

**UNITED STATES INTERNATIONAL TRADE COMMISSION
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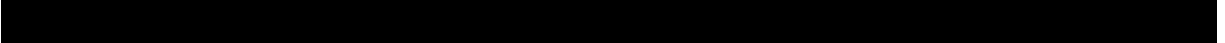
**Before the Honorable Doris Johnson Hines
Administrative Law Judge**

In the Matter of

**CERTAIN WI-FI ROUTERS, WI-FI
DEVICES, MESH WI-FI NETWORK
DEVICES, AND HARDWARE AND
SOFTWARE COMPONENTS THEREOF**

Investigation No. 337-TA-1361

**SUMMARY OF TP-LINK RESPONDENTS' PETITION FOR REVIEW OF
THE INITIAL DETERMINATION OF VIOLATION OF SECTION 337**



I. INTRODUCTION

The Initial Determination (“ID”) in this Investigation should be reviewed and corrected by the Commission because its findings of infringement are based on an overbroad reading of the Asserted Patents that is sharply at odds with the claims’ plain language and the patents’ disclosure. These clear errors result from the ID largely adopting the overreaching and unsupported theories asserted by Netgear as part of its effort to combat the marketplace success of TP-Link’s high-quality, reasonably priced Wi-Fi products. Unable to compete by relying on its own, overpriced offerings, Netgear now seeks to deprive U.S. consumers of the TP-Link products they resoundingly prefer. Indeed, the scope of the ID’s findings would hand Netgear monopoly rights over essential and foundational aspects of modern Wi-Fi technology—aspects that bear no resemblance to anything disclosed in the Asserted Patents. By persuading the ALJ to issue an ID that adopts nearly all of its litigation-inspired stretches, Netgear has fostered multiple instances of clear legal and factual error that require review and correction by the Commission. TP-Link therefore respectfully submits that review and correction of the ID is warranted in order to prevent the substantial power of the Commission from being used to wreak significant harm on the U.S. Wi-Fi router market through these erroneous findings.

II. ’714 PATENT

The ID errs in at least three respects in concluding TP-Link violated Section 337 by infringing claim 13 of the ’714 patent.

A. The ID errs by failing to find claim 13’s “interference” terms indefinite.

The ID commits clear errors of both law and fact in failing to determine that claim 13’s terms “frequency band expected to experience low interference” and “frequency band expected to experience high interference” are not indefinite. “Low interference” and “high interference” are terms of degree, and “the patent must provide ‘some standard for measuring that degree’ such that

[REDACTED]

the claim language ‘provide[s] enough certainty to one of skill in the art when read in the context of the invention.’” *GE Lighting Sols., LLC v. Lights of Am., Inc.*, 663 F. App’x 938, 940 (Fed. Cir. 2016) (brackets in original) (quoting *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015)). It is undisputed that the ’714 patent fails to provide such guidance. Instead, the ID improperly sidesteps the indefiniteness problem by effectively re-writing the terms “low interference” and “high interference” to be relative to one another, *i.e.*, to mean “*lower* interference” and “*higher* interference.” See ID at 17–28. Yet, there is no basis in the intrinsic record for redrafting the plain claim language in this significant manner solely to save the patent’s validity. The Federal Circuit “repeatedly and consistently has recognized that courts may not redraft claims, whether to make them operable or to sustain their validity.” *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 Fed. Cir. 1371 (Fed. Cir. 2004).

The ID also errs in failing to find claim 13’s “expected to experience” language indefinite, instead agreeing with Netgears’s experts that this term refers to “objective” characteristics or properties of the claimed frequency bands, such as bandwidth, frequency, and the number of channels. See ID at 29–30. As the Federal Circuit has repeatedly held, the specification and the prosecution history are the proper focus of a §112 indefiniteness analysis—and *nowhere* does the ’714 patent’s specification equate expected interference with “objective” characteristics or properties of the frequency bands. On the contrary, when the specification discusses interference levels, it consistently and exclusively focuses on whether a frequency band requires an FCC license for use—that is it. See JX-0001 (’714 Patent) at 3:30–40, 3:64–4:2, 5:40–44, 7:3–10, 7:12–22. Although the ID points to the file history as supposedly supporting its interpretation, see ID at 25, the ID misconstrues the prosecution history, which says nothing about “objective” characteristics. The ID relies heavily on the testimony of Netgear’s technical experts—but neither of them cites

