Trials@uspto.gov
Tel: 571-272-7822

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION,
Petitioner,

v.

YISSUM RESEARCH DEVELOPMENT CO. OF THE HEBREW UNIVERSITY OF JERUSALEM,
Patent Owner.

Case IPR2013-00218
Patent 6,665,003 B1[1]

Before SALLY C. MEDLEY, KARL D. EASTHOM, and JAMES B. ARPIN, *Administrative Patent Judges.*

EASTHOM, *Administrative Patent Judge*.

DECISION
Request for Rehearing
37 C.F.R. § 42.71(d)

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[1] *Sony Corp. v. Yissum Research Co.*, Case IPR2013-00326 ("IPR2013-00326") has been joined with instant Case IPR2013-00218. IPR2013-00326, Paper 15 (PTAB Sept. 24, 2013). This Rehearing Decision is entered in both cases.

I. BACKGROUND

Patent Owner, Yissum Research Development Co. of the Hebrew University of Jerusalem, in its Rehearing Request, seeks withdrawal of the "Board's conclusion that Asahi anticipates claims 1, 3–5, 22, and 34 [because] it was . . . 1) based on an improper claim construction and 2) based on a misapprehension or overlooking of the evidence presented." *See* Paper 22, 1–2 ("Req. Reh'g."). For the reasons that follow, we deny the requested relief.

The applicable standard for a request for rehearing is set forth in 37 C.F.R. § 42.71(d), which provides, in relevant part, the following:

> A party dissatisfied with a decision may file a request for rehearing, without prior authorization from the Board. The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or a reply.

II. DISCUSSION

Patent Owner has not shown that we overlooked or misapprehended any matter previously addressed.

1. *Claim Construction*

Patent Owner contends that our construction of "stereoscopic image pair" is too broad, and that we misapprehended that Patent Owner acted as its "own lexicographer by providing a special definition" of the term "stereoscopic image pair." Req. Reh'g 3. Although Patent Owner contends that the record supports a lexicographic definition, Patent Owner did not characterize the proposed definition as lexicographic in its Preliminary

Response or Patent Owner Response. *See* Req. Reh'g 6. In the Institution Decision, we construed this term according to an ordinary and customary meaning of the term, consistent with the '003 Patent Specification. *See* Paper 16, 78 ("Inst. Dec."). In the Final Decision, based on an alternative ordinary and customary meaning that Patent Owner set forth in its Patent Owner Response, we adopted a slightly broader interpretation than the one initially set forth in the Institution Decision, consistent with the '003 Patent Specification. *See* Paper 53, 7–18 ("Fin. Dec."); Paper 29, 4 ("PO Resp."). Patent Owner's and Petitioner's declarants, respectively Dr. Irfan Essa and Dr. Trevor Darrell, support the interpretation. *See* Fin. Dec. 7–18; PO Resp. 4.

Specifically, as the Final Decision explains, Patent Owner argued that the customary and ordinary meaning of "stereographic image" includes an image that does not provide human depth perception. Quoting Patent Owner, we reasoned as follows:

> Patent Owner attempts to broaden the term "stereoscopic image," as interpreted in the prior art:
>
> > To a person of ordinary skill in the art, the term "stereoscopic image" [in the prior art] is not by itself limited to an image that provides a perception of depth to a person. *Instead, the term "stereoscopic image" is a broad term that includes images that are used by computers or machines to measure distance to an object*.

Fin. Dec. 8–9 (quoting PO Resp. 4 (second emphasis added in Final Decision)).

Patent Owner maintains that the following sentence in the '003 Patent Specification limits the ordinary and customary meaning of the term in its

claims: "Stereoscopic images comprise two images recorded of a scene from slightly displaced positions, which, when viewed simultaneously by the respective eyes, provides a perception of depth." *See* Req. Reh'g 6 (quoting Ex. 1001, col. 1, ll. 36–38). In other words, Patent Owner contends that this sentence narrows the ordinary meaning to images that provide human depth perception. Req. Reh'g 6. Given the broad ordinary meaning, which includes other forms of stereoscopic images according to Patent Owner's argument as quoted above, the '003 Patent Specification merely describes a feature of a well-known type of stereoscopic image—the feature of providing human depth perception. This sentence in the Specification, at most, points to a preferred embodiment, and fails to limit the class of "stereographic images" to that preferred embodiment. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc) ("[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.").

