

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON DC**

**Before the Honorable Doris Johnson Hines
Administrative Law Judge**

In the Matter of

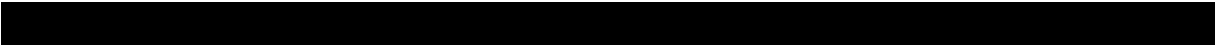
**CERTAIN WI-FI ROUTERS, WI-FI
DEVICES, MESH WI-FI NETWORK
DEVICES, AND HARDWARE AND
SOFTWARE COMPONENTS THEREOF**

Investigation No. 337-TA-1361

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

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. BACKGROUND	5
A. The Parties	5
1. Complainant Netgear Inc.	5
2. Respondents	5
B. Procedural History	6
III. STANDARD OF REVIEW	7
IV. ISSUES FOR REVIEW	7
A. '714 Patent	7
1. The ID errs by failing to find claim 13's "interference" terms indefinite.	7
a. The ID errs by rewriting the terms "low interference" and "high interference" to be relative to each other.	8
b. The ID errs in finding "expected" interference levels are based on objective characteristics or properties of the claimed frequency bands.....	13
i. The ID's finding regarding objective factors is inconsistent with the intrinsic record.	14
ii. The '714 patent provides no guidance regarding how to evaluate the ID's objective characteristics when determining interference expectations.	23
2. The ID errs by construing claim 13 to cover dual- and multi-band networks.....	24
a. The problems addressed by the '714 patent.....	25
b. The ALJ erred in construing claim 13 as not requiring separate frequency bands for transmitting and receiving.	27



c.	The ALJ’s incorrect claim construction has improperly enabled Netgear to read claim 13 on networks that use the same band for both uplink and downlink.....	32
3.	The ID errs in finding claim 13 is not invalid in view of Morikawa.	34
a.	Morikawa’s disclosure.	36
b.	The plain and ordinary meaning of “at the same time.”	38
c.	Morikawa discloses “at the same time” under the term’s plain and ordinary meaning.	44
d.	Morikawa discloses “at the same time” communication even under the ID’s unduly restrictive interpretation.	48
e.	Morikawa renders claim 13 obvious.....	56
B.	’698 Patent	57
1.	The ID errs in interpreting and finding infringement based on the “received signal strength” limitation.	58
a.	The ID improperly adopted a construction of “received signal strength” that “includes channel utilization and rate.”	59
b.	The accused APS “preferred backhaul” functionality is based on utilization and rate, not “received signal strength,” and therefore does not infringe.	68
2.	The ID errs in interpreting and finding infringement of the “default frequency band” limitation.	70
a.	The ID errs in construing “default frequency band” as “a first selected frequency band.”	72
b.	Under the proper construction of “default frequency band,” the accused path selection function in the Qualcomm-based Accused Products does not infringe.....	75
3.	The ID errs in finding Qualcomm driver roaming functionality is present and used in the Accused Products.	77
a.	The accused Qualcomm driver roaming code is [REDACTED] [REDACTED]	78

	b.	Uncontested evidence in the record establishes that the accused Qualcomm driver roaming code is [REDACTED] in the Accused Products.	80
	c.	Given the uncontested evidence establishing that the accused Qualcomm driver roaming code is not compiled or used on the Accused Products, the ID’s contrary finding is clearly erroneous.	83
C.		’179 Patent	88
	1.	The ID errs in finding infringement of the ’179 patent based on the accused “ [REDACTED] ” feature.	88
	a.	Asserted claim 11	89
	b.	The accused “ [REDACTED] ” functionality governs [REDACTED], <u>not</u> establishing an alternative backhaul.	90
	c.	Uncontroverted testimony based on the source code confirmed that “ [REDACTED] ” is not involved in establishing an alternative backhaul and therefore does not infringe.	91
	d.	The ID clearly errs by crediting two words in a lone document over uncontroverted testimony regarding the source code.	94
D.		Incorrect Inventorship	97
V.		CONCLUSION	100

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Allen Eng'g Corp. v. Bartell Indus., Inc.</i> , 299 F.3d 1336 (Fed. Cir. 2002).....	11, 13
<i>Amazon.com, Inc. v. Barnesandnoble.com, Inc.</i> , 239 F.3d 1343 (Fed. Cir. 2001).....	46
<i>Amgen Inc. v. Apotex Inc.</i> , 712 F. App'x 985 (Fed. Cir. 2017)	87
<i>Amgen Inc. v. Hoechst Marion Roussel, Inc.</i> , 314 F.3d 1313 (Fed. Cir. 2003).....	46
<i>Biosig Instruments, Inc. v. Nautilus, Inc.</i> , 783 F.3d 1374 (Fed. Cir. 2015).....	8
<i>Brigham & Women's Hosp., Inc. v. Perrigo Co.</i> , 761 F. App'x 995 (Fed. Cir. 2019)	70
<i>Brookhill-Wilk I, LLC. v. Intuitive Surgical, Inc.</i> , 334 F.3d 1294 (Fed. Cir. 2003).....	21
<i>Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.</i> , 289 F.3d 801 (Fed. Cir. 2002).....	69, 87
<i>Certain Automated Storage and Retrieval Systems, Robots, and Components Thereof</i> , Inv. No. 337-TA- 1228, Comm'n Op. (U.S.I.T.C. Mar. 17, 2022)	18
<i>Certain Computer Network Security Equipment and Systems, Related Software, Components Thereof, and Products Containing Same</i> , Inv. No. 337-TA-1314, Claim Construction Order (U.S.I.T.C. Feb. 22, 2023)	63, 66
<i>Certain Magnetic Data Storage Tapes and Cartridges Containing the Same</i> , Inv. No. 337-TA-1012 (“ <i>Certain Magnetic Data Storage Tapes</i> ”), Comm'n Op. (U.S.I.T.C. Apr. 2, 2018)	82, 94
<i>Certain Magnetic Data Storage Tapes and Cartridges Containing the Same</i> , Inv. No. 337-TA-1012 (“ <i>Certain Magnetic Data Storage Tapes</i> ”), ID (U.S.I.T.C. Sept. 1, 2017)	82, 94
<i>Certain Portable Battery Jump Starters and Components Thereof</i> , Inv. No. 337-TA-1256, ID at 83 (U.S.I.T.C. Apr. 29, 2022).....	97

<i>Certain Routers, Access Points, Controllers, Network Management Devices, Other Networking Products, and Hardware and Software Components Thereof, ITC Inv. No. 337-TA-1227 (“Certain Routers”), Comm’n Det. (U.S.I.T.C. May 3, 2022).....</i>	70
<i>Certain Routers, Access Points, Controllers, Network Management Devices, Other Networking Products, and Hardware and Software Components Thereof, ITC Inv. No. 337-TA-1227 (“Certain Routers”), Final ID (U.S.I.T.C. Dec. 7, 2021)</i>	69
<i>Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same, Inv. No. 337-TA-1240 (“Certain UMTS and LTE Communication Modules”), Comm’n Det. (U.S.I.T.C. July 6, 2022)</i>	94
<i>Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same, Inv. No. 337-TA-1240 (“Certain UMTS and LTE Communication Modules”), Final ID at 218-19 (U.S.I.T.C. Apr. 1, 2022)</i>	94
<i>Chef Am., Inc. v. Lamb-Weston, Inc., 358 F.3d 1371 (Fed. Cir. 2004).....</i>	8, 11
<i>Dow Jones & Co. v. Ablaise Ltd., 606 F.3d 1338 (Fed. Cir. 2010).....</i>	56
<i>Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722 (2002).....</i>	21, 22, 23
<i>GE Lighting Sols., LLC v. Lights of Am., Inc., 663 F. App’x 938 (Fed. Cir. 2016)</i>	8
<i>Gen. Elec. Co. v. Int’l Trade Comm’n, 685 F.3d 1034 (Fed. Cir. 2012).....</i>	69
<i>GPNE Corp. v. Apple Inc., 830 F.3d 1365 (Fed. Cir. 2016).....</i>	29
<i>Grace Instrument Indus., LLC v. Chandler Instruments Co., LLC, 57 F.4th 1001 (Fed. Cir. 2023).....</i>	14
<i>In re Graves, 69 F.3d 1147 (Fed. Cir. 1995).....</i>	50
<i>Hill-Rom Servs., Inc. v. Stryker Corp., 755 F.3d 1367 (Fed. Cir. 2014).....</i>	59, 66

<i>Howmedica Osteonics Corp. v. Zimmer, Inc.</i> , 822 F.3d 1312 (Fed. Cir. 2016).....	43
<i>INVT SPE LLC v. Int’l Trade Comm’n</i> , 46 F.4th 1361 (Fed. Cir. 2022)	81, 94
<i>IQASR LLC v. Wendt Corp.</i> , 825 F. App’x 900 (Fed. Cir. 2020)	21
<i>JVW Enters., Inc. v. Interact Accessories, Inc.</i> , 424 F.3d 1324 (Fed. Cir. 2005).....	7
<i>K-2 Corp. v. Salomon S.A.</i> , 191 F.3d 1356 (Fed. Cir. 1999).....	11
<i>Kaken Pharm. Co. v. Iancu</i> , 952 F.3d 1346 (Fed. Cir. 2020).....	28
<i>Kemin Foods, L.C. v. Pigmentos Vegetales Del Centro S.A. de C.V.</i> , 464 F.3d 1339 (Fed. Cir. 2006).....	100
<i>Markman v. Westview Instruments, Inc.</i> , 517 U.S. 370 (1996).....	<i>passim</i>
<i>Media Rts. Techs., Inc. v. Cap. One Fin. Corp.</i> , 800 F.3d 1366 (Fed. Cir. 2015).....	24
<i>Medtronic, Inc. v. Mirowski Fam. Ventures, LLC</i> , 571 U.S. 191 (2014).....	87
<i>Metro. Life Ins. Co. v. Bancorp Servs., L.L.C.</i> , 527 F.3d 1330 (Fed. Cir. 2008).....	82, 94
<i>Miller v. Mercy Hosp., Inc.</i> , 720 F.2d 356 (4th Cir. 1983)	7
<i>Nature Simulation Sys. Inc. v. Autodesk, Inc.</i> 50 F.4th 1358 (Fed. Cir. 2022)	13
<i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 572 U.S. 898 (2014).....	7, 14, 24
<i>O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.</i> , 521 F.3d 1351 (Fed. Cir. 2008).....	38
<i>Pacing Techs., LLC v. Garmin Int’l, Inc.</i> , 778 F.3d 1021 (Fed. Cir. 2015).....	29

<i>Pannu v. Iolab Corp.</i> , 155 F.3d 1344 (Fed. Cir. 1998).....	99
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	<i>passim</i>
<i>Realtime Data, LLC v. Iancu</i> , 912 F.3d 1368 (Fed. Cir. 2019).....	56
<i>Regents of Univ. of Minnesota v. AGA Med. Corp.</i> , 717 F.3d 929 (Fed. Cir. 2013).....	29
<i>Sequoia Tech., LLC v. Dell, Inc.</i> , 66 F.4th 1317 (Fed. Cir. 2023)	28
<i>Sonix Technology Co. Ltd v. Publications, Int'l Ltd.</i> , 844 F.3d 1370, 1379 (Fed. Cir. 2017).....	11
<i>Thorner v. Sony Computer Ent. Am. LLC</i> , 669 F.3d 1362 (Fed. Cir. 2012).....	66, 67
<i>TIP Systems, LLC v. Phillips & Brooks/Gladwin, Inc.</i> , 529 F.3d 1364 (Fed. Cir. 2008).....	30
<i>Ultravision Techs., LLC v. Glux Visual Effects Tech (Shenzhen) Co.</i> , No. 218CV00099JRGRSP, 2021 WL 3508691 (E.D. Tex. Apr. 9, 2021)	99
<i>Uni-Sys., LLC v. U.S. Tennis Ass’n</i> , No. 17 CV 147 (KAM) (CLP), 2017 WL 4081904 (E.D.N.Y. Sept. 13, 2017)	82, 94
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576 (Fed. Cir. 1996).....	67
<i>VLSI Tech. LLC v. Intel Corp.</i> , 87 F.4th 1332 (Fed. Cir. 2023)	70
<i>Welker Bearing Co. v. PHD, Inc.</i> , 550 F.3d 1090 (Fed. Cir. 2008).....	87
<i>WSOU Invs. LLC v. Google LLC</i> , Case Nos. 2022-1066, 2022-1067, 2023 WL 6210607 (Fed. Cir. Sept. 25, 2023)	18
Statutes and Rules	
35 U.S.C. § 101	99
Fed. R. Civ. P. 26(b)(1).....	82



Other Authorities

MPEP § 2157 99

I. INTRODUCTION

The Initial Determination (“ID”) in this Investigation applies an overbroad reading of the Asserted Patents that is sharply at odds with the claims’ plain language and is not commensurate with the patents’ disclosure. Contrary to the actual evidence in this case, the ID largely adopts the overreaching and unsupported theories that Netgear has put forth 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 error that require review and correction by the Commission.

The technology claimed in the asserted ’714 patent was developed in 2002 by a company working on *non*-Wi-Fi technology, and the patent application was sold in bankruptcy for only \$5,000 before Netgear later acquired it. The ’714 patent’s claims and disclosures are directed to a scheme for an asymmetric data network that separates data transmission and receipt into different frequency bands, with transmission allocated to a low-interference band and receipt allocated to a high-interference band. This interference-based allocation scheme purportedly increases network speed and capacity by allowing more bandwidth for downlink communications and by eliminating the need for complex signal filtering at the subscriber unit. Significantly, none of these purported benefits has any bearing on modern Wi-Fi technology. Wi-Fi uses a fundamentally different network design, employing independent 2.4 GHz and 5 GHz/6 GHz networks that each transmit *and* receive data on *a single frequency band*, without regard to network asymmetry or interference levels and without allocating transmission or receipt to one band versus another. The ID

nevertheless improperly stretches the '714 patent's claims to capture essentially any system, including Wi-Fi, that employs multiple independent frequency bands. As a result, if left uncorrected, the ID's faulty constructions and applications of the '714 patent's claims would grant Netgear an undeserved monopoly over the entirety of multi-band communication—a staple technology used by every Wi-Fi router for the past decade.

Beyond its overbroad construction of the '714 patent's transmitting and receiving terms, the ID committed clear errors of fact and law by failing to determine that the claim terms “frequency band expected to experience low [or ‘high’] interference” are indefinite. “Low interference” and “high interference” are terms of degree that require comparison to some baseline—which the '714 patent does not provide. However, rather than finding that the claim containing these terms is invalid, the ID impermissibly rewrote the terms “low interference” and “high interference” to mean “lower~~er~~ interference” and “higher~~er~~ interference”—introducing a concept of “relative” degrees that finds no support in the plain claim language. Similarly, rather than finding the term “expected to experience” is indefinite—because the patent fails to provide any objective standard for determining when such an expectation exists—the ID incorrectly determined that this term refers to certain “objective” characteristics of the claimed frequency bands including physical properties of the bands. However, nowhere in the intrinsic record are expected interference levels equated with any objective set of band characteristics or properties.

The ID likewise clearly erred in brushing aside the significance of the Morikawa prior art reference. Netgear does not dispute that Morikawa discloses every limitation of the '714 patent's asserted claim except the requirement of transmitting and receiving “at the same time.” In fact, not only does Morikawa plainly disclose this requirement when the term's plain and ordinary meaning is applied, but the testimony of Netgear's expert Dr. Wicker confirms that Morikawa also

[REDACTED]

meets this limitation even under the unduly narrow interpretation applied in the ID, which requires the transmission and reception of signals at the claimed base station to occur at the same specific moment in time. Dr. Wicker admitted that the system disclosed in Morikawa can be used to stream data over a long period of time, which entails lengthy transmissions from the base station. *See* 1/23/24 Tr. (Wicker Cross) at 1060:6–25, 1061:10–24. He also admitted that if a user were unable to send a signal to the base station on the uplink at the exact moment data is streaming on the downlink, the user would be unable to stop the stream. *See id.* Such a reading of Morikawa does make any practical sense in a network designed for high speed and capacity. In addition, Dr. Wicker admitted that Morikawa discloses a “point-to-multipoint system,” and that “in a point-to-multipoint system, the base station can receive and transmit at the same time.” 1/23/24 Tr. (Wicker Cross) at 1050:15–1051:5. The ID erred in brushing aside these crucial admissions from Netgear’s expert, which confirm that Morikawa is invalidating prior art.

Notably, the ’714 patent would have expired years ago if not for a highly unusual 2512-day patent term adjustment. JX-0001 (’714 Patent) at Cover. The ID’s overly expansive interpretation of the patent therefore is particularly harmful, because it grants Netgear an unwarranted monopoly on multi-band communications extending many years beyond the ordinary 20-year exclusivity period of the patent in question. This circumstance only heightens the need for the Commission to review and correct the multiple instances of clear error in the ID.

