

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NOKIA OF AMERICA CORPORATION *et al.*,
Petitioners,

v.

IARNACH TECHNOLOGIES LIMITED,
Patent Owner.

Case IPR2024-00900
Patent 8,934,359

**PATENT OWNER'S SURREPLY TO PETITIONER'S PRELIMINARY
RESPONSE REPLY**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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EXHIBIT LIST

Exhibit	Description
2001	Declaration of Bruce Schofield in Support of Patent Owner's Preliminary Response
2002	Defendant's Invalidity Contentions, <i>Iarnach Technologies Ltd. v. AT&T Services Inc. et al.</i> , Case No. 2:23-cv-00231 (E.D. Tex.) (served Dec. 7, 2023)
2003	Defendant's Invalidity Contentions, <i>Iarnach Technologies Ltd. v. Verizon Business Network Services LLC et al.</i> , Case No. 2:23-cv-00631 (E.D. Tex.) (served May 6, 2024)
2004	Executed Summons for AT&T Services Inc., <i>Iarnach Technologies Ltd. v. AT&T Services Inc. et al.</i> , Case No. 2:23-cv-00231, Dkt. No. 11 (E.D. Tex.)
2005	Federal Court Management Statistics–Profiles, available at https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_distprofile0630.2024.pdf

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I. Introduction

Patent Owner Iarnach Technologies Limited (“Patent Owner”) submits this Sur-Reply to Petitioners’ Nokia of America Corporation (“Nokia”) and AT&T Services, Inc. (“AT&T”) (collectively “Petitioners”) Preliminary Response Reply (the “Reply”) pursuant to the Board’s October 2, 2024 email.¹ For the reasons discussed here and in Patent Owner’s Preliminary Response (“POPR”), Patent Owner respectfully requests that the Board deny institution of the Petition.

II. Argument

Petitioners’ Reply confirms what Patent Owner explained in its POPR—the Petition failed to expressly map anything to the claimed “parameter sets.” *See* POPR at 11-15. Confronted with this clear failure that dooms the Petition, Petitioners now propose a variety of new theories in their Reply, including (A) that the term “parameter set” should be construed so broadly that it is virtually indistinguishable from the use of individual parameters that the ’359 Patent improved on, and (B) that the claim limitations that recite “parameter sets” are optional (and thus Petitioners’

¹ This Sur-Reply is being submitted within seven business days of Petitioners’ Oct. 9, 2024 Reply. *See* 37 CFR § 42.2 (defining “Business day”); 5 U.S.C. § 6103(a) (identifying Oct. 14, 2024 as a Federal holiday).

failure to map them to anything is not fatal). Neither the '359 Patent Specification nor its Claims support Petitioners' assertions, and they must be rejected.

First, Petitioners' Reply now asserts that the "parameter set" term should be construed as any "combination of parameters contained within the upstream overhead messages." Reply at 1. They suggest that this construction salvages the Petition grounds which—at best—"use[d] the terms 'parameter' and 'parameter set' interchangeably." *Id.* However, their proposed construction is unsupported by the Specification and would eliminate the benefits of "parameter sets" expressly identified by the '359 Patent.

Petitioners suggest that the '359 Patent at 4:8-10² and 7:44-46³ supports their proposed construction. *Id.* However, those portions of the Specification merely give examples of the types of parameters that can be included in a parameter set, and Petitioners selectively ignore the remainder of the specification which explains the parameter sets and how they are used. Simply listing off parameters and declaring them to be a "set" would not provide the benefits over the prior art taught by the

² "The upstream burst overhead parameter set comprises: state of forward error correction, delimiter, preamble, and guard band."

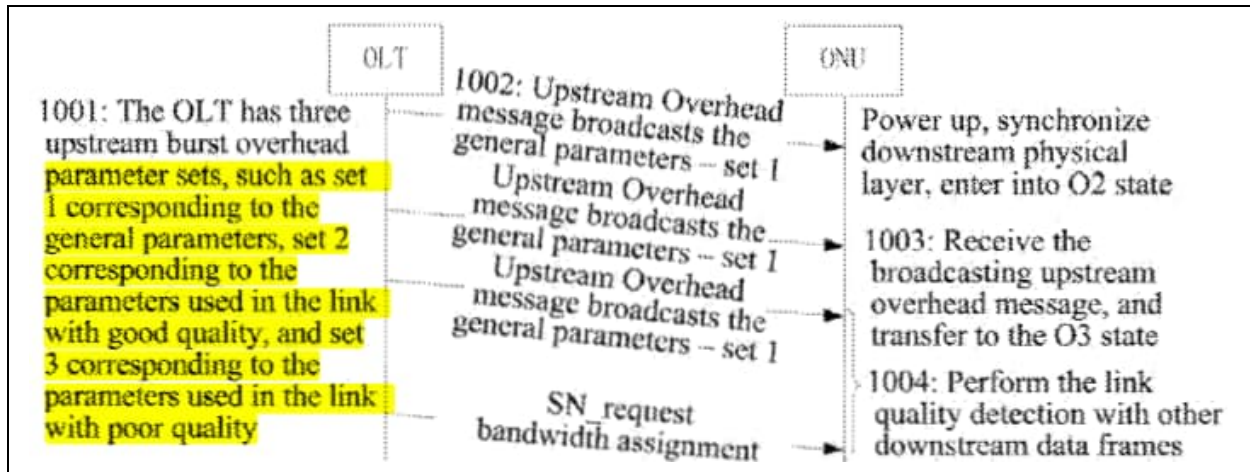
³ "Each upstream burst overhead parameter set includes the following parameters: state of forward error correction, delimiter, preamble and guard band."

