

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 IPR2013-00219
Patent 7,477,284 B2¹

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

ARPIN, *Administrative Patent Judge*.

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

¹ *Sony Corp. v. Yissum Research Co.*, Case IPR2013-00327 (“IPR2013-00327”) has been joined with instant Case IPR2013-00219. IPR2013-00327, 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 our conclusion that Asahi (Ex. 1010) anticipates claims 1, 3, 20, 27, 29, and 37 of U.S. Patent No. 7,477,284 B2 (Ex. 1001, “the ’284 Patent”) because “the Board’s conclusion that Asahi anticipates claims 1, 3, 20, 27, 29, and 37 was incorrect as being based on a misapprehension of the evidence presented.” *See* Paper 61(“Req. Reh’g”), 1–2.

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.

For the reasons that follow, we *deny* the requested relief.

II. DISCUSSION

After reviewing Patent Owner’s Rehearing Request, we determine that Patent Owner has not shown that we misapprehended or overlooked any matter previously presented. *See* Req. Reh’g 2. Patent Owner contends that we

misapprehended or overlooked Dr. [Trevor] Darrell’s testimony that to generate images that provide a perception of depth there needs to be almost 99 percent overlap between the *images* from which the lines are taken and Asahi’s [Ex. 1009] express teaching that it only utilizes 60 percent overlap in creating its *images*, which was argued in Patent Owner’s Motion for Observation at ¶ 3. (Paper 43).

Req. Reh’g 3 (emphasis added).

Specifically, Patent Owner argues that independent claims 1 and 27 of the '284 Patent recite mosaic images that “provide a sense of depth of the scene.” *Id.* Further, in our Institution Decision, we determined that “the perception of depth is provided to a person and [our] Final Decision confirmed this understanding noting that ‘the sense of depth must be perceived by a person *viewing the display.*’” Paper 16 (“Inst. Dec.”), 16–17; Paper 60 (“Fin. Dec.”), 13. In addition, claim 1 recites that “at least one imager that moves relative to a scene so as *to acquire a plurality of optical images of at least portions of the scene*, each of at least two of said optical images being viewed from a different respective viewing position.” Ex. 1001, col. 13, ll. 63–65 (emphasis added); *see also id.* at col. 16, ll. 6–8 (claim 27). Based on the testimony of Petitioner’s declarant, Dr. Darrell, Patent Owner argues that, “for a sense of depth to be perceived by a person, there must be a 99% overlap in the *images where a single line is taken.*” Req. Reh’g 3 (emphasis added). Patent Owner argues, however, that “Asahi, which is directed to computer vision and not human vision, explicitly and unequivocally states that it takes *a single line from images* with only 60% overlap.” *Id.* (emphasis added). Although Asahi discloses a working example in which 60% overlap is described, we did not determine that Asahi’s disclosure was limited to that example. *See* Fin. Dec. 26–32. Moreover, on what appears to be a significant point, Dr. Darrell and Patent Owner’s counsel appear to acknowledge that they disagree about whether a line used to create images in Asahi is limited to a using “a single vertical line of an image frame.” *See* Ex. 2014, 107:7–25.

Initially, we note that independent claims 1 and 27 recite “a *display* that receives *a plurality of the mosaics* and *displays* [the plurality of the mosaics] so as to provide a sense of depth of the scene” (emphases added). Consequently, it is the *displayed mosaics* that “provide a sense of depth of the scene.” Moreover,

Petitioner’s declarant, Dr. Darrell, testified that, “if some defects were introduced in the mosaic images recorded [without proper vertical and horizontal alignment], . . . the defects would not be so severe in every case as to preclude depth from being perceived upon viewing an appropriate display of a pair of the mosaics.” Fin. Dec. 34–35 (citing Pet. Reply 13–14 (quoting Ex. 1044 ¶ 30)); *see also* Fin. Dec. 20 (Based on testimony of Petitioner’s declarant, Dr. Darrell, and Patent Owner’s declarant, Dr. Irfan Essa, with respect to Kawakita, we were persuaded that, “although a viewer may not perceive a sense of depth of every portion of a scene *from every sight line*, the viewer still may perceive a ‘sense of depth of the scene’ despite the presence of disparities in portions of the scene.”; emphasis added).

