

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ERICSSON INC.
NOKIA OF AMERICA CORPORATION
Petitioner,

v.

XR COMMUNICATIONS LLC
Patent Owner

IPR2024-00314
Patent 7,177,369

**PATENT OWNER'S SUR-REPLY TO
PETITIONERS' PRE-INSTITUTION REPLY**

The plain meaning of “pre-equalization parameter” in claims [1.1] and [1.2] of the '369 patent is “parameter used to perform pre-equalization.” POPR at 9, 13. Petitioners’ own expert says this, and Petitioners don’t dispute it in Reply. *See* Negus Decl. (Ex. 1003) ¶ 285 (“the plain, ordinary meaning of the term ‘forward path pre-equalization parameter’ . . . is then simply a ‘parameter’ used for any part in performing ‘forward path pre-equalization’”). Thus, it is undisputed that the claim requires pre-equalization to be performed. The sole issues are: (a) whether pre-equalization has a plain and ordinary meaning and (b) what that meaning is.

“Pre-equalization” is a technical term of art and has a plain meaning. That meaning, in the context of '369 patent, is modifying a signal to reduce unwanted effects associated with multipath fading between the transmitter and the receiver (referenced herein as “multi-path pre-equalization”). Petitioners criticize this but offer no competing construction or interpretation of “pre-equalization” whatsoever. PO’s proposal is correct, and Petitioners’ criticisms lack merit.

I. Petitioners Read “Pre-Equalization” Out of the Claim

Petitioners first assert that claim 1 “already recites how the ‘pre-equalization parameter’ is used.” Reply at 1. In advancing this argument, Petitioners make clear they are reading the claim language in the following way:

[1.1]	determining at least one forward path ~~pre-equalization~~ parameter based on said at least one transmission delay; and
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[1.2]	modifying a forward path data signal that is to be transmitted to the receiving device based on said at least one forward path ~~pre-equalization~~ parameter, where said modifying includes selectively setting different transmission power levels for at least two Orthogonal Frequency Division Multiplexing (OFDM) tones in said forward path data signal.
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Under Petitioners' view, the claim would have exactly the same scope if the term "pre-equalization parameter" were replaced with "parameter" (allegedly because pre-equalization is fully captured by other claim language). *Id.* This is erroneous, and there is no basis to strip out substantive words of the claim. Indeed, Petitioners' expert already agreed that "pre-equalization parameter" in claim 1 has a specific meaning. It is not just any "parameter"—but rather a parameter that is used "in performing 'forward path pre-equalization.'" Negus Decl. ¶ 285.

Likewise, Petitioners' argument that a device "could exactly recite every word of Claim 1 and perform every claimed step . . . but would fall outside of Claim 1" (Reply at 2) fails. Petitioners' hypothetical device is one that does *not* (a) determine a "pre-equalization parameter," (b) modify a signal "based on said pre-equalization parameter," or (c) perform pre-equalization. Such a device *would* fall outside of the claim 1 because it does *not* recite every word or perform every claimed step.

Nor is there any merit to Petitioners' assertion that PO seeks to import an "intent" element into the claims. Reply at 2. In *Sorrell Holdings*, the district court construed the term "figurative handle" in a system claim to require that the handle

be “designed especially to be grasped by the hand,” which improperly suggested a design intent requirement. *Id.* Here, claim 1 is a method claim and pre-equalization is an action. And PO’s construction properly reflects what pre-equalization *is*: reducing unwanted effects associated with multipath fading. It is no different from construing other actions such as “amplification” (e.g., increasing the magnitude of the signal) or “compression” (e.g., reducing the number of bits).

II. The Specification Fully Supports PO’s Construction

The '369 patent is all about pre-equalization to reduce multipath effects, i.e., multipath pre-equalization. This is apparent from the patent’s title, abstract, problem to be solved, claimed solution, and every embodiment. *See* POPR at 14–16. When the patent introduces the claimed inventions in col. 7, it states that in “the present invention,” “equalization techniques are provided for use at a transmitting node and configured to perform [multipath pre-equalization].” '369 patent at 7:14–21. And it states that the description applies to later examples and embodiments. *Id.* (“*Such pre-equalization techniques* are discussed in greater detail in later sections.”).