[REDACTED]

anything in the intrinsic record to support their interpretation. Indeed, confirming claim 13's indefiniteness, Netgear's experts could not even agree on what the relevant "objective" characteristics or properties are. *Compare* 1/17/24 Tr. (Wicker Direct) at 116:24–117:22 *and id.* (Wicker Cross) at 225:18–226:10, *with* 1/23/24 Tr. (Haas Direct) at 1083:13–1084:22. Moreover, even assuming for the sake of argument that the ID is correct that determining "expected" interference levels requires balancing multiple "objective" characteristics or properties, the '714 patent's specification does not provide any guidance regarding what those characteristics or properties are or how they should be balanced. *See, e.g.*, 1/19/24 Tr. (Almeroth Direct) at 658:20–659:13. Claim 13 therefore is indefinite even under the ID's incorrect interpretation.

B. The ID errs by construing claim 13 to cover dual- and multi-band networks.

The ID commits legal error in adopting the ALJ's earlier construction of the terms "receiving ... in a frequency band expected to experience [low/high] interference" and "transmitting ... in a frequency band expected to experience [high/low] interference," because the ALJ's construction does not require separate bands for transmitting and receiving. Instead, the ALJ incorrectly construed claim 13 to cover a base station that services two or more separate networks operating on two or more different frequency bands, where each network uses the *same* frequency band for the uplink and downlink. *See* EDIS Doc ID 810476, Order No. 33 at 15.

These dual- and multi-band network configurations are not disclosed in or contemplated by the '714 patent's specification. The '714 patent purports to solve two specific data networking problems, both of which persist and are unaddressed in a dual- or multi-band network. First, the '714 patent addresses the problem of asymmetric data networks—namely, networks where there is more data on the downlink than the uplink. *See, e.g.*, JX-0001 ('714 Patent) at 4:5–7. To deal with this asymmetry, the '714 patent's specification teaches using a licensed frequency band for the downlink and an unlicensed band for the uplink. *See id.* at 4:7–12. According to the patent,

assigning the licensed band to the downlink and the unlicensed band to the uplink increases network capacity, because the licensed downlink will have less interference than the unlicensed uplink. *See, id.* at 3:33–40. Second, the ’714 patent addresses the problem that having closely spaced frequency bands for the uplink and downlink results in interference between them, requiring the use of complex filters. *See id.* at 5:15–23. The ’714 patent’s purported solution is to widely separate the downlink and uplink frequency bands by a factor of at least two, which the patent refers to as “an octave.” *Id.* at 4:18–25.

The ID’s construction not only ignores these specific solutions provided by the ’714 patent, but runs directly counter to them. For example, the ID’s erroneous construction has allowed Netgear to read claim 13 on a dual-band network—such as a 5 GHz network and a separate 2.4 GHz network—where each network’s uplink and downlink occur on the *same* frequency band. *See* 1/17/24 Tr. (Wicker Direct) at 109:11–18, 128:21–129:10, 166:14–23; 1/17/24 Tr. (Wicker Cross) at 187:3–9, 189:2–17; *see also* CX-2539C.1, CX-0629.2. This reading of claim 13 bears no resemblance to what is disclosed in the ’714 patent, because the base station in a dual-band network will always communicate with a given device on one frequency band, and hence is prone to the exact asymmetry and interference problems the ’714 patent was intended to solve. The ID’s interpretation of these terms runs afoul of the fundamental claim construction principle that a term’s meaning can only be determined and confirmed based on a full understanding of what the inventors actually invented and intended to encompass with the claim. *See, e.g., Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 389 (1996). Absent the ID’s erroneous construction, no infringement finding would have been possible.