The ID likewise includes multiple clear errors in its claim constructions pertaining to the also-asserted ’698 patent. For example, the ID inexplicably construed the term “received signal strength” to include “channel utilization” and “rate,” even though Netgear’s own expert confirmed that these are fundamentally different metrics that have no defined relationship to one another. The ID also construed the term “default frequency band” as “a first selected frequency band,” even

[REDACTED]

though neither party proposed that construction and that interpretation of the straightforward word “default” does not appear anywhere in the intrinsic or extrinsic record. Compounding its error, the ID then relied on that unsupported construction to find infringement based on the fact that a frequency band happens to be “selected” “first” in the Accused Products—notwithstanding that *no* band is used as a default during that selection process.

Further, the ID’s infringement analysis for both the asserted ’698 patent and the asserted ’179 patent reflect multiple clearly erroneous findings that stem from a fundamentally backward application of the burden of proof in a patent infringement case. Regarding the ’698 patent’s “received signal strength” limitation, for example, the ID finds infringement based on “roaming” code produced by third-party Qualcomm—despite unequivocal and uncontroverted testimony from TP-Link’s witnesses that this code is [REDACTED] in the Accused Products. The ID brushes aside this undisputed testimony on the grounds that TP-Link’s expert supposedly did not “definitively know” the code was [REDACTED]. ID at 117. Meanwhile, the ID credits the opposing testimony of Netgear’s expert, even though he *did not even analyze* the relevant [REDACTED] that would indicate whether the code is present in the products. In this manner, the ID effectively holds TP-Link to a standard of providing “definitive[.]” proof that it does *not* infringe, whereas the ID forgives the actual burden-bearer on infringement—Netgear—for failing to introduce any evidence on this dispositive issue. Regarding the ’179 patent, TP-Link similarly provided extensive, uncontroverted testimony based on the Accused Products’ source code establishing that the accused “[REDACTED]” feature does not perform the functionality alleged by Netgear. Once again, though, the ID disregards this undisputed testimony, and instead credits the opposing testimony of Netgear’s expert, who once again *did not analyze a single line* of the code that defines the accused feature’s actual operation. The ID’s consistent findings in Netgear’s favor

[REDACTED]

on these dispositive infringement issues—where TP-Link provided extensive and uncontroverted testimony and analysis, and Netgear provided *no* relevant testimony in opposition—are clearly erroneous and must be corrected by the Commission.

In addition to these 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. The ALJ improperly denied TP-Link’s motion on futility grounds, depriving TP-Link of its rightful opportunity to pursue this additional defense against Netgear’s overreaching patent assertions. The denial of that motion also merits review and correction.

Ultimately, the ID here threatens to eliminate [REDACTED] of dollars of products from the domestic Wi-Fi router market, depriving U.S. consumers of the high-quality, reasonably priced router products they prefer—all on the basis of multiple clear errors. TP-Link respectfully submits that review and correction of the decisions raised in this petition is warranted in order to prevent the substantial power of the Commission from being used to wreak significant harm through these erroneous findings.

II. BACKGROUND

A. The Parties

1. Complainant Netgear Inc.

The Complainant in this investigation is Netgear Inc. (“Netgear”), a Delaware corporation with its principal place of business at 350 East Plumeria Drive, San Jose, California 95134. Netgear’s primary business is computer networking equipment and solutions.

2. Respondents

The Respondents are TP-Link Technologies Co., Ltd.; TP-Link USA Corporation; TP-Link Corporation Limited; and TP-Link Research America Corp. (collectively, “TP-Link”). TP-Link Technologies Co., Ltd. is a Chinese corporation with its principal place of business at South

[REDACTED]

Building, No. 5 Keyuan Road, Central Zone Science & Technology Park Nanshan, Shenzhen, Guangdong Province, 518057 China. TP-Link USA Corporation is a California corporation with its principal place of business at 10 Mauchly, Irvine, California 92618. TP-Link Corporation Limited f/k/a TP-Link International Limited is a corporation organized and existing under the laws of Hong Kong, with its principal place of business at Room 901, 9/F., New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong. TP-Link Research Institute USA Corp. d/b/a TP-Link Research America Corp. no longer conducts business operations.

Due to a reorganization initiated in 2022 (and recently completed), the accused products imported and sold in the United States are now under the responsibility and management of TP-Link Global Inc., a California corporation with its headquarters in California. These products continue to be sold and marketed by TP-Link USA Corporation.

B. Procedural History

Netgear filed the Complaint in this Investigation on April 3, 2023, alleging that Respondents infringed 101 claims of six patents: U.S. Pat. Nos. 7,936,714 (the “’714 patent”), 10,681,698 (the “’698 patent”), 10,278,179 (the “’179 patent”), 9,468,025 (the “’025 patent”), 10,327,242 (the “’242 patent”), 10,356,681 (the “’681 patent”). The Commission instituted the Investigation on May 3, 2023. The ALJ set the Target Date for September 9, 2024, and set the procedural schedule on May 31, 2023. Order Nos. 4–5.

On December 13, 2023, Netgear moved to terminate with regard to the ’025, ’242, and ’681 patents. That motion was granted on December 14, 2023. Order No. 27. The following claims ultimately were asserted at the Evidentiary Hearing: claim 13 of the ’714 patent, claims 12, 15, 17, and 19 of the ’698 patent, and claim 11 of the ’179 patent (the “Asserted Claims”).

The Evidentiary Hearing was conducted on January 17–23, 2024. On May 9, 2024, the ALJ issued an order extending the Target Date to October 3, 2024 and extending the Initial

[REDACTED]

Determination deadline to June 3, 2024. Order No. 45. The ALJ issued the ID on May 30, 2024. The ID found a violation of Section 337 based on the asserted claims of the '714 and '698 patents, but not based on the asserted claim of the '179 patent (due to a lack of technical domestic industry).

III. STANDARD OF REVIEW

Under 19 C.F.R. §§210.43(b)(1) and (d)(2), the Commission will grant a petition and order review if: (1) a legal conclusion is erroneous or without governing precedent, rule, or law; (2) a finding or conclusion of material fact is clearly erroneous; or (3) the petition raises a policy matter that the Commission deems appropriate to address. A factual finding is “clearly erroneous” when the tribunal, after reviewing all relevant evidence, is left with the definite and firm conviction that a mistake has been committed. *See JYW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1329 (Fed. Cir. 2005); *Miller v. Mercy Hosp., Inc.*, 720 F.2d 356, 361 (4th Cir. 1983).

IV. ISSUES FOR REVIEW

A. '714 Patent

The ID errs in at least three respects in concluding that TP-Link violated Section 337 with regard to claim 13 of the '714 patent.

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

The ID commits clear errors of both fact and law in finding claim 13’s terms “frequency band expected to experience low interference” and “frequency band expected to experience high interference” are not indefinite. As a result, the ID has created the very “zone of uncertainty” around claim 13’s scope that the Supreme Court forbids. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 909–10 (2014) (“[A] patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them”). “Low interference” and “high interference” are terms of degree that require comparison to some baseline.

Although terms of degree are not inherently indefinite, “the patent must provide ‘some standard for measuring that degree’ such that 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)). The ID ignores this legal requirement, and instead effectively re-writes the terms “low interference” and “high interference” to be relative to one another—*i.e.*, to mean “lower interference” and “higher interference.” 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 Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004). Yet, that is precisely what the ID does here, by improperly importing the concept of relative degrees into claim 13. The ALJ also clearly errs in failing to find claim 13’s “expected to experience” language indefinite, instead agreeing with Netgear that this term refers to “objective” characteristics of the claimed frequency bands including physical properties such as bandwidth and number of channels. But there is no support in the intrinsic evidence for this claim interpretation: the ’714 patent’s specification does not provide any guidance regarding what these characteristics are and how they should be balanced or otherwise evaluated.

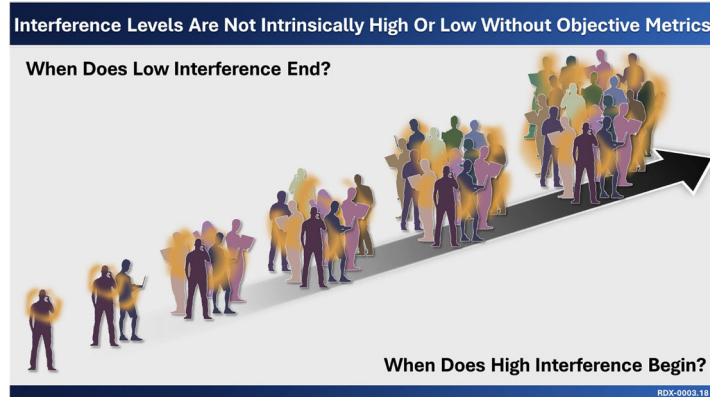
a. The ID errs by rewriting the terms “low interference” and “high interference” to be relative to each other.

The terms “high interference” and “low interference” used in claim 13 are terms of degree. Although Federal Circuit law makes clear that the ’714 patent must provide some standard for measuring the relevant degree (“high” or “low”), such that a POSITA would understand the claim’s scope, *see GE Lighting*, 663 F. App’x at 940, it is undisputed that the ’714 patent provides no such standard. Indeed, the testimony of TP-Link’s technical expert Dr. Almeroth is unrebutted.

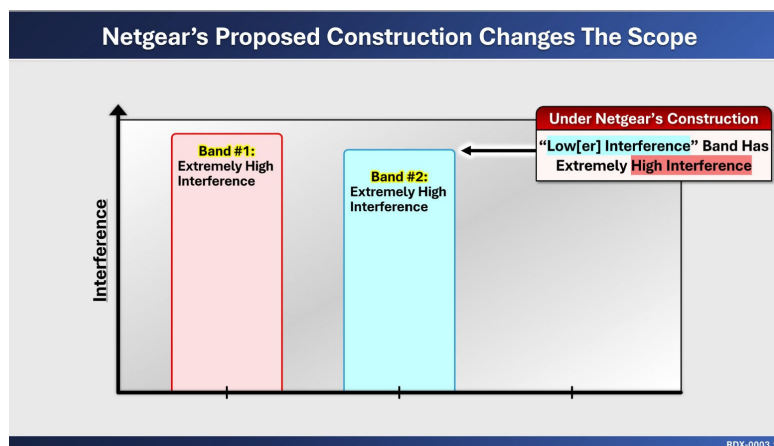
As Dr. Almeroth testified, the ’714 patent’s specification fails to provide any guidance

regarding how a POSITA should determine when a frequency band is experiencing “high” or “low” interference. *See* 1/19/24 Tr. (Almeroth Direct) at 650:20–651:22; RDX-0003.15–16. As the ID itself recognizes, the ’714 patent’s specification discusses interference levels only in terms of relative interference according to a licensing status—*i.e.*, whether use of the frequency band requires an FCC license. *See* ID at 18–19. For example, the specification compares the “relatively noisier band[s], such as the [unlicensed] UNII band,” JX-0001 (’714 Patent) at 5:40–44, with the “relatively interference-free licensed bands,” *id.* at 3:33–40; *see also id.* at 3:64–4:2, 7:3–10, 7:17–22; 1/19/24 Tr. (Almeroth Direct) at 650:25–651:22. But the observation that unlicensed bands tend to be noisier than licensed bands does not help a POSITA determine in practice when a particular band is “low interference” or “high interference.” *See* 1/19/24 Tr. (Almeroth Direct) at 651:23–656:19; RDX-0003.17–19. This is because interference levels are not constant—rather, they are constantly changing based on factors such as the time of day, the physical location, the environment, and what application the device is using. *See* 1/19/24 Tr. (Almeroth Direct) at 655:7–656:19, 661:5–663:2, 666:6–669:3. Dr. Almeroth further explained that there are no “documents or standards that provide definitions as to what constitutes low interference and high interference.” *Id.* at 653:21–654:5. The ’714 patent’s specification could have provided some baseline or guidance regarding where “low interference” ends and “high interference” begins for purposes of the purported invention—but it did not. *See id.* at 654:6–655:6; RDX-0003.18.

Dr. Almeroth used RDX-0003.18 (reproduced below) to illustrate the impossibility of determining what constitutes “high” or “low” interference without some standard. As he noted, interference is affected by the “number of devices that are communicating within a range of each other [A] t some point you transition away from having low interference to not having low interference. Maybe there’s moderate interference.” 1/19/24 Tr. (Almeroth Direct) at 654:6–18.



RDX-0003.18. Dr. Almeroth further explained how applying a relative standard to claim 13’s “high” and “low” requirements—as the ID does—could lead to an incongruous result where the “high interference” requirement is satisfied by a band that has very low interference (as long as the other band has even lower interference), and the “low interference” requirement is satisfied by a band that has very high interference (as long as the other band has even higher interference), as long as the bands are an octave part.¹ See 1/19/24 Tr. (Almeroth Direct) at 650:1–16; RDX-0003.14.



RDX-0003.14. As such, the ID’s rewriting of the terms “high” and “low” to mean “relatively higher” and “relatively lower” has a fundamentally different meaning and scope than the plain

¹ Despite the ID’s assertion to the contrary, TP-Link has never argued that the octave requirement was not required to meet the “interference” limitations of claim 13. See ID at 20.

claim language. *See* 1/19/24 Tr. (Almeroth Direct) at 650:1–651:22.²

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 Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004); *see also Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1349 (Fed. Cir. 2002) (“It is not our function to rewrite [indefinite] claims to preserve their validity.”); *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999) (“Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee.”). Yet that is exactly what the ID has done.

To justify rewriting claim 13 to cover relative interference levels, the ID asserts—without providing any analysis—that “[b]y reciting two bands, the language supports that low and high interference are relative to each other.” ID at 17. Yet, nothing in the claim language suggests that the two claimed expected interference levels are relative to each other. Rather, the claim language clearly states that one is “high” in some absolute regard, while the other is “low.”

The ID also incorrectly states that construing the terms as relative to each other “is supported by the specification, which repeatedly discloses and highlights the contrast between bands expected to receive low interference (or noise) and bands expected to receive high interference.” ID at 18. But the specification’s use of terms like “relatively” when comparing licensed frequency bands and unlicensed frequency bands does not provide any basis to rewrite

² Dr. Almeroth also explained that the term “interference” itself is subject to different possible interpretations by a POSITA. *See* 1/19/24 Tr. (Almeroth Direct) at 651:23–652:20; RDX-0003.17. For example, “interference” can encompass only competing signals, or can also include non-standard interference. *See id.* The ’714 patent’s specification does not provide any guidance regarding which definition applies. *See id.* While the ID asserts this argument is not “cogent,” the ID ignores the undisputed record evidence that the primary source of interference is other devices using the same frequency band. *See* JX-0001 (’714 Patent) at 3:5–8. Yet, the ID inexplicably **excludes** this primary source of interference from the factors relevant to determining expected interference levels.

claim 13's use of the terms of degree "high" and "low." Rather, it merely confirms that the patentee knew how to use the term "relative[]" when it wanted to, and that it elected *not* to include any concept of relativity in the actual claim language. See *Chef Am.*, 358 F.3d at 1374 ("Thus, in accord with our settled practice we construe the claim as written, not as the patentees wish they had written it"). The ID cites *Sonix Technology Co. Ltd v. Publications, Int'l, Ltd.* as supposedly being relevant because the Federal Circuit found a specification provided "guidance" and "specific examples," which supported a finding of definiteness. 844 F.3d 1370, 1379 (Fed. Cir. 2017) (cited in ID at 21). Yet, *Sonix* dealt with a term of degree, and the Federal Circuit found in that case that the specification provided sufficient guidance for a POSITA to understand the claim's scope. See *id.* As noted above, the '714 patent's specification does not provide any such guidance for understanding "high" and "low" interference, which the ID does not dispute. Moreover, the ID in this Investigation concludes that "high interference" and "low interference" are not terms of degree, but are relative terms. Unlike what the ID has done here, the court in *Sonix* did not use the specification to improperly transform terms of degree into relative terms.

The ID further asserts that "[t]he prosecution history also supports that the low/high frequency claim terms are relative." ID at 21. Claim 13, which was prosecuted as pending claim 53, originally recited: "transmitting, at a base station, data on a first frequency in a low interference frequency band; and receiving, at said base station, data on a second frequency in a high interference frequency band." JX-0004 ('714 Patent FH) at 261. The Examiner found this language indefinite because "in any frequency band interference and noise are subjects [sic] to constant change and cannot identify the frequency band, as at some point 'low interference band' can have higher interference than 'high interference band.'" *Id.* at 278–79. In response, the applicant amended claim 53 by adding the "expected to experience" language recited in current

claim 13, to account for the possibility of interference levels that change over time. *See id.* at 298. As this context makes clear, the Examiner did not reject the claim because “high” and “low” are terms of degree, and the applicant’s amendment did not change the claim’s scope from absolute interference levels to relative ones. Indeed, the ID’s assertion that “[t]he prosecution history shows that the applicant resolved an indefiniteness issue by adding the high/low interference terms to the claims, supporting that those terms are not indefinite,” is flatly incorrect. ID at 24. The high/low interference terms were in the claim pre-amendment; they were not added by amendment. What was added by the amendment was the “expected to interference” language, which presents a separate issue (discussed below). For these same reasons, the ID’s reliance on cases such as *Nature Simulation Sys. Inc. v. Autodesk, Inc.* 50 F.4th 1358 (Fed. Cir. 2022), is inapposite.³

Federal Circuit precedent requires claims to be construed consistent with their plain and ordinary meaning—even if that renders them indefinite. *See Allen Eng’g*, 299 F.3d at 1349. Here, the plain language of claim 13 requires one “frequency band expected to experience *low* interference” and one “frequency band expected to experience *high* interference”—and the lack of any guidance for determining when a frequency band has “low” or “high” interference renders the claim indefinite. In finding otherwise, the ID has committed clear errors of fact and law, and it should be reviewed on this issue.

b. The ID errs in finding “expected” interference levels are based on objective characteristics or properties of the claimed frequency bands.