Petitioners’ suggestion that the embodiment at 15:31-63 undermines PO’s construction (Reply at 2) is without merit. That disclosure is not purporting to define “pre-equalization” (nor would any such definition of pre-equalization as “modifying OFDM power levels” be warranted). Rather, the disclosure is continuing to apply the general description of “pre-equalization” given in col 7. Indeed, the embodiment

is expressly about reducing multipath effects and thus supports PO's construction. *See* '369 patent at 15:49-60 ("reciprocal path loss measurements are made" and "variations in channel path loss can be used to set[] power levels for a particular QAM level"; "Sub-carrier/channel equalization is then provided").

Nor does Petitioners' reliance on certain dependent claims (Reply at 2) negate PO's construction. Those claims are about different features/steps and don't suggest a different meaning of "pre-equalization" contrary to the specification. *Chewy, Inc. v. IBM Corp.* 94 F.4th 1354, 1360 (Fed. Cir. 2024) (certain dependent claims reciting "prefetching" didn't negate finding that requirement in all claims in view of the specification, noting that patentees often "use different terminology in different claims to define the invention"). Tellingly, Petitioners do not articulate any broader understanding of "pre-equalization." Nor do they suggest the '369 patent is directed to some type of pre-equalization other than *multipath* pre-equalization.

III. Petitioners' Quibbles with PO's Construction Lack Merit

Despite not proposing any construction of "pre-equalization" (and refusing to say what the plain and ordinary meaning *is*), Petitioners devote much of their brief to attacking isolated words in PO's construction. *See* Reply at 3–4. In true lawyerly fashion, Petitioners assert that certain common English words—such as "reduce," "unwanted," "effects" and "associated with"—are either insolubly ambiguous or require further construction. *Id.* This fails.

“Pre-equalization” is a known term of art, and PO’s construction is the plain and ordinary meaning. For example, the IEEE dictionary defines pre-equalization (or pre-emphasis) as: “A process in a system designed to emphasize the magnitude of some frequency components with respect to the magnitude of others, *to reduce adverse effects*, such as noise, in subsequent parts of the system.” Ex. 2001 (The Authoritative Dictionary of IEEE Standards Terms, 7th ed., Dec. 2000).¹ PO’s construction closely tracks this definition, including the language of “to reduce adverse effects.” The only substantive difference is that, in the context of the ’369 patent, pre-equalization refers to *multipath* pre-equalization. PO’s construction is correct and there is no evidence it is unusual or unsupported.

Finally, Petitioners’ argument about lexicography (Reply at 5) fails. Because PO’s construction is the plain meaning, no lexicography is required. And even if not express, lexicography can be implicit. *See Trs. of Columbia Univ. in City of N.Y. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) (explicit redefinition not required when the description itself is affirmatively limiting).

For the foregoing reasons, and because Petitioners don’t provide a competing construction, the Board should adopt PO’s construction of “pre-equalization.”

¹ PO didn’t cite the IEEE definition in the POPR and does not affirmatively rely on it for the construction. Rather, PO provides the definition to rebut Petitioners’ new argument in Reply that words such as “reduce,” “unwanted”/“adverse,” and “effects” are ambiguous or would render the claim indefinite.

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Respectfully submitted,

/ Philip X. Wang /

Philip X. Wang, Reg. No. 74,621

Reza Mirzaie, Reg. No. 69,138

RUSS, AUGUST & KABAT

12424 Wilshire Blvd., 12th Fl.

Los Angeles, CA 90025

Tel.: 310-826-7474

pwang@raklaw.com

rmirzaie@raklaw.com

rak_vivato@raklaw.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e)(1), I certify that the above document was served on May 15, 2024 by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

Patrick D. McPherson, Reg. No. 46,255
Kevin Anderson, Reg. No. 43,471
901 New York Ave., N.W., Suite 700 East
Washington, D.C. 20001
P: (202) 776-7800
F: (202) 776-7801
PDMcPherson@duanemorris.com
KPAnderson@duanemorris.com

Date: May 15, 2024

/ Philip X. Wang /
Philip X. Wang, Reg. No. 74,621
RUSS, AUGUST & KABAT

Counsel for Patent Owner