

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DANXIAO INFORMATION TECHNOLOGY LTD.,
Petitioner,

v.

SHENZHEN SVAKOM TECHNOLOGY CO., LTD.,
Patent Owner.

PGR2022-00050
Patent 11,134,041 B1

Before SHARON FENICK, JASON W. MELVIN, and IFTIKHAR AHMED,
Administrative Patent Judges.

MELVIN, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Denying Patent Owner's Motion to Amend
35 U.S.C. § 328(a)

I. INTRODUCTION

Danxiao Information Technology Ltd. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of post-grant review of all claims (1–20) (“the challenged claims”) of U.S. Patent No. 11,134,041 B1 (Ex. 1001, “the ’041 patent”). Shenzhen Svakom Technology Co., Ltd. (“Patent Owner”) did not file a Preliminary Response. We instituted review. Paper 6 (“Inst.” or “Institution Decision”).

Patent Owner filed a Response (Paper 11, “PO Resp.”) and Petitioner filed a Reply (Paper 20, “Pet. Reply”). Patent Owner did not file a Sur-Reply.

Patent Owner filed a Motion to Amend (Paper 8) and Petitioner filed an Opposition to that Motion (Paper 19). As requested by Patent Owner, we issued a Preliminary Guidance regarding the Motion to Amend (Paper 21). Patent Owner filed a Revised Motion to Amend (Paper 22, “RMTA” or “Revised Motion”) seeking entry of substitute claims 21–38 (“the substitute claims”) and Petitioner filed an Opposition to that Revised Motion (Paper 24, “RMTA Opp.”). Patent Owner did not file a Reply to Petitioner’s Opposition.

Petitioner filed a Motion to Exclude Evidence (Paper 29, “Mtn. Exclude”) and Patent Owner filed an Opposition to that Motion (Paper 30, “Opp. Mtn. Exclude”).

We held an oral hearing on November 20, 2023. (Paper 35, “Tr.”).

A. REAL PARTIES IN INTEREST

Petitioner identifies itself as the sole real party in interest. Pet. 111. Patent Owner identifies itself as the sole real party in interest. Paper 3, 1.

B. RELATED MATTERS

The parties both certify there are no related matters. Pet. 111; Paper 3, 1.

C. THE '041 PATENT

The '041 patent is titled “System and Method for Interactive Online Entertainment” and is directed to an interactive system in which a user may provide inputs and perform predefined acts via an adult toy. Ex. 1001, codes (54), (57). The '041 patent discloses allowing users to interact with models through an adult video chatting website, influencing the model's adult toy. *Id.* at 1:41–52. This allows users to interact with models from a distance during an online video chat session on a website, wherein the models can define input parameters and provide an interactive interface, and receive an interactive result according to the interactive interface to perform predefined acts, via an adult toy or another stimulation device, based on the interactive result received. *Id.* at 1:45–52.

Figure 3 of the '041 patent illustrates this system and is reproduced below.

