

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

AUTONOMOUS DEVICES, LLC,
Patent Owner.

IPR2023-01169
Patent 10,607,134 B1

Before BARBARA A. PARVIS, ROBERT J. WEINSCHENK, and
RUSSELL E. CASS, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND

I. INTRODUCTION

On January 8, 2024, we instituted trial as to claims 1–20 of U.S. Patent No. 10,607,134 B1 (“the ’134 patent,” Ex. 1001). Paper 19 (“Inst. Dec.”). After institution, Patent Owner filed a Contingent Motion to Amend (Paper 25 (“Mot.”)) requesting that, if “the Board finds any of original claims 2–5, 7, and 9–19 unpatentable, [Patent Owner] requests that the Board grant this motion to amend and issue the corresponding substitute claims [among 21–36] presented herein,” and further requesting that “[t]he Board should not consider this motion for each of original claims 2–5, 7, and 9–19 found patentable.” Mot. 1, 23, App. A 1–36 (Substitute Claims Listing). Patent Owner submitted a Declaration of Eli Saber, Ph.D. (Ex. 2007) in support of the Motion. Petitioner filed an opposition on June 24, 2024. Paper 30 (“Opp.”). Petitioner submitted a second Declaration of Jason Janet, Ph.D. (Ex. 1022) in support of the Opposition.

In the Motion, Patent Owner requested that we provide preliminary guidance concerning the Motion in accordance with the Board’s pilot program concerning motion to amend practice and procedures. Mot. 1; *see also* Notice Regarding a New Pilot Program Concerning Motion to Amend Practice and Procedures in Trial Proceedings under the America Invents Act before the Patent Trial and Appeal Board, 84 Fed. Reg. 9,497 (Mar. 15, 2019) (providing a patent owner with the option to receive preliminary guidance from the Board on its motion to amend) (“Notice”). We have considered Patent Owner’s Motion and Petitioner’s Opposition.

In this Preliminary Guidance, we provide information indicating our initial, preliminary, non-binding views on whether Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review and whether Petitioner (or

the record) establishes a reasonable likelihood that the substitute claims are unpatentable. *See* Notice, 84 Fed. Reg. at 9,497 (“The preliminary guidance . . . provides preliminary, non-binding guidance from the Board to the parties about the [motion to amend]”); *see also* 35 U.S.C. § 316(d) (statutory requirements for a motion to amend); 37 C.F.R. § 42.121 (regulatory requirements and burdens for a motion to amend); *Lectrosonics, Inc. v Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential) (providing information and guidance regarding motions to amend).

For purposes of this Preliminary Guidance, we focus on the proposed substitute claims, and specifically on the amendments proposed in the Motion. *See* Notice, 84 Fed. Reg. at 9,497. We do not address the patentability of the originally challenged claims. *Id.* Moreover, in formulating our preliminary views on the Motion and Opposition, we have not considered the parties’ other substantive papers on the underlying merits of Petitioner’s challenges. We emphasize that the views expressed in this Preliminary Guidance are subject to change upon consideration of the complete record, including any revision to the Motion filed by Patent Owner. Thus, this Preliminary Guidance is not binding on the Board when rendering a final written decision. *See id.* at 9,500.

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

For the reasons discussed below, at this stage of the proceeding, and based on the current record, it appears that Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend with respect to proposed substitute claims 21–36.

1. Reasonable Number of Substitute Claims

Does Patent Owner propose a reasonable number of substitute claims?
(35 U.S.C. § 316(d)(1)(B))

Yes.

Patent Owner proposes no more than 1 substitute claim for each of challenged claims 2–5, 7, and 9–19. Mot. 1–2, App. A 1–36 (Substitute Claims Listing). Petitioner does not argue otherwise. *See generally* Opp.

2. Respond to Ground of Unpatentability

Does the Motion respond to a ground of unpatentability involved in the trial? (37 C.F.R. § 42.121(a)(2)(i))

Yes.

Patent Owner responds to the grounds of unpatentability on which we instituted trial. Mot. 2–3, 16–22. Upon review of Patent Owner’s arguments, we agree that proposed substitute claims 21–36 recite new limitations, and new combinations of limitations, that directly respond to the grounds of unpatentability involved in the trial. *See* Mot. 2–3, 16–22, App. A 1–36 (Substitute Claims Listing). Petitioner does not argue otherwise. *See generally* Opp.

3. Scope of Amended Claims

Does the amendment seek to enlarge the scope of the claims? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

No.