³ In *Nature Simulations*, the Federal Circuit found that the prosecution history supported a finding of definiteness. *See* 50 F.4th at 1366–1368. But the decision in *Nature Simulations* depended on the specific facts of that case. Here, the prosecution history does not support the ID’s interpretation. Further, as explained in footnote 4 below, the fact that the ’714 patent’s applicant overcame one indefiniteness objection during prosecution is not dispositive of the present issues, and numerous cases have found indefiniteness notwithstanding the fact that an indefiniteness objection was overcome during prosecution.

[REDACTED]

The ID also clearly errs, both legally and factually, in failing to find claim 13’s “expected to experience” language indefinite, because the intrinsic record does not provide any guidance regarding how the claimed “expect[at]ions” regarding interference levels are to be determined. Apparently recognizing this problem, the ID asserts that the ’714 patent and its prosecution history equate the expected interference level of a particular frequency band with “objective” characteristics or properties of that band, including “physical characteristics” such as bandwidth, frequency level, and the number of channels within the band. *See* ID at 25, 29–30. In reality, however, the intrinsic record provides no basis for that interpretation of “expected” interference levels—the ID’s finding on this point is merely based on the testimony of Netgear’s experts, neither of whom cites anything in the intrinsic record that supports his opinion. On the contrary, when the specification discusses interference levels, it consistently focuses on whether a frequency band requires an FCC license for use. Hence, even assuming for the sake of argument that the ID is correct that determining “expected” interference levels requires balancing various factors including “physical characteristics,” the patent does not provide any guidance regarding what these characteristics are or how they should be balanced or evaluated—nor did Netgear’s experts provide any testimony on this issue. Indeed, Netgear’s experts could not even agree on what properties should be considered in the analysis. As a result, claim 13, when “read in light of the specification delineating the patent, and the prosecution history, ... fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus*, 572 U.S. at 901.

i. The ID’s finding regarding objective factors is inconsistent with the intrinsic record.

The ID commits clear error by equating expected interference levels with objective characteristics or properties of a frequency band. *See* ID at 25, 29–30. Although the ID conspicuously avoids enumerating exactly what those alleged characteristics or properties are,

certain of them can be gleaned from a reading of the ID. For example, the ID points to whether or not a frequency band requires a license for use. *See id.* at 30. The ID also favorably cites testimony from Dr. Wicker and Dr. Haas pointing to physical band characteristics such as bandwidth, frequency level, and the number of channels. *See id.* The ID’s reliance on these factors—and its finding that they define an expectation of interference—has no support in the intrinsic record, which the Supreme Court and the Federal Circuit have made clear should be the focus of the analysis when determining whether a claim term is definite. *See Nautilus*, 572 U.S. at 901; *Grace Instrument Indus., LLC v. Chandler Instruments Co., LLC*, 57 F.4th 1001, 1008 (Fed. Cir. 2023).

Under the plain and ordinary meaning of the term, an “expectation” is not an objective characteristic, but rather is a subjective conclusion that depends on who or what possesses the expectation. The words “expectation,” “expected,” and “expect” do not appear in the ’714 patent’s specification, and the specification does not provide any guidance regarding whose perspective should be used and what factors should be considered when forming an expectation of interference. *See* 1/19/24 Tr. (Almeroth Direct) at 658:20–659:13. While there are numerous factors that a person might assess to form an expectation regarding interference, those factors are simply inputs to the expectation-forming process—they are not themselves an expectation. Rather, as Dr. Almeroth explained, “[t]here has to be some set of information that goes into the determination of an expectation. And then that information needs to get synthesized in a way that an expectation is generated out of that.” *Id.* at 658:25–659:4. This process is entirely subjective, because different observers may have different interference expectations based on what factors they take into account and how they weigh those factors. *See id.* at 659:14–663:18.

Further, it is uncontested in the evidentiary record that interference levels within a particular band will constantly change, based on multiple factors such as the geographic location

[REDACTED]

and the time of day. For example, Dr. Almeroth testified about studies, some of which he co-authored, that show the inherent variability of interference levels, even within the same frequency band. *See* 1/19/24 Tr. (Almeroth Direct) at 663:19–669:3. And Dr. Wicker admitted on cross-examination that interference levels can vary based on the time of day and geographic location. 1/17/24 Tr. (Wicker Cross) at 224:21–225:2. It also is undisputed that the FCC’s licensing status of a frequency band, which the ID points to, *see* ID at 30, can change over time. For instance, the FCC changed its licensing regulations shortly after the ’714 patent was filed and before the patent issued. *See* 1/23/24 Tr. (Haas Cross) at 1102:9–1103:19. Nevertheless, licensing status and degree of use are the only topics the ’714 patent’s specification discusses related to interference levels. JX-0001 (’714 Patent) at 3:30–40, 3:64–4:2, 5:40–44, 7:3–10, 7:12–22. The ID errs in finding that expectations of interference are constant, when in fact it is undisputed that interference levels are constantly subject to change.⁴ *See* ID at 30–31.

Confronted with the undeniable fact that a POSITA would understand that interference levels on a particular frequency band are constantly changing, such that there cannot be any consistent expected interference level for any band, the ID rewrites claim 13 to effectively eliminate the requirement of an interference expectation—instead finding that an expected interference level is an objective characteristic of a frequency band based on the balancing of some set of factors. *See* ID at 25, 29–30. As noted above, these factors apparently include—but are not necessarily limited to—non-physical characteristics such as license status, as well as physical

⁴ The ID improperly criticizes TP-Link for pointing out that FCC license requirements can change over time. *See* ID at 30–31. TP-Link’s point on this issue was simply that by including FCC licensure as one of multiple of factors to be balanced in determining interference levels—which is Netgear’s position, not TP-Link’s—the intrinsic record provides no guidance as to what the complete set of factors is and how they should be balanced, rendering claim 13 indefinite. TP-Link did not change its position.

characteristics such as bandwidth, frequency level, and the number of channels within the band. But the '714 patent does not disclose how to balance or evaluate these or any other characteristics to determine interference levels. Instead, the patent's specification discusses interference levels solely in the context of "licensed bands" and "unlicensed bands." See 1/19/24 Tr. (Almeroth Direct) at 650:25–651:22; '714 Patent at 3:30–40, 3:64–4:2, 5:40–44, 7:3–10, 7:12–22. To determine interference levels, the specification compares the "relatively noisier band[s], such as the [unlicensed] UNII band," with the "relatively interference-free licensed bands." JX-0001 ('714 Patent) at 3:33–40, 5:40–44; see also *id.* at 3:64–4:2, 7:3–10, 7:17–22; 1/19/24 Tr. (Almeroth Direct) at 650:25–651:22. Thus, according to the specification, the licensed band is the "frequency band expected to experience high interference," and the unlicensed band is "the frequency band expected to experience low interference." Yet, while the '714 patent's preferred embodiment uses one licensed band and one unlicensed band, that is not the only disclosed embodiment. JX-0001 ('714 Patent) at 6:59–62. The '714 patent teaches that the "two bands may both be licensed bands or both may be unlicensed bands." *Id.* Critically, for these other embodiments, ***the specification is silent as to how to form an expectation of interference.***

In reaching its finding, the ID purports to rely on the prosecution history, asserting that "the Examiner rejected the claim as reciting subjective frequency characteristics and the applicant amended the claims ***to recite an objective characteristic of relative frequency.***" ID at 25. But this statement misrepresents the prosecution history, which says nothing about objective characteristics. As discussed above, claim 13 originally recited: "transmitting, at a base station, data on a first frequency in a low interference frequency band; and receiving, at said base station, data on a second frequency in a high interference frequency band." JX-0004 ('714 Patent FH) at 261. Again, the Examiner found that language indefinite because "in any frequency band

[REDACTED]

interference and noise are subjects [sic] to constant change and cannot identify the frequency band, as at some point ‘low interference band’ can have higher interference than ‘high interference band.’” *Id.* at 278–79. In response, the applicant amended the claim to add the current “expected to experience” language, to account for the possibility of interference levels that change over time. *See id.* at 298. Contrary to the ID’s statement, the applicant’s amendment said nothing about “objective characteristic[s].” ID at 25. Indeed, the following is the sum total of what the Applicant said regarding this amendment:

Applicant acknowledges that interference and/or noise levels may change within a frequency band over time. Applicant asserts that the claims, as currently pending, are sufficiently clear in view of the specification. Nevertheless, in a good faith attempt to expedite prosecution, Applicant has amended the claims to additionally recite ‘expected’ high/low interference/noise frequency bands, where appropriate. Support for these amendments is found in the specification at, e.g., paragraphs [0014] and [0029]–[0031].

JX-0004 (’714 File History) at 303. Paragraphs [0014] and [0029]–[0031] of the originally filed application, which correspond to lines 3:56–4:4 and 6:46–7:48 of the ’714 patent, solely address relative interference levels between a licensed band and an unlicensed band, not any other characteristics. *See ID* at 22–23.

Contrary to the ID’s finding, the most logical reading of the amendment is that constant interference levels were not required to practice claim 13, as long as an expectation of the required interference levels had been formed and was relied upon in practicing the claim steps. The applicant’s citation to portions of the ’714 specification concerning license status does not change this teaching, because, as Dr. Almeroth explained, while whether a band is licensed is a factor that will be an input to forming an expectation of interference, it does not itself equate to an expectation

of interference. *See* 1/19/24 Tr. (Almeroth Direct) at 673:6–674:5.⁵

Further, even if the prosecution history supported the ID’s “objective characteristic” construction, it only supports a single scenario: when one frequency band is licensed and the other is unlicensed. *See* JX-0001 (’714 Patent) at 3:30–40, 3:64–4:2, 5:40–44, 7:3–10, 7:12–22. Importantly, there is no support in the ’714 patent’s specification or prosecution history for assessing relative interference levels for two unlicensed bands, nor is there any support for the various physical characteristics that the ID endorses, such as bandwidth, frequency level, and number of channels—and the ID does not cite any.

The ID also relies on conclusory, inconsistent testimony from Netgear’s experts Dr. Wicker and Dr. Haas. *See* ID at 30. According to Dr. Wicker, the factors to be assessed to determine expected interference levels include the bandwidth and the number of non-overlapping channels, but not FCC licensure. *See* 1/17/24 Tr. (Wicker Direct) at 116:24–117:22; 1/17/24 Tr. (Wicker Cross) at 225:18–226:10. Dr. Haas agrees with Dr. Wicker regarding available bandwidth, and testified that FCC licensing status is also a relevant consideration. *See* 1/23/24 Tr. (Haas Direct) at 1083:13–1084:22. However, neither Dr. Wicker nor Dr. Haas cited anything in the ’714 patent’s

⁵ The ID also appears to have misunderstood TP-Link’s point about the indefiniteness standard that the Examiner applied during the original prosecution. As TP-Link explained, “[a]ll the prosecution history ultimately reflects is that the Patent Office had misgivings about the definiteness of the claim’s language, but was hamstrung by liberal claim construction and indefiniteness standards that led the Examiner to withdraw the rejection. The ITC is bound by different legal standards than those applied during patent prosecution.” R. Post-HB at 63. In this manner, TP-Link correctly pointed out that courts and the ITC routinely find claims to be indefinite even when the claims previously overcame indefiniteness arguments during prosecution—including in cases involving terms of degree, such as “high” and “low.” *See, e.g., WSOU Invs. LLC v. Google LLC*, Case Nos. 2022-1066, 2022-1067, 2023 WL 6210607, at *7–8 (Fed. Cir. Sept. 25, 2023); *Certain Automated Storage and Retrieval Systems, Robots, and Components Thereof*, Inv. No. 337-TA- 1228, Comm’n Op. at 13 (U.S.I.T.C. Mar. 17, 2022).

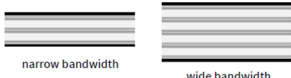
specification to support their use of factors such as bandwidth, frequency level, and the number of channels. Only Dr. Haas discussed the specification as it relates to this issue, citing column 5, lines 31–44 of the '714 patent (quoted on the righthand side of his demonstrative on this issue) and used that passage to support his opinion that bandwidth is an objective characteristic relevant to determining expected interference levels. *See* 1/23/24 Tr. (Haas Direct) at 1084:24–1085:5.

NETGEAR

The Specification

Determination of which band is expected to experience low (vs. high) interference is based on objective characteristics of the bands

- Whether one of the two bands is licensed
 - But invention applies where both bands are licensed or unlicensed: “The two bands may both be licensed bands or both may be unlicensed bands.” JX-0001 ('714 Patent) 6:59-60
- Regulated uses for the band
 - More stringent requirements means expected to experience low interference
- Available spectrum bandwidth
 - Absent licensing/regulatory constraints, more available bandwidth allows for low interference



When employing two separate bands, filtering requirements for one band may be greater than the filtering requirements for the other band. This may be due to one frequency of operation being widely used, for similar and/or different purposes, or an adjacent frequency band that has tight regulatory specifications. For example, some bands, such as WCS, have an adjacent band, such as Digital Audio Radio Satellite (DARS), that have more stringent rules. In this example due to WCS being a terrestrial band and DARS being a satellite band. By using a relatively noisier band, such as the UNII band, for upstream transmissions, a preferred embodiment of the present invention enables an operator to use the more expensive and complicated filter in the base station, and the less expensive, smaller filters in subscriber stations. This is

JX-0001 ('714 Patent), 5:31-44

CDX-0010.14

CDX-0010.14. Yet, the passage in question—column 5, lines 31–44—says nothing about bandwidth and solely discuss licensing status and regulatory specifications for certain bands.

Compounding its error on this topic, the ID inexplicably brushes aside inconsistent testimony from Dr. Haas and Dr. Wicker regarding what characteristics are relevant to interference expectations. *See* ID at 30. Dr. Wicker testified that the 5 GHz band is expected to experience low interference and the 2.4 GHz band is expected to experience high interference due to the number of non-overlapping channels. *See* 1/17/24 Tr. (Wicker Direct) at 116:24–117:22. On cross-examination, he also testified that his expectation of interference would not change if the 2.4 GHz band were to become available for license only use per FCC regulations. 1/17/24 Tr. (Wicker Cross) at 225:11–25. Thus, according to Dr. Wicker, FCC licensing status is not relevant to interference expectations, yet even the '714 patent explains that when comparing a licensed band

[REDACTED]

with an unlicensed, the licensed band is always the low interference band. *See* JX-0001 ('714 Patent) at 3:30–40, 3:64–4:2, 5:40–44, 7:3–10, 7:12–22. Dr. Wicker's testimony is thus directly at odds with the intrinsic record. It is also at odds with Dr. Haas, who says licensing status is a primary consideration when determining an expectation of interference. *See* 1/23/24 Tr. (Haas Direct) at 1083:13–1084:22. Thus, Dr. Wicker and Dr. Haas cannot even agree on the factors to be assessed—a fact the ID acknowledges but simply dismisses. ID at 30. If Netgear's own experts cannot even agree on the relevant factors, claim 13 cannot credibly be found definite.

The ID also relies on several high-level marketing documents from TP-Link and a number of third-party documents concerning two specific frequency bands—2.4 GHz and 5 GHz—that are dated years⁶ after the '714 patent's filing date. *See* ID at 29 (citing CX-807.2 (TP-Link Webpage); CX0387.3 (Motorola Technical Brief); CX-0386.3 (Understanding Wi-Fi Frequencies)). But the inquiry for indefiniteness is whether the '714 patent *itself* provides sufficient guidance regarding the claims' scope of the claims—not information in marketing documents dated more than two decades after the patent's filing date, which have no connection to the patent. *See IQASR LLC v. Wendt Corp.*, 825 F. App'x at 903–904.

