teachings relating to interactive information elements generally to different types of ad units in Sturman, including ad units associated with non-promotional background objects. Nothing in Ho suggests that the benefits of its teachings are limited to

⁵ PO contends the Board gave little weight to Dr. Zagal's testimony in its original decision denying institution. POR 47. However, that was under the Board's earlier construction of "non-promotional background object," which no longer applies.

foreground objects, and the Petition presented a motivation to combine Ho's interactive information elements with Sturman's ads generally, without limitation to foreground or background objects. *See* Pet. 50-52; EX1003, ¶¶156-160.

Further, as discussed in Section III, Ho independently discloses hotspots associated with non-promotional background objects.

C. Claims 3/7

PO again argues, based on a construction of "pre-selected" that PO never offered (and has thus waived), that Sturman does not disclose pre-selecting content based on location, as required by claims 3 and 7. POR 51. The Petition explains that these claims are expressly disclosed by Sturman because Sturman teaches targeting advertising content based on characteristics such as an IP address (which corresponds to a location) or a geographic location. Pet. 55-56, 60; EX1003, ¶¶186-187; EX1004, ¶¶47-54. Consistent with the Board's decision in the IPR2024-00171 proceeding on another of PO's patents with a substantially similar disclosure, targeting advertisements in this manner demonstrates pre-selection because ads are selected from a pool of ads pre-selected based on criteria such as geographic location. IPR2024-00171, FWD at 18-19. PO simply asserts, without explanation, that Sturman's disclosure is "irrelevant" to the limitation. POR 52.

D. Claims 4/9

Dependent claims 4 and 9 require “tracking the hot spot information that has been downloaded to the mobile communication device.” The Petition relies on Sturman’s disclosure of an advertisement server that may “track and record all communications and data sent to and received from the advertisement recipient client.” Pet. 61. In the combined system, this information would include hot spot information. *Id.*; EX1003, ¶¶188-189. PO argues the limitation is not met because the claims require tracking “hot spot information” and not advertisements. POR 53. But in the combined system, Sturman’s advertisements are sent as hot spot information, which PO does not challenge or dispute. Pet. 49-50, 55-56 (relying on Sturman’s advertisement server in combination with Ho’s interactive information elements as disclosing the claimed hot spot information); EX1003, ¶¶156-160, 169-172. Accordingly, the “advertisements” that are tracked in the combined system comprise hot spot information.

E. Claim 8

PO does not dispute that Sturman discloses pre-selecting an advertisement based on a model type of a mobile communication device, as presented in the Petition. *See* POR 56; Pet. 63; EX1006, ¶¶52 (describing advertisement matching based on a “client type,” which may be a “game console”), 42 (request from mobile device provides “a unique identifier to indicate the client type”). PO merely argues

again that the claim requires pre-selecting hot spot information, and not an advertisement. POR 56-57. PO again ignores the fact that in the proposed combination, Sturman's advertisements are delivered as hot spot information. Pet. 49-50, 55-56 (relying on Sturman's advertisement server in combination with Ho's interactive information elements as disclosing the claimed hot spot information).

VII. CONCLUSION

For these reasons, all challenged claims are unpatentable.

Date: May 19, 2025

Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE WITH
TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS,
AND TYPE STYLE REQUIREMENTS**

1. This Petition complies with the type-volume limitation of 5,600 words, comprising 5,584 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a).

2. This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman.

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The undersigned hereby certifies that on May 19, 2025, true and correct copies of the foregoing document and supporting materials were served in its entirety on the Patent Owner at the following email addresses:

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