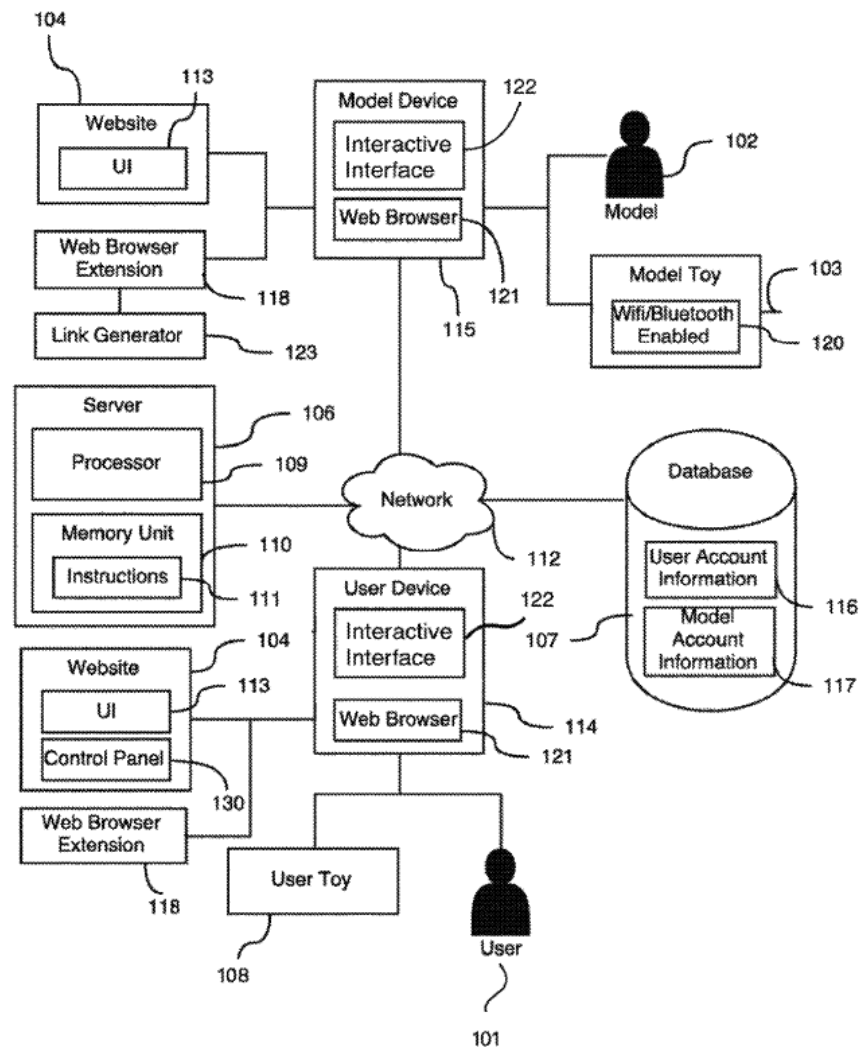


FIG. 3

Id., Fig. 3. Figure 3 is a high-level block diagram that discloses a system where user 101 operates user device 114 to access website 104 via web browser 121 to engage in an online chat with model 102 using user interface (UI) 113. *Id.* at 4:49–58. Website 104 is configured to recognize an input value and send an interactive command to model device 115 and user device 114 through respective interactive interface 122. *Id.* at 6:4–9. Model toy 103 is Wi-Fi or Bluetooth enabled 120,

which allows model toy 103 to communicate with web browser 121 via model device 115. *Id.* at 5:22–26.

In some embodiments, the '041 patent describes that “website 104 outputs randomly an interactive result.” *Id.* at 6:13–15. That result may come from an online game such as “a finger guessing game,” such as rock-paper-scissors, “a dice game, and a lottery game.” *Id.* at 6:31–34; *accord id.* at 6:31–9:4.

D. CHALLENGED CLAIMS

Claims 1, 11, and 20 are independent. Claim 1 is representative and is reproduced below, with bracketed numbering and formatting added to identify limitations as in the Petition (*see* Ex. 1004).

- 1[pre] A system for providing online communication, comprising:
- 1[a] an operable adult toy configured to receive signals;
- 1[b] a memory having stored thereon instructions;
- 1[c][1] at least one processor to execute said instructions resulting in a software application; said software application configured to:
 - 1[c][2] define input parameters;
 - 1[c][3] receive an input from one or more users; and
 - 1[c][4] providing at least one interactive interface,
 - 1[c][5] outputting randomly an interactive result according to the at least one interactive interface,
 - 1[c][6] receiving the interactive result and controlling said adult toy to actuate according to the interactive result.

Ex. 1001, 15:36–49. Claim 11 recites similar limitations, further including user and model devices accessing an online chat room, and that the user input includes virtual currency. *Id.* at 16:58–17:16. Claim 20 recites a method with limitations similar to those of claim 11. *Id.* at 18:35–53. The other challenged claims depend, directly or indirectly, from the independent claims. *Id.* at 15:50–18:34.

Of note are claims 7 and 17, which depend indirectly from claims 1 and 11, respectively. Claim 7 is representative and its dependency chain includes claim 4, which depends from claim 1 and restricts the games provided by the interactive interface. *Id.* at 16:1–7. Claim 6 depends from claim 4 and requires that the interactive interface provides different games for different input ranges from the user. *Id.* at 16:18–35. Claim 7 depends from claim 6 and recites that “in each range of input value, the plurality of predefined results comprises a plurality of different prizes respectively, and a probability to win a bigger prize from the plurality of different prizes is improved with increase of said input.” *Id.* at 16:36–40.

E. ASSERTED GROUNDS

Petitioner asserts the following unpatentability grounds:

Claims	35 U.S.C. §	Reference(s)/Basis
1–20	101	Inventorship
1, 2, 4–9, 11, 12, 14–17, 19, 20	102	2019 Lovense System ¹
1, 2, 4–6, 8–12, 14–16, 18–20	103	Olivares, ² 2019 Video ³
3, 7, 13, 17	103	Olivares, 2019 Video, Wiltshire ⁴

Pet. 12. Petitioner also relies on the Declaration of Dr. Stan McClellan. Ex. 1006.

¹ 2019 Lovense System “includes the combination of Lovense products described in the 2019 Video” (Pet. 10–12; Ex. 1008; Exs. 1010-1, 1010-2, 1010-3) and described on the Lovense Website (Pet. 7–10; Ex. 1008; Exs. 1009-1, 1009-2).

² U.S. 9,762,515 B1, issued Sept. 12, 2017 (Ex. 1002).

³ Ex. 1010-1 (“2019 Video”) (May 20, 2019), *available at* <https://www.youtube.com/watch?v=9fiQGTKNAGU>; Ex. 1010-2 (YouTube metadata); Ex. 1010-3 (transcript of 2019 Video).

⁴ U.S. 6,409,602 B1, issued June 25, 2002 (Ex. 1011).

1. Olivares

Olivares relates to a system and method for allowing a user to interact with models from a distance by enabling the user to tip the models during online video chat sessions. Ex. 1002, code (57). Petitioner asserts that Olivares and the '041 patent are “largely identical.” Pet. 2–6. Petitioner notes that the '041 patent adds “an interactive interface (e.g., a game)” to website 104 to provide “a random interactive result (e.g., the outcome of a game).” *Id.* at 6. Exhibit 1003 compares the text of the '041 patent to Olivares. Ex. 1003. Olivares’s Figure 1 is nearly identical to the '041 patent’s Figure 3. *Compare* Ex. 1001, Fig. 3, *with* Ex. 1002, Fig. 1. The only difference between the figures appears to be that Olivares’s Figure 1 does not include an interactive interface 122 in user device 114 and model device 115. *See* Ex. 1001, Fig. 3, 2:49–6:9; Ex. 1002, Fig. 1, 4:16–6:45.

