

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICRON TECHNOLOGY, INC.,
Petitioner,

v.

YANGTZE MEMORY TECHNOLOGIES COMPANY, LTD.,
Patent Owner.

IPR2024-00910
Patent 10,861,872 B2

Before JO-ANNE M. KOKOSKI, KIMBERLY McGRAW, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

DECISION
Denying Petitioner's Request for Rehearing of
Decision Denying Institution
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Micron Technology, Inc. (“Petitioner”) filed a Request for Rehearing (Paper 14, “Request” or “Req.”) of our Decision (Paper 13, “Decision” or “Dec.”) denying institution of an *inter partes* review of claims 7–10 (“the challenged claims”) of U.S. Patent No. 10,861,872 B2 (Ex. 1001, “the ’872 patent”). The Request challenges our determination that the information presented in the Petition did not establish a reasonable likelihood of showing that claims 7–10 would have been obvious over the teachings of Park.¹ Dec. 19–23.

After considering Petitioner’s Request, we find no error or abuse of discretion in our determination to deny institution. Accordingly, for the reasons that follow, Petitioner’s Request is denied.

II. STANDARD OF REVIEW

When rehearing a decision on institution, we do not review the merits of the decision *de novo*, but instead review the decision for an abuse of discretion. 37 C.F.R. § 42.71(c). An abuse of discretion may be determined “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.” *Arnold Partnership v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004) (citing *In re Gartside*, 203 F.3d 1305, 1315–16 (Fed. Cir. 2000)). The party requesting rehearing has the burden to show that the decision should be modified. 37 C.F.R. § 42.71(d). Additionally, the request for rehearing “must specifically identify all matters the party believes the Board misapprehended

¹ Park, US 9,859,297 B2, issued Jan. 2, 2018 (Ex. 1005).

or overlooked, and the place where each matter was previously addressed in a motion, an opposition, a reply, or a sur-reply.” *Id.*

III. ANALYSIS

In the Decision, we determined that Petitioner did not adequately establish that Park disclosed or taught “a plurality of dummy source structures each extending vertically through the staircase structure, the plurality of dummy source structures surrounding the staircase contact,” as required by the challenged claims. Dec. 19–23. Petitioner’s Request for Rehearing is based on two sets of arguments. First, Petitioner argues that the Board “incorrectly construed the function of ‘dummy source structure’ by overlooking exemplary embodiments and permissive language.” Req. 1, 6–12. Second, Petitioner argues that the Board “overlooked the Petition’s showing with respect to the ‘surrounding’ limitation.” *Id.* at 1, 12–15. We reviewed the Request and carefully considered the arguments presented. For the following reasons, we are not persuaded that we abused our discretion in denying institution of an *inter partes* review of the challenged claims.

A. Construction of “Dummy Source Structure”

Claim 1 recites, in pertinent part, “a plurality of dummy source structures each extending vertically through the staircase structure, the plurality of dummy source structures surrounding the staircase contact, wherein each of the dummy source structures comprises a conductive contact.” Ex. 1001, 20:11–16. The Petition argued, *inter alia*, that a “dummy source structure” would have been understood to mean a “structure that occupies the void that was used for the gate replacement process.” Paper 1 (“Pet.”), 29. In the Decision, we disagreed with Petitioner’s proposed construction and construed “dummy source structure” to mean “a structure that does not function as a source to the memory cells.” Dec. 11.

Petitioner argues that we improperly limited “dummy source structure” to only the exemplary embodiments in the Specification. Req. 6–12. Petitioner asserts that “the Board’s decision focuses on various descriptions of ‘dummy source structure,’ but overlooks that such descriptions are all exemplary descriptions.” *Id.* at 7–9. Petitioner further asserts that “the Board’s statement that ‘the Specification does not describe the dummy source structure as functioning as a source for the memory cells’ overlooks a key portion of the specification and is a legally erroneous interpretation of the specification.” *Id.* at 9–10. Moreover, Petitioner asserts that the Board improperly “focuses on an alleged distinction ‘between dummy source structures and source structures’ in the specification,” and alleges that in doing so “the Board overlooked and omitted permissive language in its reasoning.” *Id.* at 10–11. The Specification’s statement that dummy source structures may not function as a source “in some embodiments” indicates, to Petitioner, that the Specification contemplates other embodiments in which dummy source structures may function as a source. *Id.* at 3, 8–10.

Petitioner further asserts that our construction of a dummy source structure as “not function[ing] as a source” is “a negative limitation [that] is not apparent from the claim language itself because the ’872 Patent departs from the plain meaning of ‘dummy.’” Req. 11–12 (citing Paper 11 (“Prelim. Reply”), 1; Pet. 32). Petitioner also asserts that “the patentee uses ‘dummy source structure’ idiosyncratically, but was careful not to limit ‘dummy source structure’ to any particular function (i.e., a function after the hole is used for the gate replacement process).” *Id.* at 11. Although Petitioner argued in its Preliminary Reply that “[a] simple Google search undermines the assertion that ‘dummy source structure’ has a plain and ordinary

meaning” (Prelim. Reply 1), Petitioner argues for the first time in the Request that the patentee acted as its own lexicographer and “dummy source structure” is used “idiosyncratically” in the ’872 patent. Req. 11–12. We could not have overlooked argument or evidence that was not presented in the Petition. A request for rehearing is not an opportunity to supplement a petition. 37 C.F.R. § 42.71(d). In any event, “[t]o act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning,” and Petitioner does not establish that the patentee did so here. *Thorner v. Sony Computer Entertainment Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)).

