

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY MOBILE COMMUNICATIONS INC.,
Petitioner,

v.

SSH COMMUNICATIONS SECURITY OYJ,
Patent Owner.

Case IPR2015-01869
Patent 8,544,079

Before BRYAN F. MOORE, TRENTON A. WARD, and
WILLIAM M. FINK, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Patent Owner, SSH Communications Security Oyj, filed a Request for Rehearing (Paper 28, “Req. Reh’g”) of a portion of the Final Written Decision (“Final Decision”) holding claims 1–32 of U.S. Patent No. 8,544,079 (Ex. 1001, “the ’079 patent”) unpatentable”). Paper 37 (“Final Dec.”). Specifically, Patent Owner requests we reverse our decision as to the obviousness of claims 1, 3–8, 10–12, 14–18, 20–23, 25 and 27–29 over Shuen in view of RFC1234, and the obviousness of claim 19 over Bellovin. Req. Reh’g 1. In the Request for Rehearing, Patent Owner argues that the Decision overlooked certain matters in the aforementioned grounds. *Id.* For the reasons set forth below, the Request for Rehearing is *denied* and Final Decision will be supplemented to add explanation that does not change the result of the decision.

II. ANALYSIS

When considering a request for rehearing, we review the Decision for an abuse of discretion. 37 C.F.R. § 42.71(c). The party requesting rehearing bears the burden of showing that the Decision should be modified, and “[t]he request must specifically identify all matters the party believes [we] misapprehended or overlooked.” 37 C.F.R. § 42.71(d).

1. *Our Construction of “time out of the mapping for the network address translation” as Applied to Shuen and RFC1234*

Patent Owner argues that we misapprehended and overlooked applying our claim construction of “time out of the mapping for the network address translation” to Shuen and RFC1234. Req. Reh’g 1–5. Specifically, Patent Owner states:

Nowhere in its FWD does the Board even assert that Shuen's "time to live" satisfies the "time out of the mapping for the network address translation" under the Board's construction of that phrase, i.e., "a property associated with the mapping in which the mapping expires after it has not been used in the translation of a packet for a period of time associated with the mapping" . . . This requirement of the properly construed claims was overlooked in reaching the conclusion that claims 1, 3-8, 10-12, 14-18, 20-23 and 27-29 are rendered obvious by Shuen in view of RFC1234.

Id. at 3 (emphasis omitted). Notably, Patent Owner did not raise this argument (i.e., that Shuen's "time to live" does not satisfy the recited "time out . . ." under the Board's construction) in its Patent Owner Response. Patent Owner asserts, however, it "noted this deficiency of Petitioner's proofs in the January 18, 2017 hearing" and "[t]his deficiency of Shuen was first raised in Patent Owner's Preliminary Response." Req. Reh'g. 4. However, our rules do not allow Patent Owner to incorporate arguments by reference from its Preliminary Response (*see* 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document")), and our Scheduling Order provides that any arguments and evidence not contained in the Patent Owner Response will be "deemed waived" (Paper 9, 3). Petitioner asserted at the oral hearing that the argument was new and, as such, Petitioner did not have a reasonable ability to respond to the argument. Tr. 43:8–14. We determine Patent Owner has waived its argument that Shuen does not disclose the "has not been used" portion of our construction of the phrase "time out of the mapping for the network address translation."

Even if Patent Owner had not waived this specific “time out” argument from its Preliminary Response, this argument would be unpersuasive because it is based on a construction (and an interpretation of our construction) of “time out of the mapping for the network address translation” that we rejected. *See* Tr. 39:1–11 (“[T]he time to live bears no relation to when the address binding was last used in connection with the forwarding of a packet by the home router to the mobile device. It merely refreshes the time to live counter.”); Final Dec. 24 (rejecting Patent Owner’s construction of “time out of the mapping for the network address translation”: “We did not create, by the use of the phrase ‘after it has not been used,’ a requirement that the keepalive must have some ‘knowledge’ of the timeout of a mapping and be sent specifically to maintain a mapping which has been used and is due to timeout.”). Thus, we did not accept Patent Owner’s reading of our construction.

Additionally, we determined, in the Final Decision, Shuen meets our construction and properly held Petitioner’s to its burden to prove this limitation. Final Dec. 35, 48. Specifically, we stated in the Final Decision that “Petitioner relies on a ‘time to live’ value, after which the mapping expires,” as our construction requires, and “[t]he mobile host device can extend this time to live value by sending a ‘binding update’ packet, [that] just as the claimed ‘keepalive packet’ ensures that the mapping is maintained.” *Id.* at 35 (citing Pet. 46–47; Ex. 1015, 27:63–28:4). These portions of the Final Decision at least indirectly address the “after it has not

been used” portion of our construction of “time out of the mapping for the network address translation.”