Even more importantly, whether a POSITA would understand that two particular bands—2.4 GHz and 5 GHz—satisfy claim 13 does not tell the POSITA the *boundaries* of the claim's scope, any more than knowing Washington, D.C., and Chicago are in the United States defines the outer borders of the country. The purpose of the definiteness requirement is to clearly delimit the

⁶ Non-contemporaneous publications generally have little, if any, relevance for claim construction. *See, e.g., Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003) (refusing to consider dictionary and treatise evidence regarding ordinary meaning because the sources were not contemporaneous); *IQASR LLC v. Wendt Corp.*, 825 F. App'x 900, 904 (Fed. Cir. 2020) (“But [this evidence] took place after the issuance of the patent, limiting their value in establishing the meaning of the term at the time of invention, some five years earlier”).

[REDACTED]

boundaries of the exclusionary right held by a patentee, and cherry-picking specific frequency bands that purportedly satisfy the claim does not delimit those boundaries. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 730–31 (2002) (“A patent holder should know what he owns, and the public should know what he does not.”). Although the ID asserts that “[e]very expert, except Dr. Almeroth, was able to apply the claim language to identify the frequency band ‘expected to experience high interference’ and the ‘frequency band expected to experience,’” ID at 27, that statement improperly conflates Netgear’s infringement analysis with indefiniteness. While the ID points to invalidity opinions offered by TP-Link’s experts Dr. Ding and Dr. Bims regarding invalidity based on the Morikawa reference, *see id.* at 29, Dr. Ding and Dr. Bims relied on Morikawa’s disclosure of a licensed band for downlink and an unlicensed band for uplink, which is the main embodiment of the ’714 patent, and also applied Netgear’s understanding of the claims for purposes of infringement. *See* 1/22/24 Tr. (Bims Direct) at 928:15–929:4; RX-0158 (Ding Decl.) at 123–129; 1/19/24 Tr. (Almeroth Direct) at 680:8–16. Moreover, neither Dr. Ding nor Dr. Bims opined that the “expected to experience” terms are definite, nor did Dr. Wicker.⁷ Only two experts opined on indefiniteness, Dr. Almeroth and Dr. Haas. The ID’s suggestion that four different experts opined that the “expected to experience” terms are definite is incorrect.

The ID further asserts that “TP-Link has not identified a credible instance in which, given

⁷ The ID also asserts that Dr. Bims agreed that it is “well-known within the art” that certain frequency bands are expected to experience low and high interference “because of [their] physical characteristics.” ID at 30. Dr. Bims’s actual testimony, when read in full context, was that certain physical properties of a particular frequency band—specifically the “submillimeter wave” band disclosed in Morikawa, which is not used by TP-Link and therefore not accused of infringement—can aid in “reduc[ing] the interference between different links” using the same frequency. 1/22/24 Tr. (Bims Direct) at 928:9-929:4.1. This testimony concerning a particular frequency band does not bear on the boundaries of claim 13, for the same reasons discussed above.

[REDACTED]

two frequency bands, one of ordinary skill was unable to determine which band was ‘expected to experience high interference’ and which band was ‘expected to experience low interference.’” ID at 28. But again, that is not the proper legal inquiry: the issue for indefiniteness is claim boundaries, not whether a particular pair of frequency bands meet the claim. Moreover, it was not TP-Link’s burden to manufacture extrinsic evidence to prove that claim 13 is indefinite. TP-Link’s burden was to show that the intrinsic record provides no guidance regarding how to determine expected interference levels—and TP-Link has met that burden.

ii. The ’714 patent provides no guidance regarding how to evaluate the ID’s objective characteristics when determining interference expectations.

Even assuming the ID is correct that relative expected interference levels between two frequency bands are to be determined based on a balancing and comparing multiple objective factors—including physical characteristics such as bandwidth, frequency level, and number of channels—the ’714 patent does not provide any guidance regarding how to the balance or evaluate such factors. This fact is beyond dispute: the ID cites nothing from the intrinsic record on this point, nor did Dr. Wicker or Dr. Haas provide any such guidance in their testimony. Dr. Wicker and Dr. Haas only testified about what factors they believed to be relevant—and again, they could not even agree on those—without explaining how those factors are to be balanced.

Again, based on the ID’s (incorrect) findings, relevant factors include whether the band requires a license for use, the bandwidth, the frequency level, and the number of channels. Beyond those four factors, the ’714 patent also discusses filtering requirements due, for example, to adjacent bands, *see* JX-0001 (’714 Patent) at 5:40–49, a factor that is identified in Dr. Haas’s demonstrative CDX–0010.14. Accordingly, there are at least five factors in play, but there is no guidance whatsoever in the intrinsic record that explains how the numerous permutations of those factors should be balanced and evaluated to determine relative interference levels between two

[REDACTED]

bands. Indeed, there is nothing in the entire evidentiary record that provides any such explanation, and the ID does not cite such evidence.

Thus, under the ID’s own reasoning, claim 13 leaves a POSITA with numerous potential metrics to consider when assessing expected interference levels, but no guidance whatsoever as to *which* metrics should be evaluated, and in *what way*. This lack of objective guidance renders claim 13 indefinite. *See Media Rts. Techs., Inc. v. Cap. One Fin. Corp.*, 800 F.3d 1366, 1371 (Fed. Cir. 2015) (“[A] claim is indefinite if its language ‘might mean several different things and no informed and confident choice is available among the contending definitions.’”) (quoting *Nautilus*, 572 U.S. at 911 n.8).

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

The ID clearly errs 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. The ’714 patent addresses a specific problem in asymmetric data networks—namely, networks where there is more data on the downlink than the uplink. *See* 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. *Id.* at 4:7–12. The patent explains that because a licensed frequency band has fewer users than an unlicensed band, assigning the licensed band to the downlink and the unlicensed band to the uplink increases network capacity, because the downlink will have the better link. *Id.* at 3:5–11, 3:33–40. The ’714 patent also notes that having closely spaced frequency bands for the uplink and downlink results in interference between them, which requires the use of complex filters. *Id.* at 5:15–23. The patent’s purported solution to that problem

is to separate the downlink and uplink bands by a factor of at least two. *Id.* at 4:18–25.

Notwithstanding these clear teachings, the ALJ incorrectly construed claim 13 to cover a base station that services two or more separate networks operating on two or multiple different frequency bands, where each network uses the *same* frequency band for the uplink and downlink. These dual- and multi-band network configurations are not disclosed in or contemplated by the '714 patent's specification. As one example, the ALJ's erroneous construction has allowed Netgear to read claim 13 on two separate networks—a 5 GHz network and a 2.4 GHz network—where each network's uplink and downlink occur on the *same* frequency band. This reading of claim 13 bears no resemblance to the '714 patent's disclosure, because the base station in a dual-band network always communicates 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).

a. The problems addressed by the '714 patent.

The '714 patent purports to address a problem present in some data networks where “Internet or other network traffic is asymmetric, that is to say, there is more traffic coming from the network to subscribers than from subscribers to the network.” JX-0001 ('714 Patent) at 4:5–7; *see also* 1/22/24 Tr. (Bims Direct) at 782:5–17. To increase capacity, the patent proposes a network configuration where the more advantageous frequency band is assigned to the more frequently used downlink from the base station to subscribers (to increase data capacity on that link), while a less advantageous frequency band is assigned to the less frequently used uplink from subscribers to the base station (because they do not send as much data). The patent implements

[REDACTED]

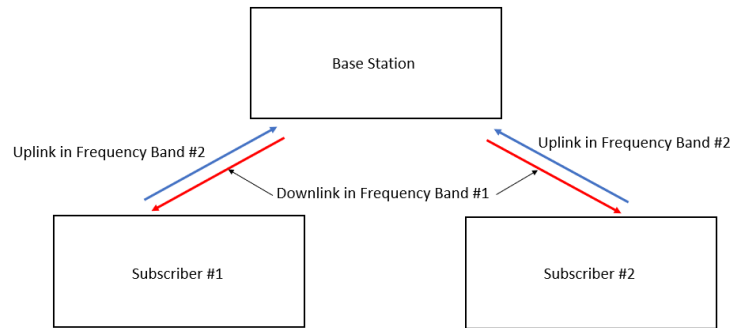
this system by using a “less noisy licensed band” to transmit data downstream from the base station to the subscriber terminals and a “noisier unlicensed band” to transmit data upstream from the subscriber terminals to the base station. *See* JX-0001 (’714 Patent) at 4:7–12; 1/22/24 Tr. (Bims Direct) at 782:18–23. The patent states the present invention increases the efficiency and capacity of a wireless data communication system by allowing use of the full bandwidth available.” JX-0001 (’714 Patent) at 4:19–21; *see also* 1/22/24 Tr. (Bims Direct) at 785:20–24.

A second problem recognized by the ’714 patent is that using a single frequency band for the uplink and downlink entails using frequencies for transmitting and receiving that are “relatively closely spaced.” *Id.* at 1:35–37. This close spacing causes interference, which requires the “extensive use of filters resulting in increased size and cost for data communication systems, particularly for subscriber stations.” *Id.* at 1:37–40, 2:11–19. Accordingly, in addition to using a licensed band for the downlink and an unlicensed band for the uplink, the ’714 patent separates those bands by at least one octave, *i.e.*, a factor of at least two. *See id.* at 3:30–33, 4:17–31, 4:55–58, 5:24–27, 6:46–59. This separation of upstream and downstream communications into frequency bands spaced by at least an octave “prevents interference between transmit and receive signals without requiring exotic filters ... [which] enables the size [and cost] of a data communications device to be reduced.” *Id.* at 5:45–49, 5:15–30.

Consistent with Figure 1 of the ’714 patent, the ’714 patent’s solution can be represented as follows, where Frequency #1 is separated from Frequency #2 by at least a factor of two:⁸

⁸ Frequency #1 can be more than twice Frequency #2, or vice versa.

Solution of the '714 Patent



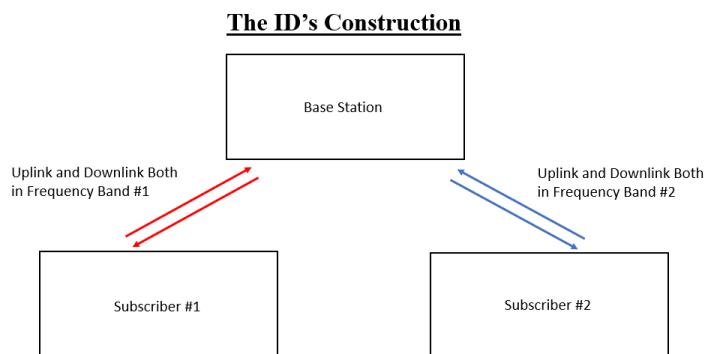
As shown above, the base station uses *two different frequency bands* for transmitting and receiving. If the base station used the same band for both—for example, if it used Frequency #2 for both uplink and downlink—the system would not practice claim 13 because, as discussed below, claim 13 expressly requires different frequency bands for the uplink and downlink.

b. The ALJ erred in construing claim 13 as not requiring separate frequency bands for transmitting and receiving.

Given the '714 patent's teaching of a base station that uses one frequency band for the downlink and a different frequency band for the uplink, TP-Link proposed during claim construction that claim 13's terms "*receiving*, at a base station, data on a first frequency *in a frequency band expected to experience low interference*" and "*transmitting*, at said base station, data on a second frequency *in a frequency band expected to experience high interference*" should be construed to require separate bands for transmitting and receiving between the base station and subscriber devices. EDIS Doc. ID 803928 at 4–8. In the Claim Construction Order, however, the ALJ denied that proposal, finding that claim 13's plain and ordinary meaning "do[es] not require exclusive bands for receiving and transmitting." EDIS Doc ID 810476, Order No. 33 at 15. The ALJ stated that while "the claims unambiguously require separate bands for receiving and transmitting ... [t]he claims do not require, and the specification supports that the claims do not require, exclusive use of those separate bands for receiving or transmitting." *Id.* at 12. TP-Link

submits that this finding misrepresents TP-Link’s proposed construction by introducing a concept of “exclusivity” that was not present in TP-Link’s proposal.

Rather than the “exclusive use” requirement that the ALJ read into TP-Link’s proposed construction, TP-Link’s proposal was simply meant to capture the concept at the heart of the ’714 patent—namely, the use of separate frequency bands for the uplink and downlink to solve the asymmetry and interference problems identified by the patent. The ALJ’s conclusion that claim 13 does not require separate bands for receiving and transmitting allows the claim to be read on a base station that independently uses *the same uplink and downlink frequency* (e.g., Frequency #1) to communicate with Subscriber #1 and *the same uplink and downlink frequency* (e.g., Frequency #2) to communicate with Subscriber #2:



In other words, the ALJ’s interpretation allows the claimed transmitting step to be met by the downlink communication between the base station and *one subscriber* and the uplink communication between the base station and *another subscriber* in two separate networks—which, as discussed below, is Netgear’s infringement read in this case. However, that configuration fails to address either of the problems that the ’714 patent purports to solve. The problem of asymmetrical communication between the base station and each subscriber is not addressed, because the same frequency band is used for the uplink and the downlink with a given subscriber; and the interference problem also is not addressed, because using the same band for the uplink and the downlink means the uplink and downlink will interfere with each other,

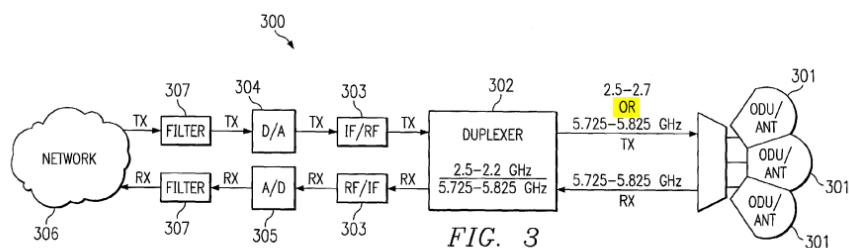
absent complex filtering. The ALJ’s construction therefore fails to align with the intrinsic record. *See Sequoia Tech., LLC v. Dell, Inc.*, 66 F.4th 1317, 1326 (Fed. Cir. 2023) (“We have explained that a patent’s express purpose of the invention ‘informs the proper construction of claim terms.’”) (quoting *Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020)).

The correct construction in view of the intrinsic record requires that when the base station communicates with subscriber devices on the network—whether a single or multiple subscriber unit—the base station must use *separate* bands for the uplink and downlink. Unlike the ALJ’s interpretation, this configuration is consistent with both the claim language *and* the specification. The asymmetry problem at the heart of the ’714 patent is addressed, because the base station uses different frequency bands for the uplink and downlink. The interference problem is addressed for the same reason—and because the frequency bands are separated by at least an octave. Permitting the base station to use a single frequency for the uplink and downlink addresses neither of those problems.

The ’714 patent’s specification further confirms that TP-Link’s construction is correct by repeatedly referring to “the present invention” as using separate bands for transmitting and receiving between the base station and subscriber devices. The first sentence of the Summary of the Invention states: “*The present invention* is directed to systems and methods for providing wireless data transmission spectrum allocation by *utilizing separate bands for upstream and downstream* wireless data communication.” JX-0001 (’714 Patent) at 3:30–33. This description of “the present invention” is repeated throughout the specification. *See id.* at 4:18–22, 4:55–57 (“Whereas *the present invention uses separate bands* of operation to carry out upstream and downstream data transmission”), 5:24–26 (“In accordance with *the present invention*, transmit and receive signals occupy *different parts or bands* of the EM spectrum ...”), 6:46–49. “When a patentee ‘describes the features of the “present invention” as a whole,’ he alerts the reader that

‘this description limits the scope of the invention.’” *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1025 (Fed. Cir. 2015); *see also, e.g., Regents of Univ. of Minnesota v. AGA Med. Corp.*, 717 F.3d 929, 936 (Fed. Cir. 2013) (holding where “the present invention” was characterized as comprising two separate disks, the claims were so limited); *GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1371 (Fed. Cir. 2016) (finding statement that “the invention provides a two-way paging system which operates independently from a telephone system” limited the claim, because “this is a summation sentence which describes ‘the invention’ as a whole”).

Tellingly, the claim construction order does not cite anything from the ’714 patent’s specification supporting a construction that would allow the base station of claim 13 to communicate with a subscriber by transmitting and receiving on the same frequency band. Although the claim construction order cites Figures 2 and 3 as supporting the ID’s construction, Figures 2 and 3 simply disclose alternative frequency band configurations, where the downlink from the base station is 2.4–2.7 GHz and the uplink to the base station is 5.75–5.85 GHz or the uplink and the downlink are both 5.75–5.85 GHz.



