

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENERAL ELECTRIC CO.,
Petitioner,

v.

UNIVERSITY OF VIRGINIA PATENT FOUNDATION,
Patent Owner.

Case IPR2016-00357
Patent RE44,644 E

Before KARL D. EASTHOM, TREVOR M. JEFFERSON, and
J. JOHN LEE, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

DECISION
Request for Rehearing
37 C.F.R. § 42.71

INTRODUCTION

Petitioner General Electric Co. (“GE”) filed a Petition (Paper 1, “Pet.”) seeking *inter partes* review of claims 75, 76, 78–82, 84–92, 94–102, 107–109, 111, 113–115, 118, 128–130, 132–136, 138–140, 157, 158, 169–178, 180–184, 186–194, 196–204, 209–211, 213, 215–17, 220, 230–232, 234–238, 240, 241, and 254–260 (“the challenged claims”) of U.S. Patent No. RE44,644 E (Ex. 1001, “the ’644 Patent”). An *inter partes* review was instituted on all challenged claims on June 22, 2016. Paper 13 (“Inst. Dec.”). After trial, the Final Written Decision was issued on June 21, 2017, holding that GE had shown by a preponderance of the evidence that the challenged claims of the ’644 Patent are unpatentable under 35 U.S.C. § 102(b) and/or § 103(a). Paper 57 (“Final Dec.”).

On July 21, 2017, Patent Owner University of Virginia Patent Foundation (“UVAPF”) filed an Amended¹ Request for Rehearing of the Final Written Decision. Paper 59 (“Req. Reh’g”). For the reasons explained below, UVAPF’s Request for Rehearing is *denied*.

DISCUSSION

A party requesting rehearing bears the burden of showing the decision should be modified. 37 C.F.R. § 42.71(d). The party must identify all matters it contends were misapprehended or overlooked by the Board. *Id.*

UVAPF’s main argument is that we erroneously relied on *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320 (Fed. Cir. 2000), in finding that U.S. Provisional Application No. 60/257,182 (“the ’182 Application”)

¹ UVAPF initially filed a Request for Rehearing (Paper 58), but filed the Amended Request for Rehearing on the same day. UVAPF asked that the earlier Request be expunged, which we granted.

does not provide sufficient written description for the challenged claims. Req. Reh’g 1; *see* Final Dec. 17–22. More specifically, UVAPF argues we erred because (1) our Decision overlooked that “the echo time ratios are a primary feature of the invention,” which distinguishes this case from *Purdue Pharma* (Req. Reh’g 1–9); (2) GE’s arguments regarding *Purdue Pharma* and the “at least twice” limitation of the challenged claims should not have been considered because they were untimely (*id.* at 9–13); and (3) the evidence demonstrates our Decision concluded incorrectly that the ’182 Application does not provide sufficient written description support (*id.* at 14–15). UVAPF’s arguments, however, are not persuasive and do not establish our Decision was erroneous for the following reasons.

A. *Applicability of Purdue Pharma*

As explained in the Final Written Decision (Final Dec. 18–19), independent claim 75 recites that “an effective echo time” for the claimed spin-echo pulse sequence is “at least twice an effective echo time” for a turbo spin-echo or fast spin-echo pulse sequence with constant 180° flip angles that provides substantially the same T2-weighted contrast. Similarly, independent claim 176 recites that the effective echo time is “at least twice an echo time” for a “conventional spin-echo pulse sequence” that provides substantially the same T2-weighted contrast. Both parties’ experts testified that these limitations may be considered essentially the same (the “echo time ratio limitation”). *See* Ex. 1009 ¶ 90; Ex. 2019 ¶¶ 47–48. All challenged claims recite an echo time ratio limitation.

UVAPF argues that the echo time ratio limitation is “a primary feature of the invention.” Req. Reh’g 1. Specifically, UVAPF emphasizes that the

echo time ratio limitation requires both the recited “at least twice” ratio as well as images with substantially the same T2-weighted contrast. *Id.* at 1–2. According to UVAPF, “a primary objective of the invention in the ’182 Application is to extend the echo-train duration substantially beyond that of spin-echo train pulse sequences” in the admitted prior art, “while maintaining substantially the same image contrast.” *Id.* at 2–3 (emphases omitted). The manner in which the ’182 Application purports to achieve this objective, according to UVAPF, is “using flip angles having values that are much less than 180°.” *Id.* at 3. UVAPF identifies an example provided in the ’182 Application showing an embodiment of the claimed sequence resulting in an echo time ratio of 4.1 while providing comparable contrast characteristics compared to a prior art sequence. *Id.* at 3–5.

Based on these disclosures, UVAPF asserts the echo time ratio is a “primary feature of the invention” because “[i]ncreasing the echo-train duration for the claimed pulse sequence necessarily increases the effective echo time that yields images having the same T2-weighted contrast.” *Id.* at 5–6 (emphasis omitted). UVAPF argues the Final Written Decision “overlooked” the “primary objective” of the invention, and “that the echo time ratio represents the amount by which this objective has been achieved.” *Id.* at 9. According to UVAPF, this establishes a distinction between the $C_{\max}/C_{24}$ ratio limitations in *Purdue Pharma* and the echo time ratio limitations in the present case. *Id.* at 7–9.