C. The ID errs by failing to find claim 13 invalid in view of Morikawa.

The ID errs in failing to find that claim 13 is anticipated or, at a minimum, rendered obvious by the Morikawa prior art reference. Netgear concedes that Morikawa discloses every element of

[REDACTED]

claim 13, except for the requirement that the claimed base station transmits and receives “at the same time.” Yet, the ’714 patent itself admits that same-time transmission and reception by a base station can be achieved using a known prior art technique called FDD. *See* JX-0001 (’714 Patent) at 1:30–35, 1:65–2:10. Hence, at best, claim 13 is merely a modification of Morikawa that incorporates the well-known prior art technique of FDD. The drastic remedy of an exclusion order should not be based on such a flimsy patent claim that shows no actual inventiveness.

Moreover, when Netgear’s infringement theory for the (indefinite) “interference” terms is applied to Morikawa, Morikawa plainly discloses a network where the base station transmits data to a subscriber on a frequency band that is expected to experience low interference while at the same time receiving data from a subscriber on a frequency band that is expected to experience high interference. Although the ID does not expressly explain what it believes the term “at the same time” actually means (despite a clear dispute between TP-Link and Netgear on this issue), the ID implicitly adopts an overly narrow construction that requires transmission and reception to occur at exactly the same moment in time. That construction is not supported by the ’714 patent’s specification, and it runs contrary to what the applicant told the Patent Office the term “at the same time” means during prosecution—namely, that the base station uses two different claimed frequency bands when bi-directionally communicating with a subscriber unit or other device. *See* JX-0004 (’714 Patent History) at 305, 371–72, 480. Had the ID applied this plain and ordinary meaning of “at the same time” as confirmed by the ’714 patent’s prosecution history, a finding of anticipation by Morikawa would have been unavoidable.

In any event, even the ID’s unduly narrow interpretation of “at the same time” requiring the base station to receive and transmit at exactly the same moment in time, Morikawa still discloses this limitation, or at least renders it obvious. Morikawa expressly discloses a high-speed,

[REDACTED]

point-to-multipoint data network with a base station that uses a licensed frequency band for transmitting downlink data to a subscriber unit and an unlicensed frequency band for receiving uplink data from a subscriber unit. *See* RX-0094 (Morikawa) at cover, [0002], [0009]–[0010], [0023], [0025]–[0044]. Given Morikawa’s stated goals of increasing network speed and capacity, the ID’s reading of Morikawa as not disclosing same-time transmission and reception vitiates Morikawa’s very purpose. In a network such as a Morikawa, which is designed to have an unlimited number of subscribers, limiting the network to the sequential use of the downlink and uplink (as the ID does) would decrease its speed and capacity, because only the downlink or the uplink could be used at any given time—and only by one subscriber. That restriction would render the Morikawa network effectively useless for its intended multi-subscriber deployment because a single subscriber’s activity could prevent every other subscriber from accessing the network. Moreover, Netgear’s technical expert Dr. Wicker confirmed that Morikawa discloses the “at the same time” requirement, admitting at his deposition that Morikawa is a point-to-multipoint network and that the base station in a point-to-multipoint network can transmit and receive “at the same time.” 1/23/24 Tr. (Wicker Cross) at 1050:18–1051:5. Although Dr. Wicker sought to backtrack from this admission at the evidentiary hearing, he was cleanly impeached with his deposition testimony.

III. ’698 PATENT

The ID errs in at least three respects in concluding TP-Link violated Section 337 by infringing claims 12, 15, 17, and 19 of the ’698 patent.

A. The ID errs in interpreting and finding infringement based on the “received signal strength” limitation.

The ’698 patent’s Asserted Claims require a different backhaul band be established “upon detecting that a *received signal strength* of the first channel from the second node is below a