The Specification does not express a clear intent to deviate from the term's ordinary and customary meaning. *See Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) ("It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must clearly express an intent to redefine the term." (citations omitted) (internal quotation marks omitted)); *Helmsderfer v. Brobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008) ("A patentee may act as its own lexicographer and assign to a term a unique definition that is different from its ordinary and customary meaning; however, a patentee must clearly express that intent in the written

description.”).

Patent Owner’s arguments reduce to the assertion that describing, in the ’003 Patent Specification, what amounts to a species (images that provide human depth perception) of a well-known genus (images that provide depth perception to humans, computers, or robots), creates a clear disavowal from the ordinary and customary meaning. *See* Req. Reh’g 4–8. As the Final Decision reasons, a patentee may act as a lexicographer by providing a special definition for a claim term in the specification with “reasonable clarity, deliberateness, and precision.” Fin. Dec. 7, 9 (quoting *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (Applicant did not clearly limit a “computer” to one of its “numerous definitions” to distinguish it over a prior art calculator, noting that “[t]he specification merely describes in a general fashion certain features and capabilities desirable in a portable computer.”)).

Patent Owner’s declarant, Dr. Essa, agrees that “the term ‘stereoscopic image’ is a broad term, which generally refers to a pair of images that view a scene from two different viewpoints.” Ex. 2010 ¶ 55. The Final Decision relies on broad teachings in the ’003 Patent Specification that support the customary and ordinary meaning upon which we relied: “‘[T]he invention may provide utility in connection with robotics and computer video games.’” Fin. Dec. 9 (quoting Ex. 1001, col. 14, ll. 20–21); *see also id*. at 10–12 (reasoning that an unclaimed, but disclosed, “display” provides human depth perception). If a person of ordinary skill in the art would have recognized that a “stereoscopic image . . . is a broad term that includes images that are used by computers or machines to measure distances,” and “is not by itself limited to an image that provides a

perception of depth to a person," as Patent Owner argued (*see* PO Resp. 4, 37, Fin. Dec. 8–9), then merely pointing out in the '003 Patent Specification what was well-known—that stereoscopic images provide human depth perception and implying that stereoscopic images may be used in computers or robots—embraces, instead of narrows, the ordinary and customary meaning. Such descriptions fail to "clearly express" the requisite intent "to assign to a term a unique definition that is different from its ordinary and customary meaning." *See Helmsderfer*, 527 F.3d at 1381.

The disclosed robotic utility reasonably embraces generic stereoscopic images using images recorded using techniques described in the '003 Patent Specification.[2] Because ordinarily skilled artisans would have known that stereoscopic images that do not provide human depth perception could be used in robots, computers, or other machines, contrary to Patent Owner's arguments, such artisans would have understood that the '003 Patent Specification does not limit the use of "stereographic images" in computers or robots to only those images that provide human depth perception. *See* Req. Reh'g 6–8.

[2] The '003 Patent generally embraces recording stereographic images from two or more recording points. The record shows that adjusting the distance between two recording points of a scene and accounting for the scene object to camera distance, produces stereoscopic images that provide human depth perception (if the images thereafter are aligned and displayed properly). *See* Fin. Dec. 10–18, 30–31, 38–41. Not accounting for object to camera distance or not providing proper alignment may create stereographic images that do not provide human depth perception, but may provide depth information to a computer or machine. *See id.*; PO Resp. 43–44 (arguing that Asahi's stereoscopic image producing method only provides height information). The claims do not require adjusting for object distance, aligning recorded images, or displaying images.

