

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

CYWEE GROUP LTD.,
Patent Owner.

Case IPR2018-01257
Patent 8,552,978 B2

Before PATRICK M. BOUCHER, KAMRAN JIVANI, and
CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

BOUCHER, *Administrative Patent Judge*.

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

I. BACKGROUND

After consideration of a Petition filed by Google LLC (“Petitioner”) and a Preliminary Response filed by Cywee Ground Ltd. (“Patent Owner”),

we instituted *inter partes* review of claims 10 and 12 of U.S. Patent No. 8,552,978 (“the ’978 patent”). Paper 8 (“Dec.”). Patent Owner requests rehearing of that Decision. Paper 10 (“Rehearing Request” or “Req. Reh’g”). We previously denied Petitioner’s request to file an Opposition to the Rehearing Request. Paper 11. We deny Patent Owner’s Rehearing Request.

When rehearing a decision on whether to institute a trial, the Board reviews the decision for an abuse of discretion. *See* 37 C.F.R. § 42.71(c). An abuse of discretion may be indicated if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors. *See Star Fruits S.N.C. v. U.S.*, 393 F.3d 1277, 1281 (Fed. Cir. 2005); *Arnold P’ship v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004); *In re Gartside*, 203 F.3d 1305, 1315–16 (Fed. Cir. 2000). The burden of showing that our Decision should be modified lies with Patent Owner, the party challenging the decision. *See* 37 C.F.R. § 42.71(d). In addition, “[t]he request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed.” *Id.*

The Rehearing Request makes three arguments: (1) the Board’s preliminary construction of “3D pointing device” precludes a finding that Bachmann is analogous art, Req. Reh’g 4–12; (2) the Institution Decision misapprehends the level of skill in the art, *id.* at 12–14; and (3) the Institution Decision did not address Patent Owner’s argument under 35 U.S.C. § 325(d), *id.* at 14–15. We address these arguments in turn.

II. BACHMANN AS ANALOGOUS ART

For purposes of deciding whether to institute review, the preliminary claim construction applied by the Institution Decision adopted Patent Owner’s proposed construction of “3D pointing device,” which is recited in independent claim 10. Dec. 10–11. In particular, we found reasonable Patent Owner’s proposal that the term be construed as “a device capable of sensing movement and orientation in three dimensions to point to or control actions on a display.”¹ *Id.*

In considering Petitioner’s application of Bachmann separately in combination with Zhang and with Liberty, we found Bachmann to be analogous art. *Id.* at 21–22. In particular, we explicitly considered the two separate tests that define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed; and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference is still “reasonably pertinent to the particular problem with which the inventor is involved.” *Id.* at 21 (citing *In re Bigio*, 381 F.3d 1320 (Fed. Cir. 2004)). In doing so, we “disagree[d] with Patent Owner’s characterization of the problem addressed by the ’978 patent as focused on the control of a display.” *Id.* at 21–22. Rather, we found that, “as the ’978 patent itself makes clear in its statement of the field of the invention, the problem addressed more generally involves ‘compensating signals of [an]

¹ According to Patent Owner, after it filed its Preliminary Response, “3D pointing device” was construed in several related proceedings. Req. Reh’g 12. Patent Owner urges us to adopt the construction in *Cywee Group Ltd. v. Motorola Mobility LLC*, No. 17-780-RGA, Doc. 55 at 7 (D. Del. Dec. 21, 2018), which clarifies that it is a “handheld” device.

orientation sensor subject to movements and rotations of [a] 3D pointing device.” *Id.* (quoting Ex. 1001, 1:22–27).

In reiterating its argument that Bachmann is not analogous art, Patent Owner contends that, in light of our preliminary adoption of its proposed construction of “3D pointing device,” “[t]he problem addressed by the ’978 Patent *as identified by the Board* calls for a 3D pointing device, which—pursuant to the Board’s own construction of that term—involves the control of a display.” Req. Reh’g 8. According to Patent Owner, Bachmann “does not address the problem of controlling a display with a pointing device at all.” *Id.* at 8–9 (citing Ex. 2001 ¶ 65). Rather, Patent Owner asserts, “the ‘hand-held devices’ identified in *Bachmann* do not include pointing devices for controlling a display,” but instead Bachmann “contemplates attaching its sensors to hand-held devices and props such as ‘swords, pistols, or simulated weapons’ for the purpose of motion tracking/capture of the prop.” *Id.* (quoting Ex. 1004, 13:43–48).

Even accepting, for purposes of this Decision, Patent Owner’s characterization of Bachmann, we are not persuaded that we erred in finding that Bachmann is at least reasonably pertinent to the problem with which the inventor of the ’978 patent was involved. The question of whether a reference is analogous art presents an issue of fact. *See In re Paulsen*, 30 F.3d 1475, 1481 (Fed. Cir. 1994). In considering this factual issue, Patent Owner’s focus on the display aspect of the problem confronting the inventor of the ’978 patent is too narrow. The bulk of the disclosure of the ’978 patent is concerned with determining the changes in angles that define an orientation of the 3D pointing device rather than with the geometrical task of mapping those determined angles onto a two-dimensional display.

Compare, e.g., Ex. 1001, 13:60–19:60 (six columns of description for determining yaw, pitch, and roll angles of 3D pointing device in describing Figure 7), *with* 20:6–21:65 (two columns describing the geometry of mapping to a display with Figure 9). Regardless of the specific degree to which each of these aspects of the problem is treated by the ’978 patent, it is unambiguously apparent that a significant aspect of the problem addressed is the determination of the 3D pointing device’s orientation.