JX-0001 (’714 Patent) at Fig. 3 (highlighting added). These alternative configurations do not contradict TP-Link’s proposed construction, because the base station never uses both the 2.4–2.7 GHz and the 5.75–5.85 GHz bands for the downlink at the same time—rather, it uses only one *or* the other. When 2.4–2.7 GHz is used for the downlink, claim 13 is practiced because the uplink is 5.75–5.85 GHz. But claim 13 is not practiced when 5.75–5.85 GHz is used for both the uplink

[REDACTED]

and the downlink. *See TIP Systems, LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1373 (Fed. Cir. 2008) (“Our precedent is replete with examples of subject matter that is included in the specification, but is not claimed.”). Indeed, ’714 patent inventor Randy Karr testified at his deposition that using the same 5.8 GHz band to both receive and transmit “would not fall into the gist of the invention” and indeed “predates the patent.” *See* RX-0330C (Karr Dep Tr.) at 76:4–23, 83:10–84:1. TP-Link’s construction does not preclude the use of an alternative frequency for the uplink as shown in Figure 2 and 3, because Figures 2 and 3 disclose a scenario where separate frequencies are used for the uplink and downlink, in accordance with TP-Links construction—*i.e.*, when 2.4–2.7 GHz is used for the downlink and 5.75–5.85 GHz is used for the uplink. Consistent with the ’714 patent’s specification, TP-Link’s construction is meant to preclude the situation where separate frequencies are never used for the claimed uplink and downlink.

The applicant’s description of the invention during prosecution further confirms TP-Link’s construction is correct. During prosecution, the applicant repeatedly distinguished the Mangal prior art reference, which describes a communication system that includes a subscriber unit system and a base station, each with a pair of wireless transceivers. *See* RX-0163 (Mangal) at 2:59–3:16. *Id.* at Fig. 1. Mangal specifies that “subscriber wireless transceiver 102 and the base station wireless transceiver 108 comprise a first wireless transmission link between the subscriber unit system 100 and the base station system 109 and employ licensed frequencies for wireless transmissions.” *Id.* at 4:6–10. Mangal also explains that “subscriber wireless transceiver 104 and the base station wireless transceiver 110 comprise a second wireless transmission link between the subscriber unit system 100 and the base station system 109 employing unlicensed frequencies for wireless transmissions.” *Id.* at 4:15–19. Mangal goes on to explain that for a given interaction, the base station and the subscriber station pick only the licensed frequency band *or* the unlicensed frequency

band for the uplink and downlink. In other words, for a given interaction with the subscriber station, the base station will transmit and receive *on the same frequency*, not on two different frequencies. *See id.* at 6:27–42, Fig. 3. Based on Mangal’s use of the same band for the uplink and downlink, the ’714 patent’s applicant repeatedly characterized the ’714 patent’s invention as transmitting and receiving *in different bands* at the same time, including in oral argument before the PTAB on appeal from examiner rejections. *See, e.g.*, Ex. 6 at 2840–41 (9/21/10 Hearing at 3:23–4:4) (“[T]he result of *Appellant’s invention* is that ... a subscriber would *receive in one band, and then transmit in a different band.*”); *id.* at 2845 (9/21/10 Hearing at 8:9–19); *id.* at 2566–67 (11/6/07 Hearing at 2:20–3:2) (“Generally, *Appellant’s invention* provides a wireless system where stations on the network communicate with each other over *different frequency bands.*”).

In this manner, the claim language, the specification, and the prosecution history all support TP-Link’s construction, which requires the base station to use different uplink and downlink frequencies when communicating with a subscriber or other device. In contrast, the intrinsic record does not provide any support for the ALJ’s construction permitting a base station to use the same frequency for the uplink and downlink.

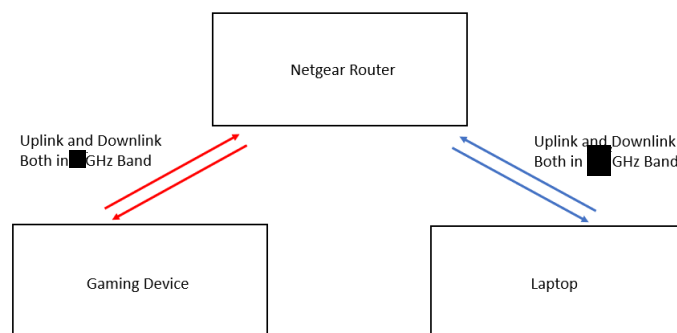
c. The ALJ’s incorrect claim construction has improperly enabled Netgear to read claim 13 on networks that use the same band for both uplink and downlink.

The ALJ’s incorrect construction has allowed Netgear to successfully assert claim 13 against dual-band and multi-band networks, for purposes of both infringement and technical domestic industry. In such networks, the wireless router—the alleged “base station” of claim 13—services two or more separate networks on different frequency bands, while using the same uplink and downlink frequency to communicate with a subscriber device on a particular network.

TP-Link’s dual-band feature is referred to as “dual band concurrent,” and Netgear’s is called “simultaneous dual band.” Both features work by setting up two separate Wi-Fi networks.

See CX-2539C.1, CX-0629.2. For example, Netgear's expert Dr. Wicker used the following demonstrative to explain how Netgear's asserted technical domestic industry products create two separate Wi-Fi networks, one operating at █ GHz and the other operating at █ GHz:

CDX-0001C.99; 1/17/24 Tr. (Wicker Direct) at 109:11–18, 166:14–23. In this dual-band configuration, subscriber devices on the █ GHz network █ use █ GHz for uplink and downlink, and subscriber devices on the █ GHz network █ use █ GHz for uplink and downlink. Thus, in the example provided in the demonstrative above, the gaming device in the upper left-hand corner will use █ GHz for both the uplink and downlink, and the laptop in the upper right-hand corner will use █ GHz for both the uplink and downlink. This configuration is shown schematically below:



Dr. Wicker testified that TP-Link's products work the same way. See 1/17/24 Tr. (Wicker Direct)

[REDACTED]

at 128:21–129:10; *see also* 1/17/24 Tr. (Wicker Cross) at 187:3–9. 189:2–17.

The fundamental problem with reading claim 13 onto a dual-band network—which is possible only due to the ALJ’s erroneous construction permitting the claimed base station to use the same band to transmit and receive—is that (as discussed above) this application has nothing to do with the system disclosed and claimed in the ’714 patent. Instead, the disclosed and claimed system uses *different* frequency bands for the uplink and downlink, to address network asymmetry and interference. Because they use the same frequency band for both the uplink and downlink, the Netgear and TP-Link products do not address the asymmetry and interference problems identified by the ’714 patent at all. The ALJ’s erroneous construction has improperly permitted Netgear to expand the ’714 patent to cover subject matter that the inventors did not even purport to invent. Review of the ID’s construction is therefore requested.

3. The ID errs in finding claim 13 is not invalid in view of Morikawa.

The ID commits clear errors of fact and law in failing to find that claim 13 is anticipated—or, at a minimum, rendered obvious—by the Morikawa prior art reference. Netgear conceded at the evidentiary hearing that Morikawa discloses every element of claim 13, except for the requirement that the claimed base station transmits and receives “at the same time.” Yet, the ’714 patent itself acknowledges that transmission and reception “at the same time” can be achieved using a known prior art technique called FDD. *See* JX-0001 (’714 Patent) at 1:30–35, 1:65–2:10. Accordingly, at best, claim 13 merely modifies the Morikawa prior art to incorporate the well-known 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.

Nevertheless, the ID has determined Morikawa is not invalidating, based on an unduly narrow construction of the term “at the same time” that is at odds with the plain and ordinary meaning of this term as confirmed by the prosecution amendment that added this language to claim

13. As the prosecution history shows, the claimed “at the same time” communication requires the base station to use the two different claimed frequency bands when communicating back and forth with a subscriber unit or other device—not, as the ID incorrectly finds, to transmit and receive data packets at exactly the same moment in time. If the ID did not commit clear error by failing to apply the correct meaning, a finding of anticipation would have been unavoidable.

In any event, even applying the ID’s overly narrow interpretation of this limitation, Morikawa still anticipates claim 13 or renders it obvious. Morikawa expressly discloses a high-speed, 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. Given Morikawa’s stated goals of increasing network speed and capacity, the ID’s reading of Morikawa as not disclosing the ALJ’s narrow interpretation of “at the same time” vitiates its very purpose. In a network designed to have an unlimited number of subscribers, limiting Morikawa to the *sequential*—rather than also simultaneous—use of the downlink and uplink (as the ID does) would *decrease* the network’s speed and capacity, because only the downlink or the uplink could be used at a given time, and only by one subscriber. That restriction would render the Morikawa network useless for its intended multi-subscriber deployment, because a single subscriber’s activity could prevent every other subscriber from accessing the network.

Indeed, 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.” Although Dr. Wicker sought to backtrack from this admission at the evidentiary hearing, he was cleanly impeached with his deposition testimony. The question of Morikawa’s

[REDACTED]

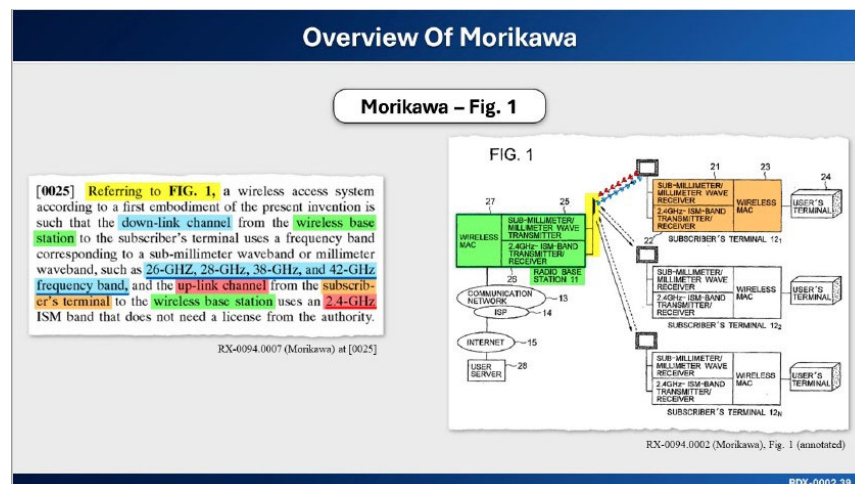
disclosure should have been put to rest when he was caught in this lie. However, the ID inexplicably excuses Dr. Wicker's falsehood, seeking to explain it away by relying on similar demonstrably false testimony he provided. The ID's casual dismissal of Dr. Wicker's dispositive admission was clearly erroneous and constitutes an abuse of discretion.

a. Morikawa's disclosure.

The Morikawa prior art reference, titled "Point-to-Multipoint Wireless Access System," discloses a wireless communication system where a base station communicates with an unlimited number of identical subscriber terminals. *See* RX-0094 (Morikawa) at cover, [0002], [0009]–[0010], [0012]–[0017], [0021], [0023], [0025], [0045], [0075], [0094]; 1/22/2024 Tr. (Bims Direct) at 798:23–799:7. Morikawa's base station uses a downlink channel to transmit data to a subscriber terminal and an uplink channel to receive data from the subscriber terminal. *See* RX-0094 (Morikawa) at [0002]; 1/22/2024 Tr. (Bims Direct) at 799:17–800:6. The downlink channel is a frequency band licensed by a governmental agency (such as the FCC), and the uplink channel is a different frequency band that is not licensed by a governmental body. *See* RX-0094 (Morikawa) at [0025]; 1/22/24 Tr. (Bims Direct) at 800:12–23, 801:3–8. The two frequency bands are over an octave apart. *See* 1/22/24 Tr. (Bims Direct) at 800:24–801:2. Morikawa's base station has separate radios for the uplink and downlink, which allows it to receive and transmit data on the uplink and downlink at the same time. *See* RX-0094 (Morikawa) at [0025], [0027]–[0028]; 1/22/24 Tr. (Bims Direct) at 801:9–803:10.

Morikawa notes that using the same frequency band for the uplink and the downlink is not desirable for purposes of asymmetric networks such as the Internet, because the downlink typically carries much more data than the uplink. *See* RX-0094 (Morikawa) at [0008], [0010], [0091]. Morikawa states that it therefore is desirable to provide more bandwidth for the downlink than for the uplink. *See id.*; 1/22/24 Tr. (Bims Direct) at 817:7–818:17. Morikawa's proposed solution is

to use a high-frequency licensed band for the downlink from the base station and a low-frequency unlicensed band for the uplink to the base station, with the two bands being separated by more than an octave. See RX-0094 (Morikawa) at [0002], [0023], [0025], [0044]; 1/22/24 Tr. (Bims Direct) at 801:9–803:10. This approach allows the system to transmit “large capacity data through the down-link channel and transmit[] small capacity data through the up-link channel.” RX-0094 (Morikawa) at [0025]; see also *id.* at [0008], [0010], [0091]; 1/22/24 Tr. (Bims Direct) at 817:25–818:10. As a result, the point-to-multipoint wireless access system disclosed in Morikawa can be “constructed at a lower cost, and effectively operate at a high speed.” RX-0094 (Morikawa) at [0025]; see also *id.* at [0007], [0010], [0016], [0044]. Figure 1 of Morikawa, titled “block diagram of a point-to-multipoint wireless access system according to a first embodiment of the present invention,” illustrates this solution:



RDX-0002.39 (annotated). Figure 1 includes a single wireless base station (highlighted in green), which is connected wirelessly to a plurality of subscriber terminals 121, 122, and 12n (with one example highlighted in orange). See RX- 0094 (Morikawa) at [0002], [0023], [0025]–[0026]; 1/22/24 Tr. (Bims Direct) at 801:12–19. The subscriber terminals disclosed in Figure 1 have an opposite receiver and transmitter arrangement compared to the base station. See RX-0094

[REDACTED]

(Morikawa) at [0030]–[0031]; 1/22/24 Tr. (Bims Direct) at 802:15–17. Accordingly, a subscriber terminal transmits to the base station on the uplink channel from its 2.4 GHz transmitter and receives from the base station on the downlink channel using its sub-millimeter/millimeter waveband receiver. *See* RX-0094 (Morikawa) at [0025]; 1/22/24 Tr. (Bims Direct) at 802:17–22.

b. The plain and ordinary meaning of “at the same time.”

The term “at the same time” was not construed in this case, and therefore should be given its plain and ordinary meaning to a POSITA in view of the intrinsic record. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005)). That is precisely the interpretation TP-Link applied in this case—TP-Link examined the intrinsic record and relied on the term’s plain and ordinary meaning as it would be understood by a POSITA. The ’714 patent’s specification does not use the phrase “at the same time” to discuss the operation of the claimed base station. Nor does the patent provide any examples of data being transmitted or received “at the same time” by the claimed base station. Rather, the term “at the same time” was added to claim 13 (then pending claim 53) during the ’714 patent’s prosecution to distinguish this claim over the Mangal prior art reference. *See* JX-0004 (’714 Patent History) at 293–312. During prosecution, the applicant made clear that the plain and ordinary meaning of “at the same time” is *the use of two different uplink and downlink frequencies when the base station bi-directionally communicates with a subscriber unit or other device*. *See* JX-0004 (’714 Patent History) at 305.

As discussed above, Mangal describes a communication system that includes a subscriber unit system and a base station, each with a pair of wireless transceivers. *See* RX-0163 (Mangal) at 2:59–3:16. Mangal further discloses that base station system 109 and subscriber unit 100 can communicate with each other at any given time on a licensed band for both the uplink and the downlink, or an unlicensed band for both. *See id.* at 4:6–10; Fig. 1. Mangal

further explains with reference to its Figure 3 flowchart that the base station selects the single frequency—licensed or unlicensed—to be used for both the uplink and downlink: “[A]t step 303, the base station control system 111 selects *one of* the licensed allocation sub frame 201 *or* the unlicensed allocation sub frame 202 based on the determined required quality of Service for the requested communication service.” *Id.* at 6:35–38. This means that once either the licensed or the unlicensed transmission link is selected in Mangal, communication—both transmission and reception—occurs only on the selected link. *See id.* at 6:49–53. Netgear’s expert Dr. Wicker confirmed this reading of Mangal on cross-examination. *See* 1/23/24 Tr. (Wicker Cross) at 1047:18–22, 1048:18–23; *see also id.* at 1047:23–1048:17.

Mangal further explains that a single frequency is used to achieve a desired quality of service. *See* RX-0163 (Mangal) at 2:1–16. For example, real-time communications requiring a high quality of service (such as video streaming, audio steaming, telephone calls, and web browsing) may use a licensed frequency for both the uplink and the downlink. *See id.* at 1:33–43. Conversely, communications that are not time-dependent and do not require a high quality of service (such as video mail or downloading a computer program) may use the unlicensed band. *See id.*

The ’714 patent’s applicant expressly distinguished this single-frequency operation of Mangal by adding the “at the same time” requirement to claim 13. The applicant clearly explained this interpretation of Mangal in its amendment filed with the Patent Office:

*Mangal teaches bidirectional communication in one of a licensed band, e.g., a low interference band, or an unlicensed band, e.g., a high interference band, at the same time. However, Mangal wholly fails to describe transmitting in one band and receiving in another band at the same time. According to Mangal, a base station *selects one of a licensed sub frame or a[n] unlicensed sub frame*, for communication, based on a required quality of service for a communication service. *See* Mangal, col. 6 lines 35–38. Once the licensed or unlicensed communication concludes, “the session terminates and wireless capacity tears down in reverse order ending the session.” *Id.* at lines 54–57.*

Clearly, Mangal describes transmitting and receiving in only one of an unlicensed or a licensed band during a single communication session.