Proposed substitute claims 21–36 (i) retain all limitations of their original corresponding claims 2–5, 7, and 9–19¹ (including the original dependent and independent claims from which claims 2–5, 7, and 9–19 depend), and

¹ We note the correspondence between the original claims and the proposed substitute claims is as follows: proposed substitute claims 21–33 correspond to original claims 3–5, 7, 9, and 11–18, respectively; proposed substitute claim 34 corresponds to original claim 10; proposed substitute claim 35 corresponds to original claim 19; and proposed substitute claim 36 corresponds to original claim 2. *See* Mot. App. A 1–36 (Substitute Claims Listing).

(ii) further include additional limitations as compared to respective claims 2–5, 7, and 9–19. *See* Mot. 3–4, App. A 1–36 (Substitute Claims Listing). Therefore, proposed substitute claims 21–36 do not enlarge the scope of the claims of the challenged patent. *See* Mot. 3–4. Petitioner does not argue otherwise. *See generally* Opp.

4. New Matter

Does the amendment seek to add new subject matter? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

No.

On this record, Patent Owner appears to have identified adequate written description support for proposed substitute claims 21–36. *See* Mot. 4–16. Petitioner does not argue otherwise. *See generally* Opp.

Thus, at this stage of the proceeding, on the record before us, Patent Owner has shown a reasonable likelihood that there is adequate written description support in the original disclosure of the '134 patent for proposed substitute claims 21–36.

B. Patentability

For the reasons discussed below, at this stage of the proceeding, and based on the current record,² it appears that Petitioner (or the record) has not shown a reasonable likelihood that proposed substitute claims 21–36 are unpatentable.

² We express no view on the patentability of original claims 1–20 in this Preliminary Guidance. Instead, we focus on limitations added to the challenged claims in the Patent Owner's Motion to Amend.

Does the record establish a reasonable likelihood that the proposed substitute claims are unpatentable?

I. Indefiniteness

No.

Petitioner notes that the proposed substitute claims recite both “a second one or more object representations” and “a second object representation,” and argues these limitations render the claims unclear. Opp. 25. In particular, Petitioner notes that proposed substitute claim 21 recites “generating or receiving *a second one or more object representations*, wherein *the second one or more object representations* represent one or more objects of the application [(limitation [21.d])],” “the first one or more object representations comprise: . . . *a second object representation* that represents a second three dimensional (3D) object of the application [(limitation [21.h])],” and “*the second object representation* includes a second data structure [(limitation [21.l])].” *Id.* (emphases added); see Mot. App. A 1–3 (claim 21). Petitioner contends claim 21 is indefinite under 35 USC § 112(b) because “[i]t is unclear whether the ‘second object representation’ of [21.l] refers to the ‘second one or more object representations’ of [21.d] or the ‘second object representation’ of [21.h].” Opp. 25.

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). We are unpersuaded by Petitioner’s contentions because it appears that the proposed substitute claims inform, with reasonable certainty, those skilled in the art about the scope of the invention. For example, with respect to the claimed “*second object representation*,” claim 21 clearly states that the “*second object representation*” (including a second data structure) *is included in* “*the first one or more object representations*.” See Mot. App. A 1–3 (claim 21, reciting that “the first one or more object representations comprise . . . a second object representation that represents a second three dimensional (3D) object of the application . . . wherein the second object representation includes a second data structure”). Claim 21 also clearly states that “*the first one or more object representations*” (of which the “*second object representation*” is a part) is a *distinct* claim element from the claimed “*second one or more*

object representations”—because claim 21 indicates that “*the second one or more object representations*” and “*the first one or more object representations*” are compared to each other to determine if there is a “partial match” (based on a number or percentage of “partially matching portions”) therebetween. *See id.*

In view of the express language in claim 21, one having ordinary skill in the art would understand that the “*second object representation*”—which is a part of the set identified by “the first one or more object representations”—is distinct from the set identified by “*the second one or more object representations*.” We preliminarily find no lack of clarity in these claim limitations.

On this record, Petitioner has not established a reasonable likelihood that the phrases “the second one or more object representations” and “the second object representation” (of “the first one or more object representations”) recited in proposed substitute claim 21 render the claim unclear and indefinite.

Thus, on this record, Petitioner has not shown a reasonable likelihood that proposed substitute claim 21, and proposed substitute claims 22–36 reciting similar pertinent language, fail to comply with the definiteness requirement.

II. Obviousness

No, as to substitute claims 21–36 and Petitioner’s grounds based on Thomas, and based on the combination of Thomas and Hirai.