threshold.” JX-0002 (’698 Patent) at Claim 12; *see also id.* at Dependent Claims 15, 17, 19. Because the term “received signal strength” was not construed during the *Markman* process, its ordinary meaning applies. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (“[T]he words of a claim ‘are generally given their ordinary and customary meaning.’”). However, contrary to the term’s ordinary meaning—and in the absence of any evidence amounting to lexicography or a disclaimer—the ID improperly adopts a construction that “received signal strength” “includes channel utilization and rate.” ID at 112. Not only does this construction find no support in the intrinsic record, but undisputed evidence introduced at the hearing demonstrated that channel utilization and rate are fundamentally different metrics from “received signal strength.” *See* 1/18/24 Tr. (Akl Cross) at 483:9–14, 484:2–11, 486:4–487:25, 489:13–490:14, 492:16–493:17, 495:10–17, 1165:25–1167:8, 1/22/24 Tr. (Bims Direct) at 849:8–850:18; RDX.0002.90. Construing “received signal strength” to “include[]” these different metrics is tantamount to construing the term “apple” to include “orange” and “pear.” Indeed, neither the ID nor Netgear’s experts articulated any coherent relationship between these metrics, let alone explained how a POSITA could understand the meaning of “received signal strength” to “include[]” channel utilization and rate. *See, e.g.*, ID at 112; 1/18/24 Tr. (Akl Direct) at 415:2–13. The ID’s improper claim construction should be rejected. When the ordinary meaning of “received signal strength” is applied, it is undisputed that the accused Adaptive Path Selection (APS) “preferred backhaul” functionality is based on channel utilization and rate—not “received signal strength”—and therefore does not infringe. *See* ID at 113–15.

B. The ID errs in interpreting and finding infringement of the “default frequency band” limitation.

The Asserted Claims require “performing an attempt to utilize a first channel in a *default frequency band* as a backhaul with second node in the network.” JX-0002 (’698 Patent) at Claim

[REDACTED]

12; *see also id.* at Dependent Claims 15, 17, 19. During the *Markman* process, the parties proposed competing constructions of “default frequency band.” *See* Ex ___, Joint Claim Construction Chart, at 4. The ID adopts the construction “a first selected frequency band.” *See* ID at 97 (citing Order No. 33 at 28–32). Neither party proposed that construction, nor does that definition of the term “default frequency band” appear in the specification or in any of the other intrinsic or extrinsic evidence. The ID’s construction also bears no relation to the plain meaning of the word “default.” In any process for selecting a frequency band for the backhaul, **one** of the bands will be selected—and because that band will have been selected instead of any other band, it will have been selected “first,” making it a “first selected” frequency band. Because the ID’s construction therefore encompasses **any** frequency band that happens to be selected first, it improperly reads the word “default” out of the term “default frequency band.” Critically, if all of the available bands are evaluated according to some criterion, and all of them are available to be selected first (provided they satisfy the criterion), then **none** of them is selected by default. Yet, that is the construction the ID adopts—and it is the infringement theory Netgear presented and on which the ID bases its finding of infringement. *See* Netgear Post-HB at 45 (citing 1/18/24 Tr. (Akl Direct) at 411:18–412:1); 1/19/24 Tr. (Akl Cross) at 522:4–20. Because the ID’s construction fails to comport with the plain meaning of the word “default”—and indeed, reads the concept of a “default” backhaul frequency band out of the claim—it must be rejected. When the correct and ordinary meaning of the term “default” is applied, the accused APS path quality equation indisputably does not use a “default frequency band,” and therefore does not infringe.

C. The ID errs in finding Qualcomm driver roaming functionality is [REDACTED] in the Accused Products.

As noted above, the Asserted Claims require a different backhaul band be established “upon detecting that a ***received signal strength*** of the first channel from the second node is below

[REDACTED]