JX-0004 ('714 Patent File History) at 305. As the preceding statement makes clear, the applicant distinguished Mangal because Mangal's base station used the same licensed *or* unlicensed frequency for a given communication with a subscriber station. Indeed, the applicant repeated this distinction based on the number of frequencies that are used for transmitting and receiving several times during prosecution. *See, e.g.*, JX-0004 ('714 Patent File History) at 371 ("*Mangal* discusses bidirectional communication between its device, e.g., 105, and network system 113 taking place entirely in only one of a low interference band or a high interference band at the same time. ... At best, *Mangal* describes transmitting and receiving at a subscriber station at the same time in only one of a licensed band, (i.e., low interference), or unlicensed (i.e., high interference) band, but not both."), 372 ("[T]he exchange of data both upstream and downstream ... occurs in only the selected band at any given time in Mangal. ... *Mangal* describes reservation slots and queuing methods (*see* col. 5 lines 34-67) and tearing down of virtual connection paths ... suggests that *Mangal* intends for its system to handle or provide communication services for only one communication request at a time."), 480 ("If you read Mangal, I think it makes it clear that when communication takes place, it occurs at the same time, over one of the selected bands."). The Board of Patent Appeals ultimately agreed with the applicant, stating: "Mangal, at best, discloses bidirectional communication occurring entirely in only one of a low interference band *or* a high interference band at the same time, and not simultaneously in both bands." *Id.* at 455 (emphasis in original).

Regardless of the Board's view of Mangal, though, what is crucial is what the applicant told the Board "at the same time" means when it added that limitation to distinguish Mangal—namely, that "at the same time" refers to bi-directional communications between a base station and a subscriber happening on *different* frequency bands. *See* JX-0004 ('714 Patent File History) at

305. The term does not impose any requirement that the bi-directional communications must happen simultaneously. Indeed, there would have been no need to add a “simultaneity” requirement to distinguish Mangal, given that Mangal uses a *single* frequency for the uplink and downlink. As such, requiring the use of two different frequency bands for a bi-directional communication was sufficient to distinguish this prior art.⁹

Although the ID offers several purported bases for rejecting this plain and ordinary meaning of “at the same time,” all of the rationales it states are clearly erroneous.

First, the ID states that TP-Link waived its allegedly “new construction” because it was not raised during claim construction. *See* ID at 70–71. Yet, TP-Link does not seek a “new construction.” TP-Link simply seeks to apply the term’s plain and ordinary meaning, which is the meaning the Federal Circuit has held should apply to all unconstrued claim terms. *See Phillips*, 415 F.3d at 1312–13.

Second, the ID asserts TP-Link did not raise this plain and ordinary meaning of “at the same time” prior to its post-hearing brief. *See* ID at 70–71. That likewise is not true. In its pre-hearing brief, TP-Link specifically explained the distinction that the applicant made over Mangal during prosecution—namely, that “at the same time” was added to distinguish Mangal’s use of a single frequency for the exchange of upstream and downstream data. *See* C. Pre-HB at 82. TP-Link also stated that “Dr. Bims will explain how this is in contrast to the Mangal prior art distinguished during prosecution of the ’714 Patent, which teaches two-way communication over

⁹ Without claim 13’s “at the same time” limitation requiring separate frequencies, Mangal would anticipate the claim. For example, claim 13’s transmitting step would be met by a transmission by Mangal’s base station during one bi-directional communication on the licensed frequency band (*e.g.*, requesting and downloading cnn.com), and the receiving step would be met by Mangal’s base station receiving during a different bi-directional communication on the unlicensed frequency band (*e.g.*, requesting and downloading an email). By adding “at the same time,” the applicant removed these separate bi-directional communications disclosed in Mangal from claim 13’s scope.

[REDACTED]

one band at a time, whereby ‘the exchange of data *both* upstream and downstream ... occurs *in only the selected band at any given time* in Mangal.’” *Id.* Contrary to the ID’s suggestion, *see* ID at 74, Dr. Bims did exactly that the hearing. In over two pages of testimony, he explained the distinction the applicant made over Mangal when it added the “at the same time” requirement, and how Mangal is different from Morikawa. *See* 1/22/24 Tr. (Bims Direct) at 821:16–823:24. TP-Link also cross-examined Dr. Wicker extensively on this issue. *See* 1/23/24 Tr. (Wicker Cross) at 1042:2–1049:17. As such, the ID’s finding that TP-Link did not raise this argument before or during the hearing and that it therefore was waived is clearly erroneous. The ID shows that there was a claim construction dispute between the parties that must be resolved, and it was error for the ID not to do so. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 415 F.3d 1303 (Fed. Cir. 2005).

It is also ironic that the ID (incorrectly) accuses TP-Link of changing its claim construction position, when Netgear changed its interpretation of “at the same time” *in the middle of Dr. Wicker’s testimony* at the hearing. At his deposition, Dr. Wicker testified unequivocally that “at the same time” communication requires overlapping data packets at the base station:

Q. Do you agree that in order for you to prove that a product practices claim 13 of the ’714 patent, you need to show a base station that -- all other claim elements being satisfied, *a base station that is receiving packets while at the same time transmitting packets that overlap with those received packets?*

A. *Yes, that’s fair.*

1/17/24 Tr. (Wicker Cross) at 180:22–181:3. However, at the evidentiary hearing, Dr. Wicker denied that claim 13 requires packet overlap. After being impeached with the above-quoted testimony, he instead asserted that the term requires “communication streams going over two different links in opposite directions on a correct frequency ... at the same time.” 1/17/24 Tr. (Wicker Recross) at 231:10–14. The ID’s finding that Dr. Wicker did not change his interpretation of “at the same time” is clearly wrong. *See* ID at 46.

[REDACTED]

Third, the ID states that TP-Link’s plain and ordinary meaning interpretation is incorrect because it improperly “expand[s] the term to conflict with its plain language and to cover non-concurrent/non-simultaneous—i.e., sequential—transmission and reception that occurs ‘during a particular interaction.’” ID at 71. That finding is legally erroneous, because it assumes—without consulting the intrinsic record—that the plain and ordinary meaning of “at the same time” in the context of the ’714 patent requires transmitting and receiving to happen at exactly the same moment. Yet, *Phillips* makes clear that a claim’s plain and ordinary meaning is the meaning it would have to a POSITA in light of the intrinsic record, which includes the prosecution history. *Phillips*, 415 F.3d 1303 at 1317. As discussed above, there is no support in the ’714 patent’s specification for such a narrow reading of “at the same time,” and the prosecution history—i.e., the applicant’s amendment and argument to distinguish Mangal—provides clear evidence of a plain and ordinary meaning that means during the same bi-directional communication interaction or session, not simultaneous.

Fourth, the ID relies on claim differentiation to assert that “TP-Link’s construction would improperly render claim 13 indistinguishable from independent claim 32, which recites ‘said transmitting and said receiving occur during the same communication session.’” ID at 71. However, claim differentiation is only a presumption, and can be rebutted based on evidence in the intrinsic record. *See Howmedica Osteonics Corp. v. Zimmer, Inc.*, 822 F.3d 1312, 1323 (Fed. Cir. 2016). As discussed above, in distinguishing Mangal, the applicant told the Patent Office that “at the same time” communication is broad enough to cover the same communication session. *See* JX-0004 (’714 Patent File History) at 480. Moreover, the ID commits a logical error in asserting that claims 13 and 32 necessarily would have the same scope if the plain and ordinary meaning advocated by TP-Link is applied to claim 1. While communications from the same communication

[REDACTED]

session occur “at the same time,” not all communications that occur at the same time necessarily are part of the same communication session. For example, a request to download cnn.com involves transmission and reception at the same time, and is part of the same communication session because the data on the uplink and the downlink are related to the same request. But separate interactions such as sending an email and downloading music at the same time would not be part of the same communication session, because they are unrelated communications.

Fifth, the ID finds the applicant’s distinction over Mangal did not amount to an unambiguous disavowal of claim scope. ID at 72–73. Yet, applying the applicant’s distinction over Mangal to understand the plain and ordinary meaning of this term does not entail any reduction or surrender of claim scope that would require a finding of disclaimer. On the contrary, it entails *expanding* the term’s scope over the unsupported “single moment in time” construction that the ID implicitly applies. The ID’s suggestion that TP-Link’s interpretation requires a disavowal of scope is legally erroneous.

c. Morikawa discloses “at the same time” under the term’s plain and ordinary meaning.

Morikawa indisputably discloses a base station that transmits and receives “at the same time” under that term’s plain and ordinary meaning in view of the intrinsic record. Paragraphs [0033]–[0043] of Morikawa provide an example of a subscriber unit downloading a file from the internet, which Dr. Wicker acknowledged could include streaming music or downloading a webpage. *See* 1/23/24 Tr. (Wicker Cross) at 1060:6–19. Mangal also makes clear that as of April 11, 2000, audio streaming and web browsing were examples of real-time communications. *See* RX-0163 (Mangal) at 1:37–39. It is undisputed that in this example provided by Morikawa, the base station transmits to the subscriber unit on the licensed frequency band and receives from the subscriber unit on the unlicensed frequency band. For instance, Morikawa explains that the request

[REDACTED]

packet is fed through the subscriber terminal to the base station over the unlicensed 2.4 GHz uplink. *See* RX-0094 (Morikawa) at [0034]–[0035]; CDX-0007C.12; 1/22/24 Tr. (Bims Direct) at 800:12–23; 1/23/24 Tr. (Wicker Direct) at 1012:24–1013:9. Morikawa further explains that the response packet group is fed through the base station to the subscriber terminal over the sub-millimeter/millimeter downlink. *See* RX-0094 (Morikawa) at [0042]; CDX-0007C.18; 1/22/24 Tr. (Bims Direct) at 800:12–23; 1/23/24 Tr. (Wicker Direct) at 1014:21–1015:1. These communications are part of the same bidirectional, real-time communication between the base station and the subscriber unit, and—in accordance with the distinction that the ’714 patent’s applicant made over Mangal during prosecution—they occur “at the same time” because the base station uses two different frequencies for the same bidirectional communication’s uplink and downlink. *See* RX-0094 (Morikawa) at [0033]–[0044]; JX-0004 (’714 Patent File History) at 305.

Indeed, Dr. Wicker conceded during cross-examination regarding his infringement opinion that a request/response communication such as the one disclosed in this example from Morikawa constitutes a “same time” communication. Specifically, during questioning regarding certain of his test results pertaining to the accused TP-Link products, Dr. Wicker admitted that a base station that receives a request-to-send (RTS) packet from a client computer, followed by the transmission of a clear-to-send (CTS) packet from the base station to the client computer in response to the RTS packet, is an example of transmitting and receiving “at the same time,” *even though the packets are in sequence, rather than overlapping*:

Q. So sending a request-to-send followed by a clear-to-send, is that receiving and transmitting at the same time or not?

A. Well, this is – remember, the packets – yes, these would be an example of what’s being transmitted and received at the same time.

Q. So but, right, you know they are actually one after the other, right?

A. *That’s right, they are in sequence.*

1/17/24 Tr. (Wicker Cross) at 214:25–215:8.

Netgear cannot have it one way for purposes of infringement and another for validity. If sequential communications are sufficient for infringement, they are sufficient for invalidity. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) (“A patent may not, like a ‘nose of wax,’ be twisted one way to avoid anticipation and another to find infringement.”) (citation omitted); *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (“It is axiomatic that claims are construed the same way for both invalidity and infringement.”). While the ID acknowledges this conflicting testimony, *see* ID at 74, it does not explain how Dr. Wicker’s opinion that sequential request-response packets meet the “at the same time” requirement in the infringement context can be reconciled with his opinion that they do not meet the same requirement in the invalidity context.

The ID also finds that TP-Link’s arguments regarding Morikawa are unsupported by expert testimony, because TP-Link’s expert Dr. Bims supposedly “did not address paragraphs 33–43 of Morikawa in his testimony.” ID at 73. However, that finding is clearly erroneous, because Dr. Bims spent nearly all of his testimony on Morikawa addressing the Figure 1 embodiment, which is the same embodiment described in Morikawa paragraphs 33–43. *See* RDX-0002.39 (Bims demonstrative addressing Morikawa Fig. 1). In discussing the Figure 1 embodiment, Dr. Bims expressly explained how Morikawa discloses the use of downlink and uplink frequency bands at the same time. *See* 1/22/24 Tr. (Bims Direct) at 801:9–803:10. He also specifically addressed paragraph 44 of Morikawa, which summarizes the Figure 1 embodiment, to explain how Morikawa discloses “same time” transmission and reception at the base station:

Q. Okay. And looking at paragraph 44 of Morikawa, does that also describe at the same time communication for a single subscriber unit?

A. Yes. It’s saying in paragraph 44, if we concentrate on the 2.4-GHz band, which is the uplink channel, that communication is happening on that channel while

communication is happening on the licensed band, which is the downlink channel. So the use of the order “while” also confirms what a person of ordinary skill would know looking at Fig. 1, which is that there is transmission and reception at the base station on the downlink channel while also on the uplink channel transmitting and receiving information.

1/22/24 Tr. (Bims Direct) at 814:16–815:3. Dr. Bims likewise explained how Morikawa discloses the distinction that the applicant made over Mangal to explain what “at the same time” means:

Q. And how does that contrast with what you see in the disclosure of Morikawa?

A. So in Morikawa, the base station, when it’s communicating, even with a single subscriber terminal, is able to transmit and receive on different frequency bands at the same time.

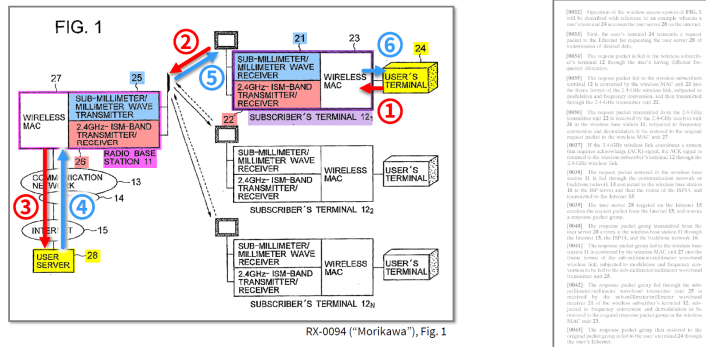
Q. And if we go to RDX-2.52, comparing JX-4 at 372 14 to 373, the prosecution history discussing Mangal, how does that track what you saw in the disclosure of Mangal compared to Morikawa?

A. Okay. So in Mangal, during the prosecution of the ’714 patent, the applicant says that Mangal indicates the exchange of data both upstream and downstream, but it says that it only occurs in the selected band at any given time. And it goes on to say that Mangal does not satisfy the limitation in the claim that receiving on the low-interference band and transmitting on the high-interference band will occur at the same time.

1/22/24 Tr. (Bims Direct) at 823:7–14. The fact that Dr. Bims did not specifically mention paragraphs 33–43 in his testimony does not mean that TP-Link did not elicit ample testimony from him regarding Morikawa’s disclosure of “at the same time” transmission and reception based on the disclosure in those paragraphs. As shown above, Dr. Bims did provide such testimony.

Moreover, the fact that paragraphs 33–43 of Morikawa—which are part of the record in this case—disclose an embodiment with request/response-style communications is clear from reading those paragraphs. Indeed, there is no dispute that paragraphs 33–43 disclose such communications, and Dr. Wicker even explained the relevant steps at the hearing with reference to his demonstrative CDX-7C.20 (reproduced below).

Morikawa Does Not Disclose “wherein at least a portion of said receiving and at least a portion of said transmitting occur at the same time”



CDX-7C.20. Dr. Wicker testified that these steps could represent streaming music or downloading a webpage such as cnn.com. 1/23/24 Tr. (Wicker Cross) at 1058:3–1061:24. He also testified that steps 2 and 5—for example, transmitting the request for cnn.com to the base station (step 2) and transmitting the webpage to the subscriber (step 5)—always happen on different frequency bands. *Id.* at 1048:5–17. The evidentiary record on this issue is not limited to Dr. Bims’s testimony, but also includes Dr. Wicker’s testimony. The ID’s finding that there was no expert evidence in the case concerning what paragraphs 33–43 of Morikawa disclose is demonstrably wrong.

d. Morikawa discloses “at the same time” communication even under the ID’s unduly restrictive interpretation.

Morikawa even discloses the ID’s unduly restrictive reading of “at the same time,” which requires the base station to transmit and receive at the same exact moment in time (an interpretation the ID clearly applies, even if it is never directly articulated). Just like the ’714 patent, Morikawa discloses a high-speed data network that is designed to maximize speed and capacity by using different downlink and uplink frequencies, and it thereby teaches same-time transmission and reception at the base station. Reading Morikawa as the ID suggests—where its uplink and downlink can never be used at the same time—would entail a slower network, because there would always be an idle link. That is not a reasonable interpretation.