Petitioner has asserted the following cited art against the following substitute claims:

- Obviousness ground asserting Thomas (Ex. 1005) against proposed substitute claims 21–36; and
- Ground asserting Thomas and newly cited Hirai (Ex. 1025)³ against proposed substitute claims 21–36.

Opp. 1–25.

³ US 7,399,224 B2, issued July 15, 2008.

On this record, it appears that Petitioner (or the record) has not shown a reasonable likelihood that:

- proposed substitute claims 21–36 are unpatentable as obvious over Thomas, and
- proposed substitute claims 21–36 are unpatentable as obvious over the combination of Thomas and Hirai.

Below, we analyze Petitioner’s proposed grounds against the proposed substitute claims.

Proposed Substitute Claim 21

Proposed substitute independent claim 21 replaces original dependent claim 3 by rewriting it into independent form and also adding new limitations. *See* Mot. 3–4, App. A 1–3 (claim 21). In particular, proposed substitute claim 21 amends original claim 3 to recite:

[21.h]⁴ wherein the first one or more object representations comprise: a first object representation that represents a first three dimensional (3D) object of the application, and a second object representation that represents a second three dimensional (3D) object of the application, and

[21.i] wherein the first object representation includes a first data structure that:

[21.j] is generated at least in response to processing a type and a location of the first 3D object, and

[21.k] comprises a label indicating the processed type of the first 3D object and a coordinate indicating the processed location of the first 3D object, and

[21.l] wherein the second object representation includes a second data structure, and

[21.m] wherein the first data structure and the second data structure are correlated with the first one or more instruction sets for operating the first avatar of the application.

Mot. App. A 1–3 (Substitute Claims Listing).

⁴ We provide the bracketed designations added by Patent Owner to the claim limitations (*see* Mot. App. A 1–3).

Limitation [21.h] of proposed substitute claim 21

Limitation [21.h] recites that “the first one or more object representations comprise: a first object representation *that represents a first three dimensional (3D) object of the application*, and a second object representation *that represents a second three dimensional (3D) object of the application*.” Mot. App. A 1–3 (Substitute Claims Listing) (emphasis added).

In both grounds (i.e., the Thomas ground, and the Thomas-Hirai ground), Petitioner relies on Thomas for claim element [21.h] (which Petitioner calls [SUB.1]). *See* Opp. 10–11. In particular, Petitioner contends that Thomas discloses the claimed “first object representation” and “second object representation” because

Each of Thomas’s avatars (*e.g.*, players in a sports game application) corresponds to a respective ***object of the application***. *See* Petition, 14; TESLA-1005, 4:32–39. . . .

. . . [D]uring learning mode, Thomas stores parameters defining the “current circumstances,” *e.g.*, “the surrounding circumstances during which an event 685 may take place.” TESLA-1005, 4:17–19. These include parameters characterizing the avatars, such as “spatial position” of user-controlled or opposing-team avatars and “archetype of the avatar.” TESLA-1005, 4:46–51, 9:43–53; *see* 8:37–42, 10:33–42; *see* Petition, 12–13. These stored data characterizing avatars correspond to ***the first one or more object representations that represent objects of the application*** (the avatars). *See* Petition, 12–13; TESLA-1022, ¶80.

Each avatar is characterized by corresponding parameters, *e.g.*, specifying whether that avatar is user-controlled or on the opposing team, the location of that avatar, and/or the archetype of that avatar. *See* TESLA-1005, 4:46–51, 9:43–53, 8:37–42, 10:33–42; TESLA-1022, ¶81. Data characterizing a particular avatar (*e.g.*, a particular opposing-team avatar) corresponds to ***a first object representation that represents*** that particular avatar (***a first 3D object of the application***). Similarly, data characterizing a second avatar (*e.g.*, another opposing-team avatar or a user-controlled avatar) corresponds to ***a second object representation that represents*** that other avatar (***a second 3D object of the application***). TESLA-1022, ¶81.

Opp. 10–11.

Petitioner explains in more detail the properties of its identified “first object representation” in Thomas as follows:

Thomas describes “data structures herein referred to as user profiles, which may be individual data structures in a database 130.” TESLA-1005, 4:8–10; *see* 3:57–59. . . . An example user profile data structure is illustrated in FIG. 4 [of Thomas]. . . .

“Each user profile [in Thomas] has fields or sub-profiles logically associated, or linked, to one or more events and/or situations.” *Id.*, 4:10–12. . . . The sub-profiles themselves “each contain[s] fields or additional sub profiles” (*e.g.*, sub-profiles 660–680 in FIG. 4) that together define the situation associated with the respective event. TESLA-1005, 9:40–42; *see* 4:23–24 (“Each event 685 and situation 655 are defined by a set of one or more parameters”). . . .