2. *Deposition Testimony*

Focusing on its narrower construction, Patent Owner also asserts that we improperly interpreted the evidence supporting our determination that Asahi's method creates stereoscopic images that provide human depth perception. According to Patent Owner,

> the Board . . . misapprehended or overlooked Dr. Darrell's [deposition] testimony that to generate images that provide a perception of depth there needs to be 99 percent overlap between the images from which the lines are taken and misapprehended or overlooked Asahi's express teaching that it only utilizes 60 percent overlap in creating its images.

Req. Reh'g 3.

The Final Decision addresses this overlap issue arising from Dr. Darrell's deposition testimony. Fin. Dec. 35–36. Patent Owner first raised it in a Motion for Observation (Paper 37 ¶ 8); however, the issue is not developed sufficiently to undermine other findings of record. For example, Patent Owner relies on Asahi's discussion of a 60 % "scene overlap," in a working example, whereas Patent Owner cross-examined Dr. Darrell concerning overlap of "99 percent overlap from frame to frame *where a single line is being taken*." *Compare* Ex. 1006 ¶ 30, *with* Paper 37, 6 and Ex. 2014, 31:10–16. Patent Owner does not provide sufficient evidence or explanation connecting the concept of frame overlap where a single line is being taken to the concept of scene overlap in Asahi's working example. Similarly, Patent Owner does not point us to testimony in which Patent Owner cross-examined Dr. Darrell explicitly about the 60 % scene overlap that Asahi discloses in its working example. *See* Ex. 1006 ¶ 30, Fig. 5.

Asahi states that a frame includes two fields, and each field includes a scene. *See* Ex. 1010 ¶¶ 34–35. Patent Owner appears to equate frame overlap, scene overlap, and image overlap. *See* Req. Reh'g 9–14. On this record, Patent Owner does not show how the different types of overlap are comparable directly. Therefore, Dr. Darrell's testimony that 99% frame overlap is required in some context does not mean that Asahi's disclosure of 60% scene overlap precludes anticipation by Asahi. Moreover, on what appears to be a significant point related to overlap, Dr. Darrell and Patent Owner's counsel disagree about whether a line used to create images in Asahi is limited to using "a single vertical line of an image frame." *See* Ex. 2014, 107:7–25. It is significant in context to Dr. Darrell's answer of "[y]es" after being asked if "'there needs to be at least 99 percent overlap from frame to frame *where a single line is being taken.*'" *See* Paper 37 ¶ 8 (quoting Ex. 2014, 31:10–16, emphasis added). Patent Owner does not explain clearly how this frame overlap "where a single line is being taken" relates to Asahi's working example of 60 % scene overlap, at least because Patent Owner and Dr. Darrell disagree about how or which lines of a frame that Asahi's method uses to create images.

Further, as the Final Decision notes, Dr. Darrell responds "I think so" to a question about "substantial overlap," which in the context of another question (see colloquy below), implies "almost 99 percent overlap" in Asahi. *See* Ex. 2014, 108:20–23; Fin. Dec. 36. Patent Owner responds in its Rehearing Request that Dr. Darrell referred merely to "frame rate," instead of a substantial frame "overlap" in Asahi. *See* Req. Reh'g 12. Patent Owner's cited pages of Dr. Darrell's deposition testimony do not support Patent Owner's characterization of the testimony. *See* Req. Reh'g 10–11

(citing Ex. 2014, 31, 108–109).

> On a relevant point, we made the following findings:
>
> Petitioner points out that Dr. Darrell testified that the "frame rate would be high enough so that you didn't miss parts of the scene." *Id*. at 8 (citing Ex. 2014, 108:9–16). Lending context, on the cited deposition page, Dr. Darrell responded "I think so" to a question about whether *the frame overlap* would be "substantial."

Id. at 36 (emphasis added).