2. The 2019 Video⁵

The 2019 Video is a 10 minute, 41 second YouTube video titled “How to use Lovense Smartcam and the OBS Toolset” explaining how to use Lovense Smartcam, which is part of the supporting software for the Lovense Lush toy. Ex. 1010-2, 3; 1010-3, 1–6. The 2019 Video explains that Lovense Smartcam allows a user to add the Lovense overlay to a video feed, and that the Lovense overlay “allows your viewers to know what tip ranges you have set up and what toys are gonna vibrate.” Ex. 1010-3, 1 (0:36–0:38), 2 (2:01–2:09). The Lovense overlay can “add animations” such as a “dice game” and, for one embodiment, “you need to tip 12 tokens to roll the dice,” which causes “all toys to react for three seconds.” *Id.* at 4 (4:10–4:12, 4:34–4:40).

⁵ Exhibit 1010 includes 3 parts, 1010-1 is the YouTube video, 1010-2 is the corresponding metadata, and 1010-3 is a transcript that corresponds to various time increments of the YouTube video.

3. *2019 Lovense System*

Petitioner asserts its commercial embodiment as of 2019, referred to as the 2019 Lovense System. Pet. 11–12. Petitioner shows aspects of the system through multiple exhibits, including the Declaration of Jilin Qiu (Ex. 1008), Lovense Webpages (Ex. 1009⁶), and the 2019 Video (Ex. 1010).

4. *Wiltshire*

Wiltshire describes a computer gaming system in which gaming programs execute on a server/host computer connected to a plurality of client/terminal computers over a network. Ex. 1011, code (57). Wiltshire describes multiplayer games, such as blackjack, in which cards are dealt to a player and to a casino dealer, with the game's result depending on the values of cards dealt to each. *Id.* at 9:38–62.

II. ANALYSIS OF PETITIONER'S CHALLENGES

Petitioner asserts that the '041 patent's claims are unpatentable for lack of proper inventorship under 35 U.S.C. § 101 (claims 1–20), for lack of novelty under § 102 (claims 1, 2, 4–9, 11, 12, 14–17, 19, 20), and for obviousness under § 103 (claims 1–20). Pet. 12. Because we agree that Petitioner has shown each challenged claim would have been anticipated or obvious, we do not reach the inventorship ground.

A. PGR ELIGIBILITY

The '041 patent was filed on November 3, 2020, and does not claim priority to earlier applications. Ex. 1001, code (22), 1:1–10. It issued on September 28,

⁶ Exhibit 1009 includes two parts, 1009-1 is the Affidavit of Nathaniel E Frank-White indicating that the Internet Archive's Wayback Machine contains the web pages that appear as 1009-2.

2021, within nine months before the Petition was filed. *Id.*, code (45); Pet. 113 (filed June 27, 2022); Paper 5. Therefore, the '041 patent was eligible for post-grant review when Petitioner filed the Petition. *See* 35 U.S.C. § 321(c).

B. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner contends that a person of ordinary skill in the art would “have a bachelor’s degree in electrical engineering, software engineering, computer science, or a similar field with at least two years of experience related to development of software for distributed or networked applications.” Pet. 26 (citing Ex. 1006 ¶ 51). Patent Owner does not dispute or otherwise address Petitioner’s proposed level of ordinary skill. We adopt Petitioner’s definition, as it appears to be consistent with the '041 patent’s description and the asserted prior art.

C. CLAIM CONSTRUCTION

For a post-grant review petition filed after November 13, 2018, we construe claim terms “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.200(b) (2019). Thus, claim terms generally are construed in accordance with their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art, and the prosecution history pertaining to the patent at issue. *Id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary artisan after reading the entire patent,” and “as of the effective filing date of the patent application.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 1321 (Fed. Cir. 2005) (en banc).

“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” *Nidec Motor Corp. v. Zhongshan*

Broad Ocean Motor Co. Matal, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner asserts that no term requires construction. Pet. 13. Patent Owner agrees “that all terms in the challenged claims should be given their plain and ordinary meanings” and does not propose any constructions under that standard. PO Resp. 8. We agree that no claim term requires express construction to resolve the disputes in this proceeding.

D. ANTICIPATION BY THE 2019 LOVENSE SYSTEM

Petitioner provides contentions for how the 2019 Lovense System discloses each limitation of claims 1, 2, 4–9, 11, 12, 14–17, 19, and 20. Pet. 28–69; Ex. 1004 (claims index). Petitioner’s evidence adequately establishes how the 2019 Lovense System operates and that it was available before the effective filing date of the challenged claims. *See* Ex. 1008 ¶ 31; Ex. 1009-1; Ex. 1009-2; Ex. 1010-2.