Again, Patent Owner did not argue that Shuen did not meet the “after it has not been used” portion of the Board’s construction in its Patent Owner Response and Petitioner was not able to respond to this issue. Assuming *arguendo* that PO did not waive its argument that Shuen did not meet the ‘after it has not been used’ portion, we consider that argument here for purposes of completeness.

As to whether Shuen’s “time to live” satisfies the “time out of the mapping for the network address translation” under the Board’s construction of that phrase, i.e., “a property associated with the mapping in which the mapping expires after it has not been used in the translation of a packet for a period of time associated with the mapping,” the Petition cites the following language from Shuen:

to keep the mobility binding data 368 (information) for the mobile host 320. If the time 448 expires *and the mobile host 320 has not signed on again*, then the home router 340 will delete the binding data 368 for the mobile host 320.

Id. (citing Ex. 1015, 23:48–59 (emphasis added)).

In other words, the “time to live” is a period of time associated with the mapping causes the timeout of a mapping and the Petition cites to disclosure that timeout may be due to the host not signing in, i.e. a situation in which the mappings *have not been used*. Petitioner’s Declarant also cites to that passage and asserts: “The home routers depend on the binding

updates to let them know when a mobile node has disconnected for some reason.” Ex. 1002 ¶ 158.

Additionally, Patent Owner asserted in its Preliminary Response that the purpose of the binding updates is to maintain mappings when the Shuen device is not communicating, i.e. no translation is occurring. Prelim. Resp. 51–52. Specifically, Patent Owner asserts in its Preliminary Response:

Shuen’s bindings are intended to maintain connectivity of a mobile device to a network regardless of where and when the mobile device roams in the network. Significantly, Shuen’s “time to live” counter and binding updates by the mobile device are *specifically designed to maintain a persistent presence of the roaming mobile device on the network even though the mobile device is not engaged in any communications over the network*. Shuen refers to this persistent connection of the mobile device to the network as a “network session.” Again, this is similar to known cell phone systems with idle mobile stations that remain logged onto the system. See Ex. 2009 at 3 (“Location updating is the mechanism that is used to determine the location of [a mobile station] *in an idle state (connected to the network, but with no active call)*.”)

Id. Thus, consistent with the claim construction, it is evident that the mapping “has not been used” because the call is idle and “not engaged in any communications over the network.”¹ Thus, Shuen’s “time to live”

¹ This is consistent with how we analyzed the phrase “has not been used” in connection with the Bellovin reference. See Final Dec. 25 (Section II. C. 3) (“Bellovin specifies that, during a hold, a BTI will send a series of ‘KEEPALIVE’ messages to its nearest router (Ex. 1003, 31:21–39; Ex. 1004, 40) or to the corresponding BTI at the other end of the call (Ex. 1003, 33:45–61; Ex. 1004, 42) to prevent the call from being terminated. Thus,

satisfies the “time out of the mapping for the network address translation” under the Board’s construction of that phrase, i.e., “a property associated with the mapping in which the mapping expires after it has not been used in the translation of a packet for a period of time associated with the mapping.”

Thus, we are not persuaded by Patent Owner’s argument that in allegedly misapprehending and/or overlooking the application of our claim construction of “time out of the mapping for the network address translation” to Shuen and RFC1234 we mistakenly found that claims 1, 3–8, 10–12, 14–18, 20–23, and 25, 27–29 are unpatentable over Shuen and RFC1234.

2. Our Construction of the Term “Network Address Translator (NAT)”

a. Incorporation by Reference

Patent Owner also argues

the Board overlooked: 1) that references relied upon by Patent Owner, and acknowledged by the Board to be definitional, include documents incorporated by reference, thus forming part of the ’079 patent specification (see PO Resp. 12, 21-22; Ex. 2012 ¶¶ 44, 52, 57, and 66); and 2) the ’079 patent specification expressly includes a clear and unequivocal statement that NAT devices are required to perform bidirectional translations (see PO Resp. 11 (citing the ’079 patent 11:54-56)).

Req. Reh’g 6 (emphasis omitted). Specifically, Patent Owner asserts we overlooked the statement in RFC1631 that “[l]ikewise IP packets on the

consistent with the claim construction, it is evident that the mapping ‘has not been used’ because the call is on hold.”)

return path go through similar address translations.” Ex. 1006, 2–3. We disagree. We explicitly considered the statements in RFC1631 and the other allegedly incorporated by reference documents cited by Patent Owner.