The Request for Rehearing, however, recognizes that the Final Written Decision did **not** overlook this point. In fact, the Request identifies the portion of the Decision that addressed it. Req. Reh’g 8–9 (citing Final Dec. 22). *Purdue Pharma* involved a patent claiming a method of treating

pain by administering an opioid only once a day in an oral sustained release dosage form. 230 F.3d at 1322. The relevant claims recited a ratio of “more than twice” between maximum plasma concentration of the opioid ($C_{\max}$) and the plasma level of the opioid 24 hours after administration (C_{24}). *Id.* As explained in the Final Written Decision, the patent in *Purdue Pharma* indicated a key aspect of the invention was a rapid initial rise to peak concentration ($C_{\max}$) with an absorption half-life of about 1–8 hours. Final Dec. 21–22 (citing *Purdue Pharma*, 230 F.3d at 1327). That disclosure, however, did not provide sufficient written description support because it failed to direct a person of ordinary skill to the $C_{\max}/C_{24}$ ratio recited in the relevant claims. *See id.*

The Final Written Decision acknowledged the disclosure in the ’182 Application of the objective of lengthening usable echo train durations while achieving desired image contrast characteristics. Final Dec. 22 (citing Ex. 1014, 4). We concluded this disclosure was similar to the disclosure of the key feature in *Purdue Pharma*. *Id.* (citing *Purdue Pharma*, 230 F.3d at 1327). UVAPF disputes that conclusion, arguing that the comparison with *Purdue Pharma* is not “meaningful,” because we purportedly overlooked the importance of lengthening the usable echo train duration while achieving comparable image contrast, and the relationship between this “primary objective” and the echo time ratio. Req. Reh’g 8–9. The Final Written Decision, however, specifically considered this “primary objective” described in the ’182 Application—including both the echo train duration and image contrast aspects. Final Dec. 22. We further concluded the alleged relationship between that key feature and the echo time ratio, which

is **not** described in the '182 Application, was insufficient to direct a skilled artisan to the recited echo time ratio limitations. *Id.*

As we explained, the patent in *Purdue Pharma* similarly described a key feature and claimed a particular ratio related to that feature, but the court held the written description was inadequate because it failed to describe that ratio or ascribe any particular importance to that ratio. *Id.* at 20–22 (citing *Purdue Pharma*, 230 F.3d at 1326–28). The same is true of the claimed echo time ratio and the disclosure of the '182 Application, which does not identify any such ratio much less describe its significance. *Id.* UVAPF has not identified any argument or evidence we have overlooked, nor has UVAPF shown our application of *Purdue Pharma* was erroneous.

B. Timeliness of GE's Arguments

UVAPF contends GE's arguments regarding *Purdue Pharma* should not have been considered because they were untimely. Req. Reh'g 9–11. GE did not cite the *Purdue Pharma* case until the Petitioner Reply. See Paper 27, 13–14. We disagree that GE's arguments were untimely, however, because *Purdue Pharma* was cited to rebut arguments made by UVAPF in its Patent Owner Response.

In the Patent Owner Response, UVAPF argued that a person of ordinary skill would have been able to derive the full range recited for the echo time ratio limitations based on an example provided in the '182 Application. Paper 21, 55–58. GE argued in the Petitioner Reply that UVAPF's position is precluded by *Purdue Pharma*, which held that whether a claimed ratio can be derived from the written description is immaterial if the disclosure does not describe the ratio or direct a person of ordinary skill

to the ratio as a part of the invention. Paper 27, 13–14 (citing *Purdue Pharma*, 230 F.3d at 1328). Thus, *Purdue Pharma* was cited to respond directly to arguments made by UVAPF in its Patent Owner Response, and GE’s arguments based on *Purdue Pharma* were not untimely.

In addition, UVAPF also contends GE untimely raised its arguments that the ’182 Application does not provide sufficient support for the “at least twice” aspect of the echo time ratio limitations. Req. Reh’g 11–13. To the contrary, GE argued in the Petition that the ’182 Application failed to adequately support the “at least twice” limitation. Pet. 11–12 (“[N]owhere does the ’182 application make a comparison of the [effective echo time] of a pulse sequence derived according to the disclosed method, much less delineate a range with a boundary of ‘at least twice’ that of any other echo time.”). Thus, GE’s arguments regarding the “at least twice” limitation were not untimely.

C. Evidence of the “At Least Twice” Limitation

Finally, UVAPF argues that evidence in the record relating to certain prior art approaches referenced in the ’182 Application (the “Alsop” approach in particular) provides support for the “at least twice” aspect of the echo time ratio limitations. Req. Reh’g 14–15. Again, this argument and evidence were specifically addressed in the Final Written Decision. Final Dec. 22. As we explained, whether a person of ordinary skill could **derive** the echo time ratio limitations from a discussion of admitted prior art in the ’182 Application is immaterial when, as here, the disclosure does not identify, or direct a skilled artisan to, the recited echo time ratio as part of the claimed invention. *Id.* (citing *Purdue Pharma*, 230 F.3d at 1328).

UVAPF has not demonstrated that we overlooked or misapprehended any argument or evidence relating to this issue, nor has UVAPF shown that our conclusion was erroneous.

CONCLUSION

As explained above, UVAPF has not identified any matter that we misapprehended or overlooked, nor has UVAPF established that any aspect of our Decision was improper under governing law. *See* 37 C.F.R. § 42.71. Therefore, UVAPF has not carried its burden to show that our Decision should be modified. *Id.*

ORDER

It is

ORDERED that UVAPF's Request for Rehearing is *denied*.

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