Patent Owner contends that the 2019 Lovense System does not disclose “receiving the interactive result and controlling said adult toy to actuate according to the interactive result” in each independent claim, in particular pointing to the “according to the interactive result” phrase. PO Resp. 18–20.⁷ In Patent Owner’s view, under its plain meaning, “‘according to’ means ‘in a manner corresponding or conforming to; in proportion or relation to; in accordance with.’” *Id.* at 18. Thus, Patent Owner submits, in the claim “the system needs to issue control instructions to the adult toy such that the adult toy exhibits different actuations in a manner corresponding or conforming to different interactive results.” *Id.* Addressing Petitioner’s evidence, Patent Owner contends that, in the 2019 Lovense System,

⁷ Throughout its arguments, Patent Owner cites to the Declaration of Mingshao Zhang. In resolving the parties’ disputes, we have considered the extent to which Dr. Zhang’s opinions lend a persuasive viewpoint to Patent Owner’s arguments.

“regardless of the interactive result of the dice roll, all the toys always actuate by vibrating for 3 seconds.” *Id.* at 19.

Petitioner responds that the 2019 Lovense System “discloses the toy vibrating for different lengths of time, and at differing vibration speeds, in response to different dice rolls.” Pet. Reply 15. We agree. As Petitioner shows, the configuration instructions state that, “[y]ou, the model, well also set a prize for each dice roll number” and show a configuration in which each roll corresponds to a different actuation time. Ex. 1009-2, 51, 52. Patent Owner focuses on Exhibit 1010-1, in which the narrator discusses configuring “what each dice roll will do” and states that, in the displayed configuration, “you can see all toys are going to vibrate for three seconds.” Ex. 1010-1, 5:10–5:11; *accord id.* at 4:28–4:44 (“And then I’ve just checked all toys to react for three seconds.”). But the screens depicted show without ambiguity that each distinct roll is associated with a setting for reaction time. *Id.* at 4:28–4:44. Thus, the system depicted in Exhibit 1010 (the video) is consistent with Exhibit 1009, the configuration instructions. Based on the foregoing, we find the software is configured to actuate the toy according to the interactive result in the 2019 Lovense System.⁸

Patent Owner does not otherwise contest Petitioner’s anticipation challenge. We have reviewed Petitioner’s assertions, agree with them, and adopt them. Pet. 28–69; Pet. Reply 14–18. Accordingly, Petitioner has shown anticipation of claims 1, 2, 4–9, 11, 12, 14–17, 19, and 20 by the 2019 Lovense System.

⁸ At the hearing, Patent Owner argued that a “dice roll is not interactive” but abandoned that argument and agreed that “if one person clicks a button to roll some virtual dice,” that constitutes an interactive result “[b]ecause the person interacts with the interface and receives a random result.” Tr. 24:1–25:9.

E. OBVIOUSNESS OVER OLIVARES AND THE 2019 VIDEO

Petitioner asserts that the combination of Olivares and the 2019 Video teaches claims 1, 2, 4–6, 8–12, 14–16, and 18–20 of the '041 patent. Pet. 24, 69–101. Petitioner submits that the two references “are part of a single line of innovation and product development” and that the products and services described in Olivares “were extended as described in the 2019 Video.” *Id.* at 24. Thus, reasons Petitioner, skilled artisans “would have found it obvious to extend the UI of Olivares to include Lovense’s dice game or keno game.” *Id.* In the Institution Decision, we considered each limitation of claim 1, determining that Petitioner adequately supported its contentions. Inst. 7–12.

Patent Owner contests this ground only for the same reason discussed above regarding anticipation by the Lovense System. PO Resp. 20–21. For the same reasons discussed above, we determine that the 2019 Video discloses the disputed aspect: “receiving the interactive result and controlling said adult toy to actuate according to the interactive result.”

Patent Owner does not otherwise contest Petitioner’s obviousness challenge based on Olivares and the 2019 Video. We have reviewed Petitioner’s assertions, agree with them, and adopt them. Pet. 24, 69–101; Pet. Reply 18–19. Accordingly, Petitioner has shown claims 1, 2, 4–6, 8–12, 14–16, and 18–20 would have been obvious over Olivares and the 2019 Video.

F. OBVIOUSNESS OVER OLIVARES, THE 2019 VIDEO, AND WILTSHIRE

For claims 3, 7, 13, and 17, Petitioner asserts that additional references, in combination with Olivares and the 2019 Video, render the claims obvious. Pet. 101–11. Claims 7 and 17 are subject to Petitioner’s anticipation challenge discussed above, for which Patent Owner did not contest the assertions directed to

claim 7 or 17. Accordingly, we need not address those claims under this additional ground.

Claim 3 depends indirectly from claim 1 and further recites limitations requiring two interactive interfaces, each outputting a result, and outputting a result according to the two results. Ex. 1001, 15:61–67. Petitioner characterizes the claim as reciting “two users playing an interactive game against one another.” Pet. 102. Petitioner asserts that Olivares discloses that the model and a user each have an interactive interface (citing Ex. 1002, 4:23–25, 4:35–37), and that Wiltshire discloses that multiple players can play online games against each other (Ex. 1011, 12:9–15). Pet. 102–04. In particular, Petitioner points to Wiltshire’s disclosure of a blackjack game, in which cards are dealt to the patron and casino dealer. Pet. 104–05 (citing Ex. 1011, 9:40–45, Figs. 6A, 6B). Because the winner of Wiltshire’s game receives the prize, Petitioner asserts that the combination teaches claim 3’s final limitation. *Id.* at 105–06 (citing Ex. 1011, 9:58–62).