Indeed, Morikawa expressly discloses that its licensed frequency band is used for downlink data transmission to a subscriber unit “while” an unlicensed frequency band is used for uplink data transmission from a subscriber unit. *See* RX-0094 (Morikawa) at [0044]; 1/22/24 Tr. (Bims Direct) at 814:16–815:13. “While” is an ordinary English word that means “at the same time.” Moreover, as Dr. Wicker contended at the hearing, the ’714 patent discloses “at the same time” communication using the same word (“while”) in exactly the same context—in fact, Dr. Wicker points to the ’714 patent’s use of “while” as its only alleged disclosure of “at the same time.” *See* JX-0001 (’714 Patent) at 4:5–17; 1/22/24 Tr. (Bims Direct) at 815:14–816:9; 1/23/24 Tr. (Wicker Cross) at 1071:7–12. Yet, the ID dismisses Morikawa’s use of the word “while,” crediting Dr. Wicker’s testimony that Morikawa uses “while” as a contrast word, whereas the ’714 patent uses it to mean “at the same time.” *See* ID at 77. Dr. Wicker admitted on cross-examination that both Morikawa and the ’714 patent use “while” in the same context. *See* 1/23/24 Tr. (Wicker Cross) at 1071:7–12. This fact is clear from a side-by-side comparison of the language:

At Least A Portion Of The Transmission And Receipt At The Same Time	
'714 Patent	Morikawa
Generally, Internet or other network traffic is asymmetric, that is to say, there is more traffic coming from the network to subscribers than from subscribers to the network. <u>Therefore, in the present system and method the less noisy licensed band frequency is preferably used to transmit data downstream from the hub to the subscriber while the noisier unlicensed band frequency is preferably used to transmit upstream data from a subscriber to the hub.</u> However, one embodiment of the present system and method, by employing the relatively underused unlicensed band at 5.8 GHz, is adaptable to allow relatively high capacity data transmissions from a subscriber to the hub, as necessary. JX-0001 (’714 Patent) at 4:5-17	[0044] The request packet transmitted from the user’s terminal 24 through the up-link channel has a smaller data size, whereas the response packet group transmitted from the user server 28 through the down-link channel has a larger data size. <u>In the above embodiment, by using a 2.4-GHz ISM band through the up-link channel while a sub-millimeter or millimeter waveband through the down-link channel, saving the transmitter cost for the up-link channel to achieve a low-cost user’s terminal.</u> The 2.4-GHz ISM band is a non-licensed waveband, whereby a single license only on the down-link channel can be sufficient for the service operation, saving the running cost for the service. RX-0094.0008 (Morikawa) at [0044]

RDX-0002.46

RDX-0002.46. As this plain language shows, nothing in the ’714 patent suggests that it is using the word “while” any differently than Morikawa does. Expert testimony from Dr. Wicker is not needed to understand the plain syntax of these sentences. In any event, given that Netgear and Dr.

[REDACTED]

Wicker have taken the express position that “while” means “at the same time,” not “whereas” or “however,” they should be held to that position.

The ID also commits the same fundamental error that Netgear did at the evidentiary hearing: it assumes that just because Morikawa’s system can be used to send request/response messages, it is limited to that protocol. *See* ID at 84–85. But the ’714 patent operates the same way. Dr. Wicker admitted that the embodiment in Figure 1 of the ’714 patent likewise could be used to service a single request/response, such as visiting a website. *See* 1/23/24 Tr. (Wicker Cross) at 1056:5–7. Yet, as Dr. Wicker conceded, the ability to download a single website does not make the ’714 patent’s base station incapable of “simultaneous receipt and transmission.” *Id.* at 1056:11–17. Morikawa, which discloses the same architecture as Figure 1 of the ’714 patent, should not be interpreted any differently. *See* RX-0094 (Morikawa) at [0025]–[0044], Fig. 1.

It is well-established that prior art must be evaluated from the point of view of a POSITA, taking into account “inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Graves*, 69 F.3d 1147, 1152 (Fed. Cir. 1995). The ID’s reading of Morikawa as being limited to a response/request protocol does not make sense from a POSITA’s point of view. Morikawa discloses a high-speed point-to-multipoint network with an unlimited number of subscribers. *See* RX-0094 (Morikawa) at [0002], [0008], [0023], [0025]–[0026], [0030]; 1/22/24 Tr. (Bims Direct) at 803:11–23. In actual operation, Morikawa’s base station will be servicing any number of requests from those subscribers, and hence will constantly be transmitting and receiving data at the same time. *See* RX-0094 (Morikawa) at [0023], [0025]–[0027], [0030]; 1/22/24 Tr. (Bims Direct) at 802:23–803:10. For example, Dr. Wicker was forced to concede on cross-examination that Figure 1 of Morikawa is not limited to a single response/request, but rather that a user of Morikawa’s network could type in back-to-back webpage requests (*e.g.*, for CNN and

[REDACTED]

the *New York Times*). See 1/23/24 Tr. (Wicker Cross) at 1058:20–1059:4. In that scenario, the base station would be servicing two overlapping webpage requests that would involve overlapping data on the uplink and downlink. *Id.* at 1059:13–18. This admission from Dr. Wicker should have ended the dispute regarding Morikawa’s disclosure.

The ID likewise ignores that Morikawa contains any number of identical subscriber units, and that at a given time, any one of them could be sending its own webpage request. Because Morikawa is a high-speed data network with an unlimited number of subscribers, a POSITA would understand this to be taking place. See 1/22/24 Tr. (Bims Direct) at 801:9–803:14. A POSITA therefore would understand that Morikawa’s base station transmits and receives data at the same time. See 1/22/24 Tr. (Bims Direct) at 802:9–14, 803:4–10.¹⁰ Although the ID notes that Morikawa never discusses “the timing of transmission and reception between the base station and multiple subscriber units,” ID at 83, that is exactly the point: Morikawa does not discuss such “timing” because there is no such different timing in Morikawa. This fact supports TP-Link’s position, not Netgear’s.

Importantly, finding Morikawa does not disclose a base station that receives and transmits at the same time requires reading the reference in a way that would render its network useless. Dr. Wicker admitted on that Morikawa’s base station could stream music to a subscriber over the submillimeter-wave licensed downlink, and that such a stream could last over an hour. See 1/23/24

¹⁰ The ID strikes TP-Link’s reliance on Morikawa’s multiple subscribers as a theory supposedly not disclosed in TP-Link’s pre-hearing brief or in Dr. Bims’s expert report. See ID at 83–84. But Morikawa discloses a network full of multiple identical subscribers labeled with the same number, 12, that all operate the same way. See RX-0094 (Morikawa) at [0025]–[0031], Fig. 1. TP-Link made this point in both its pre-hearing brief and Dr. Bims’s report. See R. Pre-HB at 81, 85–86; RX-0285C (Bims Invalidity Rpt.) ¶¶ 232–34. Because the subscriber units are identical, TP-Link focused on just one of them to explain Morikawa’s operation, because discussing the other identical units would be redundant. The striking of TP-Link’s reliance on Morikawa’s multiple subscribers is clearly erroneous and constitutes an abuse of discretion.

[REDACTED]

Tr. (Wicker Cross) at 1060:20–25. Yet, under Dr. Wicker’s view of Morikawa, the subscriber would not be able to stop the music stream because the subscriber would not have access to the uplink to the base station to send a “stop” command. *See id.* at 1061:10–17. That reading of Morikawa is nonsensical. If Dr. Wicker were correct, every other subscriber on Morikawa’s network would not be able to access the Internet while that single subscriber was streaming music for an hour, bringing Internet access¹¹ for all other subscribers to a halt. *See id.* at 1060:20–1061:4. Under Dr. Wicker’s interpretation, Morikawa’s network could effectively be paralyzed by a single user streaming music, which would vitiate Morikawa’s goal of increasing network speed and capacity. The ID again brushes aside this fact, asserting that “to the contrary, Dr. Wicker, testified that if Morikawa were used to stream music or receive an email, such communications would occur only on the 2.4 GHz band, between the 2.4 GHz transceiver on both the base station and user terminals, as shown in Fig. 1.” ID at 83. But this testimony is demonstrably false, as discussed in detail below. Morikawa always uses the high frequency sub-millimeter/millimeter waveband downlink to transmit Internet data to subscribers. *See* RX-0094 (Morikawa) at [0025]–[0044].

The ID also relies heavily on Dr. Wicker’s testimony that Morikawa’s disclosure of a single MAC unit demonstrates a lack of disclosure of transmitting and receiving by the base station at the same time. *See* ID at 76–77. However, Dr. Wicker’s testimony on that point is entirely conclusory and devoid of explanation. Dr. Wicker merely stated in one sentence that “there’s a single MAC that’s coordinating the transmission or reception of the request and the response.” 1/23/24 Tr. (Wicker Direct) at 1019:7–14. He never explains how the alleged coordination is

¹¹ Despite the ALJ’s statement in footnote 23 of the ID, TP-Link did not argue that “the Internet” would be brought to a halt or paralyzed. Rather, *access* to the Internet by Morikawa’s subscribers would be blocked.

carried out, or why it would prevent same-time transmission and reception. Moreover, this testimony plainly misrepresents the MAC unit disclosed by Morikawa. Morikawa explains in paragraph 29 that its MAC unit interfaces between the communication network 13—*e.g.*, the Internet—and the base station. *See* RX-0094 (Morikawa) at [0029]. Hence, the MAC unit deals with data transmitted between the base station and the communication network (the Internet). Morikawa also states that the MAC unit’s function is to “prevent[] a data collision on the bus cable between the data which a plurality of terminals transmitted.” *Id.* at [0029]. In this manner, Morikawa indicates that the MAC coordinates data *received* by the base station from the subscriber terminals to be transmitted to the Internet—it does not disclose that the MAC unit coordinates the base station’s transmit and receive functions vis-à-vis the subscriber units in any way.

In contrast with Dr. Wicker, Dr. Bims provided a detailed explanation of Morikawa’s base station hardware supports transmission and reception at the same time:

Then, also, I would notice that within the base station highlighted in green there’s further detail about the structure of the base station. The base station has a transmitter that is transmitting in the licensed frequency band, and then also it has a transmitter and receiver structure that is operating in the 2.4-GHz band. So that’s telling the person of ordinary skill that the base station can transmit on a licensed band and transmit and receive on an unlicensed band at the same time given that these are independent radios that are both turned on for communication, and there’s no coordination between them to prevent them from transmitting at the same time.

1/22/24 Tr. (Bims Direct) at 802:3–14. Nevertheless, the ID improperly rejects Dr. Bims’s testimony, which is fully supported by the Morikawa’s specification, *see* RX-0094 (Morikawa) at [0025]–[0031], instead relying on Dr. Wicker’s conclusory and incorrect testimony regarding Morikawa’s MAC unit. *See* ID at 79.

The ID’s rejection of Dr. Bims’s testimony is all the more baffling given Dr. Wicker’s unambiguous admission during his deposition that a base station in a point-to multipoint-system—the type of system Morikawa discloses—*can transmit and receive at the same time*. Indeed, Dr.

[REDACTED]

Bims was impeached with this testimony at the evidentiary hearing, exposing his hearing testimony as untruthful:

Q. And in a point-to-multipoint system the base station can receive and transmit at the same time, correct?

A. **Not necessarily, no.**

Q. And can we look at your deposition, page 24, lines 22–25. I took your deposition up in Ithaca, correct?

A. Yes, that's correct.

Q. **So in a point-to-multipoint system, the base station can receive and transmit at the same time. Answer. That's fair, yes.** Were you asked that question and did you give that answer?

A. **Yes, that's correct.**

1/23/24 Tr. (Wicker Cross) at 1050:18–1051:5. Dr. Wicker was caught in a lie, changing “yes” to a “no.” Yet, rather than fault him for his false testimony and hold him to what he stated at his deposition, the ID goes to lengths to try to explain away his dispositive testimony. Specifically, relying on other false testimony from Dr. Wicker, the ID concludes that Morikawa's base station receives and transmits at the same time, but on the same frequency. *See* ID at 83. In particular, the ID relies on the following testimony from Dr. Wicker concerning Morikawa:

Q. Now if -- hypothetically -- you were to use 25 Fig. 1 for things like CNN, would that occur on the 2.4 transmitter/receiver or on both bands?

A. I would expect it to be on the 2.4 transceiver.

Q. Why?

A. Because that's a transceiver. It goes both ways. And that's simply what I would expect.

1/23/24 Tr. (Wicker Redirect) at 1072:24–1073:5. Yet, Morikawa could not be clearer in its disclosure that Internet data transmitted from the base station to the subscriber units always uses the higher frequency sub-millimeter/millimeter waveband link, not the 2.4 GHz link. That is what is explained in Paragraphs 33–43 of Morikawa, and specifically in paragraph 41 (which Dr. Wicker

relied on, *see* 1/23/24 Tr. (Wicker Direct) at 1014:14–20): “The response packet group fed to the wireless base station 11 is converted by the wireless MAC unit 27 into the frame format of the sub-millimeter/millimeter waveband wireless link, subjected to modulation and frequency conversion to be fed to the sub-millimeter/millimeter waveband transmitter unit 25.” RX-0094 (Morikawa) at [0041]. Dr. Wicker admitted this fact in his direct testimony, *see* 1/23/24 Tr. (Wicker Direct) at 1014:14–20, and he further testified that steps 2 and 5 in the demonstrative CDX-7C.20 above always happen on two different frequencies. Thus, Dr. Wicker’s testimony that cnn.com would be downloaded on the 2.4 GHz is clearly false.¹² The ID also states that “TP-Link’s reliance on Dr. Wicker’s testimony that, ‘in a point-to-multipoint system, the base station can receive and transmit at the same time’ ... does not mean that such a system would do so *in different bands*” (ID at 83 n.24), seemingly agreeing that Morikawa’s base station can at least receive and transmit at the same time, but only in the 2.4 GHz band. The ID’s grudging acknowledgement that Morikawa discloses the “at the same time” requirement at least to some extent further confirms that Dr. Wicker’s MAC argument—and the ID’s reliance on it to show that Morikawa does not permit “at the same time” communication—is incorrect.

Ultimately, both sides’ technical experts agree that the base station in a point-to-multipoint system can receive and transmit at the same time—and that Morikawa’s system is a point-to-multipoint system. The ID’s rejection of this undisputed testimony in favor of Dr. Wicker’s blatantly false testimony about Morikawa’s disclosure is clear error and an abuse of discretion.

¹² Although Morikawa does disclose that the base station can transmit on 2.4 GHz in an alternative embodiment, *see* RX-0094 (Morikawa) at paragraph [0029] (“a 2.4-GHz transmitter/receiver unit or a 2.4-GHz-ISM-band transmitter unit 22), that embodiment is limited to the transmission of a control signal called an acknowledge or ACK signal. *See id.* (“If the 2.4-GHz wireless link constitutes a system that requires acknowledge (ACK) signal, the ACK signal is returned to the wireless subscriber’s terminal 12 through the 2.4-GHz wireless link.”). Regardless, TP-Link made clear in its post-hearing brief that it was not relying on that embodiment. *See* R. Post-HB at 18.

e. Morikawa renders claim 13 obvious.

The ID also errs in failing to find that claim 13 is rendered obvious by Morikawa in view of a POSITA's knowledge, as reflected in the Razavi reference. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1372–73 (Fed. Cir. 2019) (finding there was no need to show motivation to combine when a secondary reference was used to explain a POSITA's understanding of the primary reference); *Dow Jones & Co. v. Abblaise Ltd.*, 606 F.3d 1338, 1353 (Fed. Cir. 2010) (affirming grant of summary judgment of invalidity on “grounds of obviousness under [a single prior art reference] in view of general knowledge in the field”).

The case for obviousness here is straightforward. It is undisputed that Morikawa discloses every element of claim 13 except for the “at the same time” requirement. However, that requirement is not alleged to be inventive. Indeed, the '714 patent itself acknowledges that one form of same-time transmission and reception—FDD—already was well known in the art, and permits simultaneous transmission and reception by a base station. *See* JX-0001 ('714 Patent) at 1:65–67. Netgear should not be permitted to maintain a patent claim that simply modifies Morikawa to add the prior art technique of FDD. As Dr. Bims testified, a POSITA who reads Morikawa in its full context—including its goal of increasing speed and capacity in an asymmetric network, and its dual-frequency architecture that uses two separate, independent radios in the base station and in each of the subscriber units—would understand that Morikawa uses FDD, which increases system speed and capacity for all of the reasons discussed in § IV.A.4.a–d above. *See* 1/22/24 Tr. (Bims Direct) at 818:19–819:14. As the Razavi textbook explains, FDD is a technique used in point-to-multipoint networks—such as those disclosed in both Morikawa and the '714 patent—that allows a base station to transmit and receive data at the same time. *See* RX-0130 (Razavi) at 16. As discussed above, the ID's reliance on Morikawa's MAC unit as preventing transmission and reception “at the same time” is clearly erroneous. Razavi also confirms a

[REDACTED]

POSITA’s understanding that FDD would require some degree of filtering, and therefore, contrary to the ID, its absence from Morikawa is not noteworthy because a POSITA would have read Morikawa through that lens. *See* 1/22/24 Tr. (Bims Direct) at 819:20–24; 1/23/24 Tr. (Wicker Cross) at 1038:25–1039:19. Because the evidence in the record shows a POSITA would have understood that Morikawa uses FDD, the ID errs in failing to find claim 13 obvious in view of Morikawa.