Dr. Banerjee also testifies that the Specification “explains that the dummy source structure might not even be an inoperable structure,” and therefore “the ’872 Patent does not use ‘dummy’ to exclude the dummy source structure from being an operable, functioning element.” Ex. 1003 ¶ 85 (citing Ex. 1001, 5:41–43, 16:63–66). In support of his testimony, Dr. Banerjee points to the Specification’s teaching that “[i]n some embodiments, one or more dummy source structures are in contact with the substrate and may provide interconnect between the 3D memory device and peripheral devices” (Ex. 1001, 5:41–43), and “[w]hen conductive materials are used to fill dummy source hole 212 (e.g., contact 224), the dummy source structure 246 may function as an interconnect to connect 3D memory device 100 with other peripheral devices” (*id.* at 16:63–66), which we considered and relied upon in construing “dummy source structure” in the Decision. Dec. 11–13. None of the functions identified by Dr. Banerjee, however, relate to whether the dummy source structure would function as a source to the memory cells.

To the extent the dummy source structure is functional, the Specification consistently describes that function as an interconnect with other peripheral devices, and does not teach or suggest that the dummy source structure may function to provide source to the memory cells. *See* Ex. 1001, 5:40–43 (“In some embodiments, one or more dummy source structures are in contact with the substrate and may provide interconnect between the 3D memory device and peripheral devices.”), 11:46–48 (“In some embodiments, dummy source structures 178 may function as interconnects to connect 3D memory device 100 with other peripheral devices.”), 16:63–66 (“When conductive materials are used to fill dummy source hole 212 (e.g., contact 244), the dummy source structure 246 may function as an interconnect to connect 3D memory device 100 with other peripheral devices.”). Our construction of “dummy source structure” is consistent with the Specification, and does not foreclose the dummy source structure from being operational, for example, as an interconnect to peripheral devices. Nor is it inconsistent with the Specification’s teaching that “[i]n some embodiments, dummy source structure 246 may not connect to channel structures in the inner region.” *See* Req. 11 (citing Ex. 1001, 16:38–44). In the case where the dummy source structure connects with the channel structures, the other end may connect with peripheral devices, or may be a dead end. Thus, even if the dummy source structure is operable as an interconnect to connect the 3D memory device *with other peripheral devices*, it does not follow that a dummy source structure would function as an interconnect to a supply that provides *source to the memory cells*.

For these reasons, we are not persuaded that we abused our discretion in our construction of the term “dummy source structure.”

B. The “Surrounding” Limitation

Claim 1 recites “the plurality of dummy source structures surrounding the staircase contact.” The Petition argued that “‘surrounding’ does not require fully encircling, e.g., it does not require ‘surrounding’ on all sides.” Req. 4 (citing Pet. 33–38). In the Decision, we agreed with Patent Owner that we need not determine whether surrounding requires “fully encircling” because Petitioner’s unpatentability contentions asserted that “dummy structures surrounding the staircase contact” are satisfied by structures on two sides of the object and that “surrounding” does not encompass structures on only two sides of an object. Dec. 14, 16.

Petitioner argues that “the Board overlooked that considering whether objects ‘surround’ another object requires more than considering whether those objects are on ‘two sides’ of the other object.” Req. 14. Petitioner explains that “if the dummy source structures were to become laterally wider, one could say the dummy source structures only surround the contact on two sides, yet those structures surround the contact to a greater degree than the smaller dummy source structures,” but that “depending on the perspective when viewing the ’872 Patent exemplary embodiment, it can be said that the dummy source structures—even with four—only surround on two sides.” *Id.* at 14–15. Petitioner concludes that “‘surrounding’ is best understood as the degree to which objects line the periphery of another object.” *Id.* at 15.

As we explained in the Decision, the ’872 patent “repeatedly uses ‘between’ to describe objects in the middle of two structures,” and “uses ‘surrounding’ to indicate an object in the middle of more than two structures.” Dec. 15. Petitioner does not demonstrate why we should stray from the clear distinction found in the ’872 patent itself to instead adopt the

“degree to which objects line the periphery of another object” interpretation advanced by Petitioner for the first time in the Request. *See* Req. 14–15.

Therefore, Petitioner’s Request does not persuade us that we erred in our construction of “surrounding.”

IV. CONCLUSION

We have reviewed and considered the arguments in Petitioner’s Request and conclude that Petitioner has not carried its burden of demonstrating that we misapprehended or overlooked any matters, and therefore abused our discretion, in denying institution of *inter partes* review of the challenged claims of the ’872 patent.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petitioner’s Request for Rehearing is *denied*.

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Patent 10,861,872 B2

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