Claim 13 depends from independent claim 11 and further recites limitations similar to those of claim 3. In summary, claim 13 requires two interactive interfaces, each outputting randomly a result, and that the web browser outputs the result according to those results and actuates the toy. *See* Ex. 1001, 17:25–36. For claim 13, Petitioner relies in part on the same contentions as for claim 3. *See* Pet. 110.

Patent Owner challenges Petitioner’s reliance on Wiltshire, arguing that it “is not an analogous prior art to Olivares or the 2019 Video.” PO Resp. 22–23. The correct inquiry is whether Wiltshire is analogous to the ’041 patent. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1377 (Fed. Cir. 2023). Petitioner asserts that Wiltshire is “in the field of online games of chance.” Pet. Reply 21 (citing Ex. 1020 ¶¶ 8, 11, 31–36). The ’041 patent states it is “directed

methods and systems for interactive online adult entertainment.” Ex. 1001, 1:7–9; *see* Pet. Reply 20. As Petitioner’s expert points out, the ’041 patent includes “casino style games such as a ‘dice game’ and a ‘lottery game.’” Ex. 1020 ¶ 8 (citing Ex. 1001, Fig. 4). Petitioner’s expert also identifies that Wiltshire discloses “dice games (e.g., craps) and lottery games (e.g., keno), in addition to many other casino style games.” *Id.* (citing Ex. 1011, 1:25–45). We conclude that Petitioner has shown Wiltshire is in the same field as the ’041 patent and, at a minimum, reasonably pertinent to problems addressed in the ’041 patent. Namely, both the ’041 patent and Wiltshire address providing online versions of casino-style games. Thus, we find that Wiltshire is analogous art to the ’041 patent.

Patent Owner argues also that Petitioner does not provide an adequate reason that skilled artisans would have looked to Wiltshire’s teachings to modify Olivares and the 2019 Video. PO Resp. 24. We do not agree. Petitioner asserts that the 2019 Video discloses games of chance such as dice and keno games, and that “Wiltshire details how to implement games of chance in an interactive network system.” Pet. 25 (citing Ex. 1006 ¶ 92). Petitioner more particularly addresses the combination asserted against claims 3 and 13, submitting that using Wiltshire’s teachings would allow a skilled artisan “to support multiplayer modes” in a system like Olivares, which “expressly discloses multiple users.” *Id.* Petitioner’s reasoning logically supports the combination because the system of Olivares and the 2019 Video involved multiple users, but those references did not expressly disclose presenting multiplayer games to multiple users. Thus, modifying the system to implement Wiltshire’s approach would have expanded the system’s capabilities as Petitioner asserts—supporting multiplayer modes is a benefit from the combination.

Patent Owner criticizes Petitioner's reference to Wiltshire's blackjack game as insufficient to render obvious modifying Olivares and the 2019 Video to provide a multiplayer dice game. PO Resp. 24–25. The proposed modification, however, does not rely on Wiltshire's teachings specific to blackjack. Rather, Petitioner asserts that the modification would involve “common and obvious features of multiplayer games of chance” such as “random moves by players [that] determine the winner.” Pet. Reply 22 (citing Ex. 1011, 1:25–45). Although Patent Owner characterizes Wiltshire as too vague and providing only a general approach, the limitations at issue recite nothing specific about how a multiplayer game must operate. Claim 3 recites two interactive interfaces each providing a result, and outputting an interactive result according to those two results. As Petitioner establishes, Olivares and the 2019 Video disclose a system with two interactive interfaces. Pet. 102–04. And Patent Owner does not dispute that Wiltshire discloses a multiplayer game in which the participants receive results through their respective interactive interfaces. *See id.* at 105–05. As Petitioner points out, the final claimed interactive result is “derived from the winner of the game” (*id.* at 106 (quoting Ex. 1011, 9:19–27)) and we agree with Petitioner that it would have been obvious to configure the combined system to support multiplayer games as described in Wiltshire. *See* Pet. Reply 21–22.

We agree that claim 3's and 13's subject matters would have been obvious in light of Olivares, the 2019 Video, and Wiltshire.

III. PATENT OWNER'S REVISED MOTION TO AMEND

Patent Owner requests that, if we find any of the challenged claims unpatentable, we grant entry of the corresponding proposed substitute claims 21–38. RMTA 1. Because we conclude that Petitioner shows by a preponderance of

the evidence that each of challenged claims 1–20 is unpatentable, we consider Patent Owner’s RMTA with respect to the substitute claims.

A. APPLICABLE LAW

In a post-grant review, amended claims are not added to a patent as of right, but rather must be proposed as a part of a motion to amend. 35 U.S.C. § 326(d). The Board must assess the patentability of proposed substitute claims “without placing the burden of persuasion on the patent owner.” *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1328 (Fed. Cir. 2017) (en banc); *see also Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 3–4 (PTAB Feb. 25, 2019) (precedential). Thus, Petitioner, not Patent Owner, “bears the burden of proving that the proposed amended claims are unpatentable by a preponderance of the evidence.” *Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1040 (Fed. Cir. 2017) (as amended on rehearing, *Bosch Auto. Serv. Sols., LLC v. Iancu*, No. 2015-1928 (Fed. Cir. Mar. 15, 2018) (Order on Petition for Panel Rehearing)); *Lectrosonics*, Paper 15 at 3–4.