. . . the sub-profile for Event #1 [in Thomas’ Fig. 4] includes fields/sub-profile 675 storing parameters characterizing opposing-team avatars, *e.g.*, specifying “the spatial position(s) of the avatars controlled by one or more user opponents 675 of the game.” *Id.*, 4:37–39. The portion of the fields/sub-profile 675 . . . storing parameters for a specific opposing-team avatar is likewise **a data structure** because it is composed of structured data (*e.g.*, fields containing parameter values for that avatar), and/or because it is a portion of the user profile data structure. TESLA-1022, ¶86. The characterization of a particular opposing-team avatar (the **first object representation**) includes this portion of the fields/sub-profile 675 (**first data structure**).

Opp. 12–13.

Petitioner explains in more detail the properties of its identified “second object representation” in Thomas as follows:

The characterization of a second opposing-team avatar (the **second object representation**) includes a portion of the fields/sub-profile 675 that stores parameters for that second opposing-team avatar (**a second data structure**). *See* [SUB.2], *supra*; TESLA-1022, ¶¶108–110.

Alternatively/additionally, Thomas's fields/subprofile 665 (a ***data structure*** . . .) stores parameters characterizing user-controlled avatars, *e.g.*, their "spatial position." TESLA-1005, 4:31–33. The characterization of the user-controlled avatar (the ***second object representation***) includes the fields/subprofile 665 (***second data structure***).

Opp. 22–23.

Thus, for the "first object representation" and "second object representation" recited in proposed substitute claim 21, Petitioner relies on the *data* that is (i) *stored in fields/sub-profiles* of a user's profile in Thomas, and that (ii) *characterizes an opposing-team avatar (such as avatars associated with user's sub-profile 675 in Thomas' Fig. 4) or a user-controlled avatar (such as avatars associated with user's sub-profile 665 in Fig. 4)*. See Opp. 10–13, 22–23. Petitioner contends these object representations in Thomas represent three-dimensional (3D) objects of the application (as required by claim 21). Opp. 10. Petitioner's sole support for this contention is that

[a] POSITA would have understood that Thomas's avatars are ***three dimensional (3D) object[s] of the application***, *e.g.*, given the implementation of Thomas's video game in the context of the ESPN NFL 2K5 game (which has "3D" characters), as explained by Dr. Janet. TESLA-1022, ¶¶78-79 (citing TESLA-1027).

Id.

Petitioner's reliance on Thomas' reference to the ESPN NFL 2K5™ video game and on Dr. Janet's associated testimony referencing Exhibit 1027 does *not* appear to show a reasonable likelihood that "[an ordinarily skilled artisan] would have understood that Thomas's avatars [(*e.g.*, opposing-team avatars and user-controlled avatars associated with user's sub-profiles 665 and 675 in Thomas' Fig. 4)] are ***three dimensional (3D) object[s] of the application***" (as Petitioner argues, *see* Opp. 10). Petitioner's showing with respect to the claimed object representations *representing 3D objects* is insufficient for the following reasons.

First, even if we were to accept that the ESPN NFL 2K5 video game referenced by Thomas rendered three-dimensional player avatars at the

time of Thomas' invention,⁵ we observe that the ESPN NFL 2K5 video game *resides in Thomas's computer program 110*, while (i) Thomas's simulator 120 (which generates the user's profile including sub-profiles 665 and 675) *does not reside in computer program 110*, and (ii) Thomas's database 130 (which stores the user's profile including sub-profiles 665 and 675) *does not reside in computer program 110*, either. *See* Ex. 1005, 3:40–4:12 (“simulator 120 collects and evaluates data about the first user's input when interacting with the computer program 110” and “[t]he collected data is then stored in the database 130. . . . [t]he data is stored in a data structure, generally referred to as a user's profile, corresponding to the first user,” with “[e]ach user profile ha[ving] fields or sub-profiles logically associated, or linked, to one or more events and/or situations”), 8:55–64 (an “example embodiment of a computer system 100 is a video game system that simulates an American football game and enables a first user to play the game against a computer opponent or a second user, and which is embodied in Visual Concepts' ESPN NFL 2K5™ (‘NFL 2K5’) video game” where “NFL 2K5 includes a computer program 110 in the form of an video game to be executed on a video game console”), Fig. 1 (showing computer program 110, simulator 120, and database 130). Petitioner itself submits that the alleged *objects* and *object representations* are generated by Thomas' *simulator 120* and *reside in database 130*. *See* Opp. 10 (referencing Thomas' learning mode, which is a mode of simulator 120), 12–13 (noting that the relevant data structures in Thomas