a threshold.” JX-0002 (’698 Patent) at Claim 12; *see also id.* at Dependent Claims 15, 17, 19. With respect to the Qualcomm-based Accused Products, Netgear presented an infringement theory for this limitation based on a “roaming” feature that is present in third-party Qualcomm driver source code. The clear and unequivocal testimony of TP-Link’s witnesses established that this feature is [REDACTED] in TP-Link products. *See* 1/22/24 Tr. (Bims Direct) at 839:5–23; *id.* (Bims Redirect) at 932:10–16; 1/22/24 Tr. (Pu Direct) at 950:12–951:14, 953:2–24. Indeed, the code for this functionality is [REDACTED]—the Accused Products. *See id.* The ID nevertheless finds infringement based on this feature—an absurd result where TP-Link has been found to infringe based on code that [REDACTED] on the Accused Products. Despite the complete absence of evidence that the relevant code is compiled, the ID improperly shifts the burden on infringement to TP-Link, finding TP-Link’s expert did not establish that he “definitively kn[e]w” the code was not compiled. ID at 117. Meanwhile, Netgear’s experts did not even address this issue. *See* 1/18/24 Tr. (Akl Direct) at 420:6–421:9; *id.* (Baer Direct) at 303:3–307:2. Because the unequivocal and uncontested evidence in the record establishes that TP-Link does not use the accused Qualcomm driver roaming feature—and indeed, that this feature does not even exist on the Accused Products—the ID’s finding of infringement is clearly erroneous and must be reversed.

IV. ’179 PATENT

A. The ID errs in finding infringement of the ’179 patent based on the accused “[REDACTED]” feature.

Claim 11 of the ’179 patent requires a specific trigger for establishing an alternative backhaul communication: “upon determining that a quality of service [QoS] of the established backhaul has dropped to below a predetermined threshold.” JX-0003 (’179 Patent) at Claim 11. The ID finds this trigger limitation is satisfied by a “[REDACTED]” threshold in TP-Link’s AWN

module. *See* ID at 175–78. That finding is clearly erroneous, because uncontroverted testimony regarding the “[REDACTED]” source code demonstrated that it does not trigger establishing an alternative backhaul. *See* 1/22/24 Tr. (Bims Direct) at 885:2–888:6; *id.* (Pu Direct) at 944:13–945:18, 946:5–947:5. Critically, Netgear did not present any source code evidence or testimony regarding the “[REDACTED]” feature. *See* 1/19/24 Tr. (Akl Cross) at 534:17–535:4. Instead, the ID relies on two words [REDACTED] in a lone technical document as purportedly indicating that there is a connection between the [REDACTED]” threshold being exceeded and an alternative backhaul being established. *See* ID at 176–77. Yet, a lone, outdated technical document cannot outweigh the uncontested testimony introduced by TP-Link analyzing the source code that actually defines the Accused Products’ operation. Moreover, the TP-Link engineer responsible for AWN testified that the lone technical document on which the ID relies is not accurate in this respect. *See* 1/22/24 Tr. (Pu Direct) at 944:13–945:18, 946:5–947:5. Because the ID improperly disregards the only evidence defining the products’ actual operation—the source code—in favor of relying on two words in a lone document that unconverted testimony shows are inaccurate, the ID’s finding of infringement of the ’179 patent is clearly erroneous and must be reversed.

V. INCORRECT INVENTORSHIP

In addition to the manifest errors in the ID, the ALJ previously committed clear error in denying TP-Link’s motion to amend to add invalidity defenses based on incorrect inventorship for the ’698 and ’179 patents. *See* Order No. 22. Although TP-Link presented specific evidence in its motion linking disclosures that third-party Qualcomm had made to the named inventors to important elements in the claims, the ALJ improperly denied TP-Link’s motion on futility grounds. As a result, TP-Link was deprived of its rightful opportunity to pursue this additional defense against Netgear’s overreaching patent assertions. The denial of TP-Link’s motion to amend also merits review and correction.

Dated: June 11, 2024

Respectfully Submitted,

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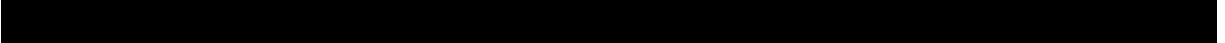
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UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC
Before the Honorable Doris Johnson Hines
Administrative Law Judge

**In the Matter of Certain Wi-Fi Routers, Wi-Fi Devices, Mesh Wi-Fi Network Devices, and
Hardware and Software Components Thereof**
Inv. No. 337-TA-1361

CERTIFICATE OF SERVICE

I, Robert Leonard, hereby certify that on June 18, 2024, copies of the foregoing document were filed and served upon the following parties as indicated:

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/s/ Robert Leonard

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