“Incorporation by reference provides a method for integrating material from various documents into a host document . . . by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed.Cir.2000) (citations omitted). “To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.” *Id.* (citations omitted). Whether *and to what extent* material has been incorporated by reference into a host document is a question of law. *Id.*

The Specification states “References to NAT are found at least in the RFC document number RFC1631 as well as the documents which are identified in the appended list of references as Srisuresh98Terminology” Ex. 1001, 1:49–53. The Specification goes on to purport to incorporate 35 references: “All of the following [35] references are hereby incorporated by reference” *Id.* at 13:13–15:14. Thus, the Specification does not specify the sections relied on by Patent Owner as defining NAT, rather RFC1631 and Srisuresh98Terminology are described as “references to NAT.” This can be considered it determining the weight to give statements in these references. See *Advanced Display Sys., Inc.* 212 F.3d at 1282.

Patent Owner asserts that several statements in the Specification and the references purportedly incorporated by reference are definitional of NAT. Req. Reh’g 9–10. Specifically, Patent Owner asserts “the ’079 patent sets forth a clear and unequivocal definitional statement: ‘Network address translators cache the information about address mapping, so that they can reverse the mapping for reply packets.’ [Ex. 1001, 11:54–56] This definitional statement in the specification appears to have been overlooked. The FWD makes no mention of it.” *Id.* at 10. However, while not quoting the specific “definitional statement” referenced above, we stated “Patent Owner also describes how the various embodiments of the ’079 patent describe a NAT as being bidirectional translation between two realms.” Final Dec. 10 (PO Resp. 17–21). The cited portion of the Patent Owner Response includes Patent Owner’s quotation of the above language on page 18. Thus, we did not misapprehend or overlook arguments regarding that “definitional statement” in the Final Decision.

Additionally, the Final Decision relies on an explicit statement in the Specification that explains how the keepalive limitations should be interpreted, i.e. “Keepalive packets need to be transmitted in one direction only, although they may be transmitted also bidirectionally.” Final Dec. 11 (quoting Ex. 1001, 12:23–25). Given this statement, which is in conflict with the statements in the purportedly incorporated by reference documents, the Final Decision found that Patent Owner “does not cite to sufficient evidence: 1) of the patentee becoming a lexicographer defining a NAT as bidirectional between two ‘realms,’ or 2) of a clear disavowal of a NAT

which translates addresses in a single direction or operates in a single ‘realm.’” *Id.* at 9; *see also, Schwarz Pharma, Inc. v. Warner-Lambert Co.*, 95 F. App’x 994, 997–98 (Fed. Cir. 2004) (unpublished) (“[v]aried use of a disputed term ... demonstrates the breadth of the term rather than providing a limited definition. Differing uses of the word ‘carbonate’ in the incorporated patents demonstrate the fact that the term had more than one meaning to those of skill in the art. But the incorporated patents are not conclusive proof that the patentee selected a single meaning for the term in the ‘450 patent.”)

Patent Owner argues that we did not consider these references as intrinsic because they were incorporated by reference. However, we stated “[Patent Owner’s] constructions [of NAT] are supported by the disclosure of the ‘079 patent and the opinion of SSH’s expert, which is based on: . . . the numerous IETF documents incorporated by reference into the ‘079 patent. . . .” Final Dec. 10. Also, we explicitly rejected the suggestion that the Patentees in this case became their own lexicographers or whether there was a clear disavowal of scope. *Id.* at 8–9.

A request for rehearing is not an opportunity merely to disagree with the panel’s assessment of the arguments or weighing of the evidence. We did not overlook or misapprehend when we have performed an analysis or reached a conclusion with which Petitioner disagrees, and mere disagreement with our analysis or conclusion is not a proper basis for rehearing. We are not persuaded that we overlooked or misapprehended Patent Owner’s argument.

b. Figures 1a and 1b

Patent Owner argues that “[t]he primary basis for the Board’s construction is Fig. 1a of the ’079 patent. Fig. 1a illustrates data traffic through a HOST NAT in one direction” Req. Reh’g. 11. We disagree, as noted above, the Final Decision relies on the express statement in the Specification that keepalives do not need to travel in the reverse direction. Patent Owner suggests that Fig. 1a and b are somehow limited by the descriptions of NAT in RFC1631, Srisuresh98Terminology because those references describe the “prior art” that Fig. 1a and b purport to describe. Req. Reh’g 12. This is a new argument not presented in the Patent Owner Response. As such, Patent Owner waived this argument. Nevertheless, we disagree that the Specification states that Fig. 1a and b are limited to the disclosures of RFC1631, Srisuresh98Terminology.