⁵ Petitioner relies on a rendered player image that appears at page 3 in Exhibit 1027, to infer that the ESPN NFL 2K5 video game renders 3D player avatars. *See* Opp. 10 (citing Ex. 1022 ¶¶ 78–79 (citing Ex. 1027, 3)); Ex. 1022 ¶ 78 (“NFL 2K5 video game depicted the players (*e.g.*, avatars) as 3D avatars. For instance, a review of the game includes the following image, which shows a 3D player avatar. *See* TESLA-1027, 3.”). Petitioner submits that Exhibit 1027 is a review of the ESPN NFL 2K5 game, downloaded from <https://www.gamespot.com/reviews/espn-nfl-2k5-review/1900-6103135/>. *See* Pet. iii (Exhibit List). We observe, however, that while the text of the review states that it is “By Alex Navarro on July 21, 2004” reviewing a “\$19.99” ESPN NFL 2K5 video game (*see* Ex. 1027, 1), page 2 in Exhibit 1027 indicates that the ESPN NFL 2K5 game is now “\$34.98 at Amazon” (*see id.* at 2). It thus appears that the version of Alex Navarro's article provided by Petitioner at Ex. 1027 was downloaded from the GameSpot website *after July 21, 2004* (*i.e.*, was downloaded at a later time, when the price of the NFL 2K5 game was no longer \$19.99).

are produced by the simulator and stored in database 130), 14–15 and 18–19 (noting that Thomas’s user profile, which includes the relevant data structures, is created by simulator 120 and stored in database 130). Thus, Petitioner’s alleged *objects* and *object representations* in Thomas’s user profile (including sub-profiles 665 and 675) *are not described by Thomas as representing 3D player avatars of the ESPN NFL 2K5 game* (which resides in computer program 110). *See* Ex. 1005, Fig. 1.

Petitioner does not identify further support and Thomas’s remaining disclosure appears to merely describe a video game interface with 2-dimensional graphical representations of a football field (310) and two sets of avatars (320) of defensive and offensive teams. *See* Ex. 1005, 8:66–9:9, Fig. 5. Dr. Janet’s supporting declaration testimony (Ex. 1022 ¶¶ 78–79, relied upon at Opp. 10) is insufficient to remedy the deficiency in Petitioner’s arguments for the same reasons given above.

Petitioner has not relied on Hirai for the limitations directed to representations of 3D objects in proposed substitute claim 21 (and we do not see Hirai as disclosing such). *See* Opp. 10–11. Thus, based on the current record, Petitioner does not appear to have shown a reasonable likelihood that *Thomas alone*, or *Thomas in combination with Hirai*, disclose or suggest “the first one or more object representations [that] comprise: a first object representation that represents a first three dimensional (3D) object of the application, and a second object representation that represents a second three dimensional (3D) object of the application” and the subsequent references to “the first 3D object” as recited in proposed substitute claim 21.

Proposed Substitute Claims 22–36

Petitioner submits the same arguments (as for claim 21) for proposed substitute claims 22–36. *See* Opp. 10–25, App. A (grouping similar claim elements in the proposed substitute claims together).

The new limitations added to proposed substitute claims 22–36 (with respect to their corresponding original claims) are similar to the new limitations added into proposed substitute claim 21 discussed *supra*. Thus, for the same reasons discussed above, with respect to the ground that relies on Thomas alone, Petitioner does not appear to have shown a reasonable likelihood that Thomas discloses or suggests the limitations pertaining to representations of 3D objects and a first data structure comprising a coordinate indicating a processed location of a first 3D object, as recited in

proposed substitute claims 22–36. Moreover, for the same reasons discussed above, with respect to the Thomas-Hirai ground, Petitioner does not appear to have shown a reasonable likelihood that Thomas and Hirai disclose or suggest the limitations pertaining to representations of 3D objects recited in proposed substitute claims 22–36.

III. CONCLUSION

This concludes the Preliminary Guidance, which is Patent Owner’s first option under the Board’s pilot program. Notice, 84 Fed. Reg. at 9,497. Patent Owner has an additional option under the Board’s pilot program to file a revised MTA by DUE DATE 3. *See* Scheduling Order.

In addition to those two options under the Board’s pilot program, Patent Owner is reminded that amendments of the challenged claims may also be pursued in a separate reissue or reexamination proceeding before, during, or after an AIA trial proceeding, including subsequent to the issuance of the Final Written 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).

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