In determining whether a petitioner has proven unpatentability of the proposed substitute claims, the Board focuses on “arguments and theories raised by the petitioner in its petition or opposition to the motion to amend.” *Nike, Inc. v. Adidas AG*, 955 F.3d 45, 51 (Fed. Cir. 2020). Ultimately, the Board determines whether the proposed substitute claims are unpatentable by a preponderance of the evidence based on the entirety of the record, including any opposition made by the Petitioner. *See Lectrosonics*, Paper 15 at 4.

Notwithstanding the foregoing, Patent Owner’s proposed substitute claims must meet the statutory requirements of 35 U.S.C. § 326(d) and the procedural

requirements of 37 C.F.R. § 42.221. *See Lectrosonics*, Paper 15 at 4–8.⁹

Accordingly, Patent Owner must demonstrate: (1) the amendment proposes a reasonable number of substitute claims; (2) the amendment responds to a ground of unpatentability involved in the trial; (3) the proposed claims are supported in the original disclosure (and any earlier filed disclosure for which the benefit of filing date is sought); and (4) the amendment does not seek to enlarge the scope of the claims of the patent or introduce new subject matter. *See* 35 U.S.C. § 326(d); 37 C.F.R. § 42.221.

B. PROPOSED SUBSTITUTE CLAIMS

Patent Owner identifies proposed substitute claims 21, 30, and 38 as independent. RMTA 2, 4. Proposed substitute claims 22–29 and 31–37 each depend from one of proposed substitute claims 21 and 30. RMTA 16; Ex. 2004, 2–4, 6–7. Proposed claim 21 would replace claim 1 and recites:¹⁰

21. A system for providing online communication, comprising:
an operable adult toy configured to receive signals;
a memory having stored thereon instructions;
at least one processor to execute said instructions resulting in a
software application; said software application configured to:
define input parameters;
receive an input from one or more users; and
providing at least one interactive interface, outputting randomly
an interactive result according to the at least one interactive
interface, receiving the interactive result and controlling said
adult toy to actuate according to the interactive result; and

⁹ While *Lectrosonics* expressly references an *inter partes* review, its analysis is equally applicable to motions to amend in a post-grant review.

¹⁰ Underlined language in proposed substitute claims reflects subject matter added to the corresponding original claim.

wherein the at least one interactive interface comprises a first interactive interface provided by a model device and a second interactive interface provided by a user device, and said software application is further configured to output randomly a first result from the first interactive interface provided by the model device, output randomly a second result from the second interactive interface provided by the user device, and output randomly the interactive result according to the first result and the second result by selecting the interactive result from the first random result and the second random result, and

wherein the first random result is different from the second random result and the first random result associates with a first control mode and the second random result associates with a second control mode, and the selected interactive result actuates said adult toy to operate in the first control mode with a first control speed in a first control time period when the selected interactive result is the first random result, and the selected interactive result actuates said adult toy to operate in the second control mode with the first control speed in a second control time period and a second control speed in a third control time period when the selected interactive result is the second random result, wherein the first control speed is different from the second control speed, and the first control time period has a first time length and each of the second control time period and the third control time period has a second time length, and the second time length is equal to two times of the first time length.

Ex. 2004, 1–2, 10–11. Proposed claim 30 would replace claim 11 and recites:

30. A system for providing online communication, comprising:
- one or more user devices and a model device in connection with a network;
 - each of said one or more user devices and said model device having a web browser thereon for accessing a website, said website providing an online chat room;
 - an adult toy in communication with said model device;

said web browser comprising a software application, said software application configured to:

define input parameters, wherein said input parameters comprise one or more ranges of input value;

receive an input from one or more users, wherein said input comprises virtual currency;

determine whether said input falls within said one or more ranges; and

if said input falls within said input parameters, providing an interactive command to at least one of said model device and said user device,

the at least one of said model device and said user device configured to provide an interactive interface according to the interactive command, outputting randomly an interactive result according to the interactive interface, receive the interactive result from the interactive interface and control said adult toy according to the interactive result, and

wherein the at least one interactive interface comprises a first interactive interface provided by a model device and a second interactive interface provided by a user device, and said software application is further configured to output randomly a first result from the first interactive interface provided by the model device, output randomly a second result from the second interactive interface provided by the user device, and output randomly the interactive result according to the first result and the second result by selecting the interactive result from the first random result and the second random result, and

wherein the first random result is different from the second random result and the first random result associates with a first control mode and the second random result associates with a second control mode, and the selected interactive result actuates said adult toy to operate in the first control mode with a first control speed in a first control time period when the selected interactive result is the first random result, and the selected interactive result actuates said adult toy to operate in the second control mode with the first control speed in a

second control time period and a second control speed in a third control time period when the selected interactive result is the second random result, wherein the first control speed is different from the second control speed, and the first control time period has a first time length and each of the second control time period and the third control time period has a second time length, and the second time length is equal to two times of the first time length.