Patent Owner also argues “[t]he Board overlooks that the remainder of the ’079 patent makes unambiguously clear, as detailed above, that NAT devices do necessarily perform reverse mapping—it is the express function of the stored mappings.” We detail in section II.2.a., above, that we considered statements in the Specification regarding reverse mapping. We are, therefore, not persuaded by this argument for the reasons stated above.

Patent Owner argues that “The Board misapprehends that [] alleged different connections [in figures [1a and 1b]] are relevant to the bidirectional mapping aspect of NAT devices. FWD 9-10.” Req. Reh’g. 13. However, we expressly addressed this argument at pages 10–11 of the Final Decision. Patent Owner then repeats its contention that the “definitional” statement

regarding reverse mapping means trumps any reference in the Specification to the physical connection of Fig. 1a and b. *Id.* We are not persuaded by this argument for the reasons stated above.

3. Patent Owner's Additional Argument Regarding Claim 19

Patent Owner argues:

Patent Owner raised a separate argument with respect to the features of claim 19 including the features of its base independent claim 18. Tr. 22:1- 12. While the FWD addresses aspects of the argument related to claim 18, it appears the Board misapprehended these arguments, and it appears the Board overlooked aspects of the argument with respect to claim 19 altogether. FWD 25, 27.

Req. Reh'g. 13–14. However, outside of the oral hearing, Patent Owner did not make this argument regarding claim 18 or claim 19. Petitioner asserted at the oral hearing that the argument was new as such Petitioner did not have a reasonable ability to respond to the argument. Tr. 43:8–14. We agree.

As to claim 18, Patent Owner asserts that at the oral hearing it argued “claim 18 excludes Bellovin’s BTI-BTI keepalives, because Bellovin’s NAT devices are not configured to be responsive to reception of the BTI-BTI keepalives” as required by the “claim 18 [limitation]—‘network address translator device is configured to maintain the mapping . . . in response to reception of at least one keepalive packet.’” Req. Reh'g. 14. However, Patent Owner does not cite to anywhere in its Patent Owner Response where it made this argument. Patent Owner cites to pages 38 and 42–43 of its Patent Owner Response for its assertion that “[w]ith respect to the BTI-BTI keepalives, a call is caused to be maintained only upon receipt of the BTI-

BTI keepalive by the terminating BTI.” Req. Reh’g. 14. Patent Owner does not point to where in the Patent Owner Response this assertion is tied to the claim 18 “feature” regarding maintaining a mapping in response to at least one keepalive packet. Thus, this argument was waived.

Even if Patent Owner had made this argument, we would not be persuaded by it. The Petition correctly states that “in the BTI-to-BTI embodiment, keepalive packets first travel ‘to’ the NAT device. Specifically, keepalive packets are sent to the edge router nearest the destination BTI. There, an address translation is performed that inserts the end BTI address.” Pet. 28 (Ex. 1004, p. 19–20). In other words, the BTI-to-BTI keepalive must be received by the edge router in order to make it to the terminating BTI. It can be argued that “in response to” the edge router (NAT) receiving the keepalive, the terminating BTI is caused to receive the keepalive which in turn causes the mapping to be maintained. This possibility has not been explored by Patent Owner or Petitioner in the briefing because Patent Owner did not make the argument that the edge router (the alleged “NAT”) is not responsive to BTI-to-BTI keepalives in its Patent Owner Response and allow Petitioner to respond to it.

As to claim 19, Patent Owner’s argument relies on its argument regarding claim 18, which we find was waived. Our Scheduling Order provides that any arguments and evidence not contained in the Patent Owner Response will be “deemed waived.” Paper 9, 3. We determine that Patent Owner has waived its argument regarding claim 18 and thus it also waived

its argument regarding claim 19 which relies on its argument regarding claim 18.

III. CONCLUSION

The Request for Rehearing does not demonstrate that we misapprehended or overlooked any matters raised in the Petition in finding claims 1, 3–8, 10–12, 14–18, 20–23, 25 and 27–29 unpatentable as having been obvious over Shuen in view of RFC1234, and unpatentable as having been claim 19 obvious over Bellovin. 35 U.S.C. §§ 314(a). ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Request for Rehearing is *denied*.

IPR2015-01869
Patent 8,544,079

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