Patent Owner relies on Asahi’s discussion of a 60% *scene-to-scene* overlap, drawn from captured images, whereas Patent Owner cross-examined Dr. Darrell concerning overlap of “99 percent from *frame to frame*.” Paper 43 ¶ 3 (emphasis added). As Patent Owner acknowledges, according to Asahi, a frame may include two fields, and each field may be a scene. Paper 43, ¶ 3; *see* Ex. 1010 ¶¶ 34–35; Paper 59 (“Tr.”), 8:16–23. As noted above, however, claim 1 only requires that the at least one imager acquires a plurality of optical images *of at least portions of the scene*, each from a different respective viewing position, e.g., sight line. *See* Ex. 1001, col. 13, ll. 63–65; *see also* Tr. 70:1 (“And by the way, just to clarify, the images are portions of the scene.”).

We neither misapprehended nor overlooked the argument and supporting evidence presented in Patent Owner’s Motion for Observation. However, Patent Owner did not provide sufficient evidence or explanation to persuade us that the frame-to-frame overlap allegedly required to provide a sense of depth of a scene is not disclosed broadly by Asahi’s scene-to-scene overlap. Asahi’s working

example describes a 60% overlap (Ex. 1010 ¶ 30; *see id.*, Fig. 5 (depicting a single example of a two scene overlap of 60%)), but we do not limit the disclosure of Asahi to that one example. Asahi more broadly discloses “at least three images that overlap in a prescribed proportion” (Ex. 1010 ¶ 9), and Asahi explicitly describes “[a] pair consisting of two images that make up a stereoscopic image” (*id.* ¶ 32). *See* Fin. Dec. 25.

Patent Owner does not identify where it cross-examined Dr. Darrell explicitly about the 60% scene-to-scene overlap that Asahi discloses with respect to the working example. Instead, Patent Owner focuses on Dr. Darrell’s cross-examination testimony regarding the 99% overlap. *See* Req. Reh’g 10–11 (citing Ex. 2014, 31, 108–109). Nevertheless, in the deposition testimony cited by Patent Owner, Dr. Darrell responds “I think so” to a question about “substantial overlap” between scenes, which in the context of the following question, implies “almost 99 percent overlap” in Asahi. *See* Ex. 2014, 108:20–24 (Patent Owner’s following question was: “Similar to what we described earlier in the Kawakita discussion about needing almost 99 percent overlap; correct?,” to which Dr. Darrell responded “Correct.”). The cited pages of Dr. Darrell’s testimony, however, do not support Patent Owner’s characterization of that testimony.

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) 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.

Req. Reh’g 4 (quoting Ex. 2014, 108:17–109:1).

Therefore, Patent Owner’s Motion for Observation did not undermine the findings discussed in the Final Decision and reviewed above, including that Dr. Darrell testified that Asahi’s system is capable of producing stereographic images. *See* Fin. Dec. 25 (citing Ex. 2014, 87:3–21, 92–100:8 (Dr. Darrell describing Asahi’s system and testifying that Asahi’s system uses “two stereo images” to calculate three-dimensional height data to form maps)), 31 (citing Ex. 1043, 174:21–176:8 (acknowledging that “three dimensional topographical maps” produced according to Asahi may be suitable for human viewing)), 32 (citing Ex. 2014, 100:5–9 (Dr. Darrell responded “yes” when asked: “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.”)); *see also* Ex. 1010 ¶ 35 (“stereoscopic viewing is possible using this forward view image, this nadir view image, and this rearward view image”).

Patent Owner argues that the teaching of a 60% overlap in Asahi’s working example is “*determinative* and confirms Patent Owner’s argument – repeatedly made during the present proceeding – that images must be specifically generated to provide a person a perception of depth and that Asahi’s images are incapable of doing so.” Req. Reh’g 5. We disagree. Patent Owner first raised the alleged discrepancy between the overlap required (i.e., 99%) for a perception of depth and the overlap taught by Asahi (i.e., 60%) in its Motion for Observation (Paper 43 ¶ 3); however, Patent Owner did not mention this alleged discrepancy during the Oral Hearing. For the reasons set forth above, we did not find Patent Owner’s

argument and supporting evidence, as presented in the Motion for Observation, determinative. In the Final Decision, we concluded that Petitioner had shown by a preponderance of the evidence that Asahi discloses each and every element recited in claim 1 “[a]fter considering Petitioner’s contentions and supporting evidence . . . and Patent Owner’s arguments and supporting evidence to the contrary.” Fin. Dec. 32; *see* Req. Reh’g 6.

III. CONCLUSION

Based on the foregoing discussion, we deny Patent Owner’s requested relief to modify the prior Final Written Decision with respect to Asahi. Patent Owner has not shown that we misapprehended or overlooked a matter previously presented.

IV. ORDER

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

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