Id. at 4–6, 13–14. Proposed claim 38 would replace claim 20 and recites:

38. A computer based method for providing adult entertainment online, comprising the steps of:
- defining input parameters, wherein said input parameters comprise one or more ranges of input value;
 - activating an adult toy in communication with a model device;
 - starting a chat session with one or more users and a model via a website;
 - receiving an input from said one or more users, wherein said input comprises virtual currency;
 - determining whether said input falls within said input parameters;
 - if said input falls within said input parameters, providing at least one interactive interface, outputting randomly an interactive result according to the at least one interactive interface, receiving the interactive result and controlling said adult toy to actuate according to the interactive result, and
- wherein the at least one interactive interface comprises a first interactive interface provided by a model device and a second interactive interface provided by a user device, and said software application is further configured to:
- output randomly a first result from the first interactive interface provided by the model device, output randomly a second result from the second interactive interface provided by the user device, and output randomly the interactive result according to the first result and the second result by selecting the interactive result from the first random result and the second random result, and

wherein the first random result is different from the second random result and the first random result associates with a first control mode and the second random result associates with a second control mode, and the selected interactive result actuates said adult toy to operate in the first control mode with a first control speed in a first control time period when the selected interactive result is the first random result, and the selected interactive result actuates said adult toy to operate in the second control mode with the first control speed in a second control time period and a second control speed in a third control time period when the selected interactive result is the second random result, wherein the first control speed is different from the second control speed, and the first control time period has a first time length and each of the second control time period and the third control time period has a second time length, and the second time length is equal to two times of the first time length.

Id. at 8–9, 16–17.

C. STATUTORY AND REGULATORY REQUIREMENTS

1. Reasonable Number of Claims

35 U.S.C. § 326(d)(1)(B); 37 C.F.R. § 42.221(a)(3)

“There is a rebuttable presumption that a reasonable number of substitute claims per challenged claim is one (1) substitute claim.” *Lectrosonics*, Paper 15 at 4–5. Petitioner challenges claims 1–20 of the ’041 patent, and Patent Owner proposes claims 21–38 as potential substitutes for claims 1, 2, 4–12, and 14–20. Paper 6, 2; RMTA 1–2; Ex. 2004, 1–17. Thus, Patent Owner proposes no more than 1 substitute claim for each challenged claim, which is presumptively reasonable. Petitioner does not contest Patent Owner’s arguments on this point. *See generally* RMTA Opp.

2. *Respond to a Ground of Unpatentability*
37 C.F.R. § 42.221(a)(2)(i)

“A motion to amend may be denied where . . . [t]he amendment does not respond to a ground of unpatentability involved in the trial.” 37 C.F.R.

§ 42.221(a)(2)(i). Patent Owner contends that the proposed substitute claims 21, 30, and 38 recite narrowing limitations that distinguish the substitute claims over the references forming the bases of this post-grant review. RMTA 8. Petitioner does not contest Patent Owner’s arguments on this point. *See generally* RMTA Opp. Applying 37 C.F.R. § 42.221(a)(2)(i) to Patent Owner’s motion as a whole, we conclude the proposed substitute claims satisfy the regulation.

3. *Scope of Amended Claims*
35 U.S.C. § 326(d)(3); 37 C.F.R. § 42.221(a)(2)(ii)

“A substitute claim will meet the requirements of § 42.121(a)(2)(i) and (ii) if it narrows the scope of at least one claim of the patent, for example, the challenged claim it replaces, in a way that is responsive to a ground of unpatentability involved in the trial.” *Lectrosonics*, Paper 15 at 6–7.

The proposed substitute claims retain all claim limitations of their corresponding challenged claims and include additional narrowing limitations. *See* RMTA 4–5, 17, Ex. 2004. Petitioner does not argue otherwise. *See generally* RMTA Opp.

4. *New Matter or Written Description*
35 U.S.C. § 326(d)(3); 37 C.F.R. § 41.221(b)(1)

“A motion to amend may be denied where . . . [t]he amendment seeks to . . . introduce new subject matter.” 37 C.F.R. § 42.221(a)(2)(ii); *see also* 35 U.S.C. § 326(d)(3) (a motion to amend may not introduce new matter). New subject matter is any addition to the claims that lacks sufficient support in the subject

patent's original disclosure. *See TurboCare Div. of Demag Delaval Turbomach. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001). Patent Owner also is required to show written-description support in “the original disclosure of the patent for each claim that is . . . amended.” 37 C.F.R. § 42.221(b)(1).

The test for satisfying the written-description requirement “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.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Further, “a sufficient description of a genus . . . requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can ‘visualize or recognize’ the members of the genus.” *Id.* at 1350 (quoting *Regents of the Univ. of California v. Eli Lilly & Co.*, 119 F.3d 1559, 1568–69 (Fed. Cir. 1997)).

Proposed claim 21 recites, in part, “the first control time period has a first time length and each of the second control time period and the third control time period has a second time length, and the second time length is equal to two times of the first time length.” RMTA 3–4. Patent Owner asserts that “[t]his limitation of substitute claim 21 is supported in the specification of the ’652 Application at least in . . . paragraphs [0037–0040], [0049–0050].”¹¹ RMTA 7. Patent Owner further asserts that “[t]he new narrowing limitations in substitute independent claims 30 and 38 are the same as the new narrowing limitations in substitute independent claim 21,” and therefore supported by the same portions of the specification. *Id.*

¹¹ The ’652 Application appears as Exhibit 2001.