'359 Patent, nor would a POSITA have understood that to be the scope of a "parameter set". See EX2001 ¶¶34-35, 43-53.

The POPR addressed the meaning of parameter sets, as well as how such parameter sets would have been understood by a POSITA. See POPR at 2-3, 11-15. Notably, Petitioners did not address anything that Patent Owner cited or discussed in its POPR related to the correct interpretation of parameter sets. Nor could they without conceding that their overly broad construction is wholly incompatible with the '359 Patent disclosure. Both the Specification and the Challenged Claims teach that the parameter sets are sets of upstream burst overhead parameters and corresponding parameter values that are associated with specific levels of link quality:

the optical line terminal determining and identifying N kinds of upstream burst overhead parameter sets according to different levels of link quality, wherein N is an integer and is larger than zero; and

EX1001 Claim 1 at 21:64-67 (highlighting added) [hereinafter the "Link Quality" limitation].



EX1001 Fig. 3 Excerpt (highlighting added).

The method of the present invention will be described below with embodiments. In the following embodiments, suppose the OLT determines three kinds of upstream burst overhead parameter sets according to the link quality, wherein, set 1 includes the general upstream burst overhead parameters which are parameters used in default and also correspond to parameters required by the typical link quality, and the index value is set as 0b00; set 2 includes the enhanced upstream burst overhead parameters which correspond to parameters used in situations that the link quality is worse than the typical link quality, and the index value is set as 0b01; and set 3 includes the weakened upstream burst overhead parameters which correspond to parameters used in situations that the link quality is better than the typical link quality, and the index value is set as 0b10. Only three kinds of sets are

EX1001 at 8:53-67 (highlighting added). Thus, rather than using a separate indicator for every possible parameter and parameter value, the '359 Patent inventors taught and claimed these "parameter sets" which could be indicated with a single value and

associated with appropriate parameters and parameter values for various link qualities (*e.g.*, the parameters and parameter values for “typical link quality” could be one set associated with the value 0b00, the parameters and parameter values for “better than the typical link quality” could be another set associated with the value 0b10, etc.).

The ’359 Patent explains that indicating individual parameters separately (as Petitioners rely on) results in additional complexity and poor bandwidth utilization. EX1001 at 1:64-67 (“The actual implementation in the prior art has...[a] [c]omplexity problem: indications of the upstream burst overhead parameters in the GPON system are performed separately, thus it has high complexity.”), 21:41-43 (“The present invention can improve the bandwidth utilization, decrease the complexity of indicating the upstream burst overhead parameters in the PON system.”); *see also* EX2001 ¶¶34-35, 40, 44-49. Despite this, Petitioners assert that merely pointing to individual parameters being indicated and transmitted separately (the very thing the ’359 Patent described as creating a “complexity problem”) is sufficient to render obvious a parameter set.

“[T]he interpretation to be given a term can only be determined and confirmed with a full understanding of **what the inventors actually invented and intended to envelop with the claim**. The construction that stays true to the claim language and **most naturally aligns with the patent’s description of the invention** will be, in the

end, the correct construction.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (emphasis added, internal quotes and citations omitted). Ultimately, the overly broad construction that Petitioners rely on fails to capture the improvements that the Patent teaches for parameters sets and cannot be correct.

Next, Petitioners assert that because the Link Quality limitation can be satisfied by a single “parameter set,” the “parameter set” requirement can be ignored. Reply at 3-4. That is incorrect—the OLT must determine and identify at least one parameter set, and Petitioners’ theory cannot render even a single parameter set as obvious because Petitioners failed to show anywhere in the asserted ground where an OLT determines or identifies any parameter sets. See POPR at 11-15.

Petitioners then make a confusing argument that, because the POPR explained what a parameter set “can be used” for (rather than stating what it “must be used” for), that somehow changes the meaning of the term as taught by the Patent. Reply at 4-5. Petitioners cite no legal support for that point, nor do they identify anything Patent Owner has said that conflicts with the teachings of the patent or that would support their proposed construction. Petitioners also suggest that the POPR conflates parameter sets with an indication of a given parameter set, but fails to tie the argument to any relevant claim language or explain how it would address the absence of both parameter sets and indications of parameter sets in their Petition grounds. *Id.* Petitioners fail to establish how these arguments would have any relevance to the

issues at hand, and they are—at best—attempts to distract from the poor merits of their new “parameter set” theories.

Petitioners then appear to argue that the certain “parameter set” limitations (highlighted pink in the Reply) are optional because they recite “parameter sets” in the alternative. Reply at 5-6. Patent Owner disagrees with Petitioners’ interpretation of those limitations, however it is not necessary to reach that issue because Petitioners still fail to address the Link Quality limitation, which requires at least one parameter set. Thus, this is another attempt at misdirection by Petitioners to avoid addressing limitations for which they have no answer.

Petitioners then assert that “Iarnach[] asks this Board to adopt a restrictive construction of the claims that also reads out embodiments.” Reply at 6-7. However, Petitioners fail to explain how properly construing “parameter sets” as taught in the specification would “read out” any parameter set embodiments. Instead, Petitioners focus again on limitations other than the Link Quality limitation that they assert recite the use of parameter sets in the alternative. Yet again, Petitioners do not directly address the recitation of parameter sets in at least the Link Quality limitation because they cannot.

III. Conclusion

Patent Owner respectfully requests that the Board refuse to institute *inter partes* review for the reasons stated herein.

Dated: October 21, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing was served via email to lead and backup counsel of record for Petitioners as follows:

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