The determination of a hand-held device’s orientation is exactly what Bachmann describes. Ex. 1004, 1:18–20 (“The invention described herein relates to methods and apparatus for tracking the orientation . . . of an object.”), 13:47–48 (“Examples include . . . hand-held devices”). Because of the close similarity of this principal aspect of the problem confronted by the inventor of the ’978 patent, Bachmann reasonably would have commended itself to the inventor’s attention, and is therefore analogous art.

We conclude that we did not misapprehend or overlook Patent Owner’s argument that Bachmann is not analogous art.

III. LEVEL OF SKILL IN THE ART

In the Institution Decision, we found that a person of ordinary skill in the art would have had, *inter alia*, “knowledge of . . . quaternion mathematics.” Dec. 15. In doing so, we stated that “[t]he record provides support for Dr. Sarrafzadeh’s [Petitioner’s declarant] position that quaternion mathematics was well known in the relevant time frame.” *Id.* at 14. Patent Owner contends that, in doing so, we misapprehended the level of skill in the art “by conflating that ‘quaternion mathematics was well known in the relevant time frame’ with the issue of whether the *application*

of quaternion mathematics was well known in the art of 3D pointing devices.” Req. Reh’g 12–13. But in describing its technical field as “methods and apparatus for tracking the orientation . . . of an object,” Bachmann specifically states that “the field of quaternion mathematics is known to those having ordinary skill in the art and is explained in detail in numerous mathematical texts.” Ex. 1004, 1:18–20, 7:25–28. As we noted in the Institution Decision, and reiterate above, “[s]uch tracking is also one of the concerns of the ’978 patent.” Dec. 14. It is thus apparent that we considered not only the isolated question of whether quaternion mathematics was known in the relevant time frame, but also the degree of its application to tracking the orientation of objects.²

We conclude that we did not misapprehend or overlook Patent Owner’s argument that the level of skill in the art should exclude knowledge of quaternion mathematics.

² Patent Owner’s argument in its Rehearing Request that the intrinsic evidence regarding the ’978 patent is contrary to our articulation of the level of skill in the art is unavailing. Req. Reh’g 13. In making that argument, Patent Owner refers to the consideration of Liberty during prosecution, and asserts that “*Liberty* was directed to a five-axis pointing device, and improved on and issued over *Zhang* (Ex. 1005), a four-axis pointing device.” *Id.* Recognizing that Liberty uses quaternion mathematics, Patent Owner asserts that a person of skill in the art “reading these references would have understood adding a sensor to *Zhang*’s four-axis device using quaternion mathematics did not equal *Liberty*’s five-axis device.” *Id.* The relevance of this statement to the level of ordinary skill in the art is unclear. Indeed, Patent Owner’s recognition that Liberty uses quaternion mathematics weakens its argument. Liberty is not only a reference cited by the applicant in an information disclosure statement, Ex. 1009, 83, but is a reference that Patent Owner argues should result in a discretionary denial of the Petition because of its relevance, *see infra*.

IV. DISCRETIONARY DENIAL

In its Preliminary Response, Patent Owner argued that we should exercise our discretion and deny the Petition because it “presents the same or substantially the same prior art or arguments that were previously presented to the office during prosecution of the patent at issue.” Paper 7, 15 (citing 35 U.S.C. § 325(d)). The Rehearing Request correctly asserts that we did not address this argument in our Decision. Req. Reh’g 14.

In evaluating whether to exercise our discretion under 35 U.S.C. § 325(d), we consider several nonexclusive factors, such as:

- (1) the similarities and material differences between the asserted art and the prior art involved during examination;
- (2) the cumulative nature of the assert art and the prior art evaluated during examination;
- (3) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (4) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (5) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (6) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, Case IPR2017-01586, slip op. at 17–18 (PTAB Dec. 15, 2017) (Paper 8) (informative) (formatting added). These factors weigh against exercising our discretion under

§ 325(d) to deny institution, particularly in view of the limited nature of Patent Owner's allegations in its Preliminary Response.

For example, Patent Owner contends that Liberty was considered during prosecution of the '978 patent, and asserts that Liberty "is disparaged in the specification of the '978 patent." Paper 7, 15 (citing Ex. 1001, 2:38–4:2; Ex. 1009, 83–84). Patent Owner also contends that Liberty cites Zhang, and that Zhang was evaluated during prosecution of Liberty. *Id.* But the Preliminary Response neither alleges that the Examiner considered the combination of Zhang with Bachmann nor that there is substantial overlap between the arguments made during examination and the arguments made in the Petition.

In its Rehearing Request, Patent Owner contends that "the combinations of *Zhang* and *Bachmann* and of *Liberty* and *Bachmann* are at best merely cumulative of the teachings of *Liberty*, *Nasiri*, and the other references directed to pointing devices already considered by the Office during examination." Req. Reh'g 15. But the Preliminary Response contains *no* discussion of "Nasiri" that we could have misapprehended or overlooked. Nor does Patent Owner point us to any discussion in its Preliminary Response that supports its assertion in its Rehearing Request that "there is virtually no difference in the arguments being made about the combinations asserted by Petitioner and those that were considered by the Office." *See id.*

We conclude that factors 1–4 weigh strongly against exercising our discretion to deny institution. Because Petitioner has not addressed the § 325(d) issue or discussed the Liberty prosecution, factors 5 and 6 are neutral. Accordingly, we determine that Patent Owner has not sufficiently

shown that the Office considered the same prior art or arguments that are presented in the Petition, and we decline to exercise our discretion to deny the Petition under 35 U.S.C. § 325(d).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Patent Owner's Rehearing Request is *denied*.

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