More specifically, after being questioned generally about Asahi's disclosure and the need for overlap for "a complete depiction of that scene," Dr. Darrell testified that "the frame rate would be high enough," (*see* Ex. 2014, 108:1–14), and the specific colloquy (as summarized above and in the Final Decision) ensued:

> Q. And the result of that [frame rate] would be that the overlap between one frame and the next would be substantial?
> A. I think so.
> Q. Similar to what we described earlier in the Kawakita discussion about needing almost 99 percent overlap; correct?
> A. Correct. If I understand the scenario, that would be true for any scenario that was extracting a line from a two-dimensional camera.

Ex. 2014, 108:17–109:1.

Therefore, if anything, Dr. Darrell indicates that Asahi does disclose a substantial, 99 percent, overlap where a line is extracted, as a result of the frame rate, or otherwise. Even if he does not, however, Patent Owner does not show how the cross-examination of Dr. Darrell, which does not involve Asahi's specific working example, undermines Dr. Darrell's testimony that Asahi discloses human depth perception. *See* Paper 37 ¶ 8; Ex. 2014, 31:10–16, 107:18–109:1; Fin. Dec. 29–36 (finding anticipation by Asahi).

Further, even in the scene portions depicted in Asahi's working example as overlapping by 60 %, two scene portions overlap totally (i.e., 100%) *within the intersecting portion*. *See* Ex. 1006, Fig. 5, ¶ 30. Generally, even if two scenes in Asahi do not wholly overlap throughout each scene, the record implies that at least the part of a scene that does overlap with another scene would provide a measure of human depth perception as a stereoscopic image pair (after correct alignment or other processing). *See* Ex. 1006, Fig. 5; Fin. Dec. 29–36 (finding that Asahi discloses stereoscopic images that produce human depth perception). For example, Asahi explicitly describes "[a] pair consisting of two images that make up a stereoscopic image." Ex. 1006 ¶ 32.

As other examples, the Final Decision summarizes findings about Asahi and the testimony that supports anticipation by Asahi:

> Dr. Darrell concludes that "Asahi's [images] . . . could be viewed using an appropriate display and provide a perception of depth." Ex. 1044 ¶ 27. During cross-examination, Dr. Darrell re-iterated this position, and testified that, in Asahi's system, "stereoscopic images that can be viewed are created" (Ex. 2014, 87:17–18), and responded "yes" to the following question: "Is it your opinion . . . that the stereo images . . . in Asahi are capable of being viewed so as to produce a depth - - or perception of depth in a human" (*id*. at 100:5–9).

Fin. Dec. 33.

In addition, we found that "Dr. Essa does not rebut Dr. Darrell's testimony that Asahi's system would provide human depth perception after a horizontal alignment or adjustment process." *Id*. at 34. Considering the record evidence and arguments, as the Final Decision ultimately reasons, "Patent Owner's observations do not undermine the findings discussed above, including that Dr. Darrell testified that Asahi's system is capable of

producing stereographic images." *Id*. at 36.

III. CONCLUSION

Based on the foregoing discussion, we deny Patent Owner's request to modify our claim construction and withdraw our finding of anticipation by Asahi in the Final Written Decision. Patent Owner has not shown that we overlooked or misapprehended a matter previously addressed.

IV. ORDER

For the reasons given, it is ORDERED that the Patent Owner's Rehearing Request is *denied*.

FOR PETITIONER:

Walter Hanley
Michelle Carniaux
Michael E. Sander
Kenyon & Kenyon, LLP
Sony-HumanEyes@kenyon.com
whanley@kenyon.com
mccarniaux@kenyon.com
msander@kenyon.com

FOR PATENT OWNER:

David L. McCombs
David O'Dell
Gregory Huh
Haynes and Boone, LLP
david.mccombs.ipr@haynesboone.com
david.odell.ipr@haynesboone.com
gregory.huh.ipr@haynesboone.com

Robert Gerrity
William Nelson
Tensegrity Law Group, LLP
robert.gerrity@tensegritylawgroup.com
william.nelson@tensegritylawgroup.com