Petitioner asserts that the cited paragraphs do not provide support for “the second time length is equal to two times of the first time length.” RMTA Opp. 9. Petitioner points out that Patent Owner is presumably referring to the disclosure of paragraph 39, which recites “[i]n one embodiment, the first time period is 5 seconds, the second time period is 5 seconds, the third time period is 10 seconds, and the fourth time period is 10 seconds.” *Id.* (quoting Ex. 2001 ¶ 39). Petitioner argues that “Patent Owner has randomly selected one of the infinite mathematical relationships between the numbers 5 and 10,” and that “[a]lthough 10 is certainly ‘two times’ 5, the numbers 5 and 10 have infinitely many such relationships.” *Id.* at 10. Petitioner argues that “Patent Owner cannot select its random, exemplary numbers from its single embodiment, and then arbitrarily select and claim a mathematical relationship between those numbers.” *Id.* Petitioner concludes that “[t]he specification is silent as to one time length being two times another time length.” *Id.*

We agree with Petitioner. Patent Owner’s citations to the specification provide neither a representative number of species nor an articulation of common features to support “the second time length is equal to two times of the first time length.” While the single example is consistent with one duration double another, that is insufficient to demonstrate possession of the claimed relationship, because it is consistent also with many alternative relationships. Stated otherwise, the specification gives an example and would support a claim to that example, but it does not inform skilled artisans of the abstraction that Patent Owner seeks to claim in the proposed substitute claims. Because any number of abstractions might be made from the specification’s example, and the specification does not provide guidance as to which abstractions would serve the invention’s goals, the single example does not support claims to an abstraction.

Accordingly, we determine that Patent Owner does not meet its burden to demonstrate written-description support for the “second time length is equal to two times of the first time length” in claims 21, 30, and 38 of its Revised Motion to Amend. Proposed substitute claims 22–29 and 31–37 each depend from one of proposed substitute claims 21 and 30, and therefore incorporate all the elements of their respective independent claim. Thus, Patent Owner also does not meet its burden to demonstrate written description support for proposed substitute claims 22–29 and 31–37.¹²

Because Patent Owner has not satisfied the statutory and regulatory prohibition against introducing new matter in the revised proposed substitute claims, we deny the RMTA as to claims 21–38. 35 U.S.C. § 326(d)(3); 37 C.F.R. § 42.221(a)(2)(ii). Accordingly, we need not reach Petitioner’s additional unpatentability challenges. *See* RMTA Opp. 12–25.

IV. PETITIONER’S MOTION TO EXCLUDE

Petitioner seeks to exclude the Declaration of Mingshao Zhang (Ex. 2003) based on (1) Dr. Zhang’s consideration of certain, but not all, evidence submitted with the Petition and (2) Dr. Zhang’s statement that “Petitioner has not advanced any evidence or argument that the named inventor of the ’041 patent did not conceive the subject matter of the ’041 patent.” Mot. Exclude 2–4.

We agree with Patent Owner that failing to consider certain evidence does not justify excluding a declarant’s statement. *See* Opp. Mot. Exclude 2–3. To the

¹² Additionally, as noted in the Preliminary Guidance, a motion to amend must identify support for all proposed substitute claims, not just amended claims. Paper 21, 5 (citing *Lectrosonics*, Paper 15 at 8). The Revised Motion to Amend asserts support for the proposed substitute independent claims and two proposed substitute dependent claims but does not identify support for the other proposed substitute dependent claims. RMTA 5–7, 17; Ex. 2004.

extent that Petitioner's contentions rely on evidence that Dr. Zhang did not consider, his opinion on such contentions is entitled to little weight.

Accordingly, Petitioner's Motion to Exclude is denied.

V. CONCLUSION¹³

For the reasons discussed above, we conclude that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable and we deny Patent Owner's Revised Contingent Motion to Amend.

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–20	101	Inventorship ¹⁴		
1, 2, 4–9, 11, 12, 14–17, 19, 20	102	2019 Lovense System	1, 2, 4–9, 11, 12, 14–17, 19, 20	
1, 2, 4–6, 8–12, 14–16, 18–20	103	Olivares, 2019 Video	1, 2, 4–6, 8– 12, 14–16, 18– 20	

¹³ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹⁴ Because we determine all challenged claims unpatentable for other reasons, we do not address the asserted inventorship ground.

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
3, 7, 13, 17	103	Olivares, 2019 Video, Wiltshire ¹⁵	3, 13	
Overall Outcome			1–20	

Revised Motion to Amend Outcome	Claims
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in the Amendment	21–38
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	21–38
Substitute Claims: Not Reached	

VI. ORDER

Accordingly, it is

ORDERED that claims 1–20 of the '041 patent are unpatentable;

FURTHER ORDERED that, Patent Owner's Revised Contingent Motion to Amend is denied;

FURTHER ORDERED that Petitioner's Motion to Exclude is denied; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

¹⁵ Because claims 7 and 17 are unpatentable as anticipated by the 2019 Lovense System, we do not address unpatentability of those claims under this additional ground.

PGR2022-00050
Patent 11,134,041 B1

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