B. ’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.

First, the ID inexplicably construed the term “received signal strength” to include “channel utilization” and “rate,” even though these are fundamentally different metrics that have no defined relationship to one another, as Netgear’s own expert confirmed.

Second, the ID construed “default frequency band” as “a first selected frequency band,” improperly rewriting “default” as “first selected.” No party proposed this construction, and it appears nowhere in the intrinsic or extrinsic record. Relying on this erroneous construction, the ID finds infringement based on a band happening to be “selected” “first”—despite the fact that the accused selection does not use any band as a default.

Third, the ID finds infringement based on “roaming” code produced by third-party Qualcomm—notwithstanding unequivocal testimony from TP-Link’s witnesses that this code is [REDACTED] on the accused TP-Link products. The ID brushes aside this undisputed testimony on the basis that TP-Link’s expert supposedly did not “definitively know” the code was [REDACTED]. At the same time, the ID credits the testimony of Netgear’s expert, even though he did not even analyze the relevant compile-time flags. The ID thus effectively holds TP-Link to a standard of providing “definitive[.]” proof of *non*-infringement, while forgiving

[REDACTED]

actual burden-holder Netgear’s failure to introduce any evidence on this dispositive issue.

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

The ’698 patent’s Asserted Claims require that establishing a different backhaul band be performed “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. The term “received signal strength” was not construed during the *Markman* process, and its ordinary meaning therefore applies. *See Phillips*, 415 F.3d at 1312. 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.” Accordingly, 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 a coherent relationship between these metrics, let alone explained how a POSITA could understand the meaning of “received signal strength” to “include[]” the completely different metrics of channel utilization and rate. *See, e.g.*, ID at 112; 1/18/24 Tr. (Akl Cross) at 492:16–495:17. The ID’s improper claim construction therefore 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 [REDACTED]—not “received signal strength”—and therefore does not infringe. *See* ID at 113–15.¹³

¹³ The ID relied on the APS “preferred backhaul” functionality for its infringement finding regarding Broadcom-based accused products. ID at 116.

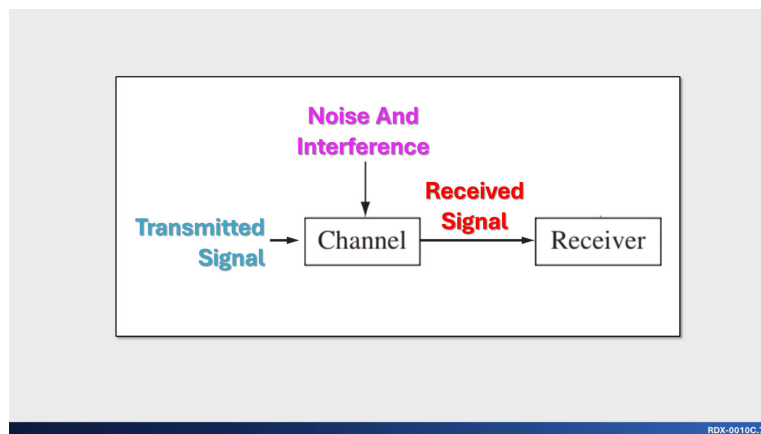
a. The ID improperly adopted a construction of “received signal strength” that “includes channel utilization and rate.”

The term “received signal strength” was not construed during the *Markman* process, and its ordinary meaning therefore applies. *See Phillips*, 415 F.3d at 1312; 1/18/24 Tr. (Akl Cross) at 483:2–8 (Dr. Akl agreeing he is applying “the plain and ordinary meaning of the [‘received signal strength’] term in view of the ’698 patent”). Yet, although neither party raised “received signal strength” for construction, the ID adopts a construction of this term that “includes channel utilization and rate.” ID at 112. Because there is no basis in the intrinsic or extrinsic record to interpret “received signal strength” as including these fundamentally different metrics, the ID’s construction is clearly erroneous and should be rejected.

The Asserted Claims use the term “received signal strength” in its ordinary sense. Claim 12 recites “upon detecting that a ***received signal strength*** of the first channel from the second node is below a threshold,” and that “channels in a given frequency band are prioritized based on a corresponding ***received signal strength***.” Nothing about this straightforward usage suggests any unusual meaning of the term. The specification likewise uses “received signal strength” in its ordinary sense, consistently discussing “RSSI” (received signal strength indicator), which is a typical measure of received signal strength recognized in the art. *See JX-0002* (’698 Patent) at Abstract, Figs. 4–9, Fig. 11, 1:43–59, 3:6–10, 3:22–25, 4:42–67, 5:1–49, 5:54–61, 5:66–6:2, 6:39–50, 7:33–39, 7:54–8:6, 8:21–27, 8:34–40. Nothing in the specification even hints at lexicography or disavowal, which would be required to construe “received signal strength” as having anything other than its ordinary meaning. *See Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“We depart from the plain and ordinary meaning of claim terms based on the specification in only two instances: lexicography and disavowal.”). The file history similarly does not suggest any unusual use of the term. *See, e.g., JX-0005* (’698 Patent File History) at JX-

0005.121–127 (Apr. 29, 2019 Non-Final Rejection), JX-0005.161–170 (Oct. 25, 2019 Response to Non-Final Rejection), JX-0005.872–878 (Jan. 28, 2020 Notice of Allowance).

Moreover, contrary to what the ID’s analysis suggests, the ordinary meaning of “received signal strength” was not seriously disputed at the hearing. As the term’s plain language indicates, “received signal strength” refers to the strength (or power) of a received signal. Netgear’s expert Dr. Akl acknowledged that “received signal strength ... [is] a known concept in the art,” and that he has “taught students about received signal strength.” 1/18/24 Tr. (Akl Cross) at 483:9–14. He explained that in his teaching, he often models received signal strength consistent with the illustration on RDX-0010C.7 (below), which shows how a received signal consists of the transmitted signal noise plus noise and interference introduced in the channel. *See id.* at 484:9–486:3;



RDX-0010C.7. Dr. Akl recognized that “to measure the strength of the received signal, you measure the power in that electrical signal.” 1/18/24 Tr. (Akl Cross) at 486:4–16. He further explained that the strength (or power) of a signal is typically measured in watts or milliwatts (in linear scale) or in decibel milliwatts (dBm) (in logarithmic scale). *See id.* at 486:17–487:15. dBm is used by signal strength metrics that are well-known in the art, such as RSSI and RCPI (received channel power indicator). *See* JX-0002 (’698 Patent) at Abstract, Figs. 4–9, Fig. 11, 1:43–59, 3:6–

10, 3:22–25, 4:42–67, 5:1–49, 5:54–61, 5:66–6:2, 6:39–50, 7:33–39, 7:54–8:6, 8:21–27, 8:34–40; RDX-0007.9; 1/18/24 Tr. (Akl Cross) at 487:22–25. In sum, per Dr. Akl and its plain language, “received signal strength” is simply the strength (or power) of a received signal.

The ID nevertheless concludes that “a received signal strength” “includes channel utilization.” ID at 112; *see also* 1/18/24 Tr. (Akl Direct) at 414:23–415:1 (purporting to identify “channel utilization” as the claimed “received signal strength”). Yet, the evidence introduced at the hearing established that channel utilization is a fundamentally different metric than received signal strength. As Dr. Akl acknowledged, “channel utilization is a known concept in the wireless industry” that is “commonly measured as a percentage” and “conveys how much you’re using a channel.” 1/18/2024 (Akl Cross) at 489:13–490:6. Dr. Akl agreed with the analogy that “if you think of a channel as a highway and there’s cars on the highway, then 100 percent utilization would be [when] you can’t have any more cars on the highway,” whereas “channel utilization of 50 percent” would mean that “[t]he highway is halfway full of cars.” *Id.* at 490:7–14 (discussing RDX-7.0017).

As such, it is clear from Dr. Akl’s own testimony that received signal strength and channel utilization are fundamentally different metrics. Indeed, Dr. Akl conceded that despite having “taught an introductory course on communications” “many times,” he has never “taught [his] students that a utilization is a received signal strength.” 1/18/24 Tr. (Akl Cross) at 484:2–5, 484:9–11. As TP-Link’s expert Dr. Bims explained: “They are two different things. Utilization is looking at, you know, percentage of time that the channel is being used. That has nothing to do with how loud the signals are on the channel.” 1/22/24 Tr. (Bims Direct) at 848:10–17. This consistent testimony from both parties’ technical experts—Dr. Akl and Dr. Bims—establishes that the ordinary meaning of “received signal strength” does not include “channel utilization.”

[REDACTED]

Netgear also incorrectly argued—and the ID finds—that “a received signal strength” “includes ... rate.” *See* ID at 112; C. Post-HB at 53. Rate is another well-known term in the art, and refers to data transfer rate, often measured in megabits per second (Mbps). *See* 1/18/24 Tr. (Akl Direct) at 414:23–415:1. As Dr. Bims explained, “rate is not received signal strength”—in fact, for a given signal strength, the rate can differ substantially. *See* 1/22/24 Tr. (Bims Direct) at 849:20–850:7; RDX.0002.90; *see also* 1/23/24 Tr. (Akl Cross) at 1166:17–1167:8. Indeed, Dr. Akl admitted that while he has taught communications courses for many years, he has never taught his students that rate is the same as received signal strength. *See* 1/18/24 Tr. (Akl Cross) at 484:6–8. As with channel utilization, in view of this testimony from both parties’ experts, it cannot seriously be contended that the ordinary meaning of “received signal strength” “includes” rate.

In fact, the basis for the ID’s construction evidently is not that the *meaning* of “received signal strength” encompasses “channel utilization” or “rate”—which would be the required conclusion for a proper claim construction—but rather that channel utilization and rate are “indications” of, or relate to, received signal strength in some unspecified manner. *See* ID at 111–12. Notably, Dr. Akl was forced to concede that he “wouldn’t characterize” his opinion as being that “utilization literally is a received signal strength.” 1/18/24 Tr. (Akl Cross) at 491:13–20. Rather, he stated he merely contended that “utilization and signal strength are *correlated*.” *Id.* at 490:19–21. Moreover, after being impeached on cross-examination, Dr. Akl was forced to assert the untenable position that the mere fact that utilization is *related* to signal strength is sufficient to meet the claim language:

Q. And you were asked the question:

So the fact that the utilization *is related to* signal strength is sufficient to meet the claim language in your view?

Answer. *It is* -- it falls within the scope of what the claim requires, *yes*.

[REDACTED]

That was your testimony, sir?

A. Yes, and this is what I've said today.

Id. at 495:10–17.

Construing “received signal strength” to include two fundamentally different concepts merely because they arguably provide some indication of, or are related to, received signal strength in some manner betrays a fundamental misunderstanding of the claim construction process. Using the ID’s fitness analogy, *see* ID at 112, while muscle mass may be indicative of how much a person can bench press, that does not mean “bench press” should be construed to *mean* or “include” muscle mass. The two are fundamentally different concepts. Here, it likewise is undisputed that received signal strength, utilization, and rate are different concepts—they do not mean or “include” one another. The purpose of claim construction is to determine what a term *means* to a POSITA. *See Markman*, 52 F.3d at 986 (“[T]he focus [in construing disputed terms in claim language] is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean.”); *Phillips*, 415 F.3d at 1312–13. The purpose is *not* to expand the term’s scope to encompass fundamentally different concepts merely because they somehow are related to or are indicative of one another. *See Certain Computer Network Security Equipment and Systems, Related Software, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-1314 (“*Certain Computer Network Security Equipment and Systems*”), Claim Construction Order at 33 (U.S.I.T.C. Feb. 22, 2023) (rejecting construction of “identification data” because it “did not itself identify packets or flows but was merely ‘related to’ packets or flows, which is inconsistent with the claim language”). Because the ID’s construction of “received signal strength” distorts the claim construction process in a manner that has no basis in law or fact, it must be rejected.

Further, although it is unnecessary for purposes of rejecting the ID’s construction, it bears

[REDACTED]

emphasizing that the evidence in the record does not even establish any specific or coherent relationship between received signal strength, channel utilization, and rate. For example, although Dr. Akl opined that “utilization and signal strength are correlated,” he testified that this correlation “could be proportional *or* inversely proportional.” 1/18/24 Tr. (Akl Cross) at 490:19–491:1. When pressed on the nature of this supposed correlation—which he had suggested could go in either direction—Dr. Akl was unable to provide a more specific answer. *See* 1/18/24 Tr. (Akl Cross) at 492:16–493:17; 1/18/24 Tr. (Akl Direct) at 415:2–13 (“Channel utilization also depends on signal strength, because the better your channel, the better your signal strength, the *more or less* utilized it is going to be.”).

Dr. Akl’s inability to explain the specific nature or direction of the supposed relationship between utilization and signal strength is unsurprising, given that (again) the evidence in the record shows the two are distinct and essentially unrelated concepts. As Dr. Bims explained, for the same utilization, the signal strength could be strong or weak, such that “you cannot simply look at the utilization value and determine whether the signal strength is strong or weak.” 1/22/24 Tr. (Bims Direct) at 847:12–25; *see also* RDX-0002.87; 1/22/24 Tr. (Bims Direct) at 848:1–9 (explaining varying levels of utilization would not tell a POSITA the received signal strength).

Similarly, Dr. Akl admitted that rate has no direct relationship to signal strength—and that lower signal strength could correspond to a higher data rate, depending on other considerations such as the band and the physical layer technology. *See* 1/23/24 Tr. (Akl Cross) at 1165:25–1167:8; 1/22/24 Tr. (Bims Direct) at 849:8–850:18; RDX-0002.90. Accordingly, not only is one metric being “related to”—or “indicative” of—another metric not a proper basis for construing the latter as “including” the former, but Dr. Akl failed even to articulate any coherent relationship between these different metrics. *See, e.g.*, 1/18/24 Tr. (Akl Direct) at 414:23–415:13; 1/18/2024

[REDACTED]

(Akl Cross) at 489:13–490:14, 484:2–5, 484:9–11, 491:13–20, 492:16–493:17, 495:10–17; 1/22/24 Tr. (Bims Direct) at 848:10–17, 849:20–850:7; 1/23/24 Tr. (Akl Cross) at 1165:25–1167:8.

Notwithstanding these facts, the ID offers three arguments in support of its construction that received signal strength “includes” channel utilization and rate. Each argument lacks merit.

First, the ID incorrectly finds that TP-Link is limiting “received signal strength” to “RSSI.” See ID at 111. Although it is true that RSSI (received signal strength indicator) is a common measurement of received signal strength, see 1/18/24 Tr. (Akl Cross) at 487:16–19 (agreeing RSSI is “one example” of “received signal strength”), RSSI is not the *only* measure of received signal strength, and TP-Link has never contended it is. For example, another common measurement of received signal strength used in the 802.11 Wi-Fi standards is “Received Channel Power Indicator Measurement,” or “RCPI.” See RDX-0007.9; 1/18/24 Tr. (Akl Cross) at 487:22–25. Unlike utilization and rate, RSSI and RCPI both are measures of the strength of a received signal. While the ID references “TP-Link Br. at 63, citing RDX-0002.88,” see ID at 111, RDX-0002.88 (reproduced below) merely includes exemplary cites to the specification illustrating the distinction between “received signal strength” and “channel utilization.” Unsurprisingly, the cites under “received signal strength” highlight RSSI, because RSSI is a common indicator of received signal strength and is most frequently mentioned in the specification. But that does not mean TP-Link is limiting “received signal strength” to RSSI. See R. Reply Post-HB at 63; RDX-0002.88 (citing JX-0002 (’698 Patent) at 1:43–59, 8:34–40, 8:52–54). Moreover, even if TP-Link were limiting “received signal strength” to RSSI—which it is not—that would not justify the ID expanding the meaning of “received signal strength” to encompass metrics that have no defined relationship to the strength of a received signal.

[REDACTED]

Second, the ID cites col. 3, lines 20–28 of the ’698 patent’s specification as supposedly “clearly identif[ying] other metrics as indicative of signal strength and distinguish[ing] them from the more specific RSSI measurement.” ID at 111. As an initial matter, even assuming for the sake of argument that the metrics addressed in the cited section—hop count and data rate—are “indicative of signal strength,” that is (once again) not a legitimate basis for construing “received signal strength” as **including** those metrics. See *Certain Computer Network Security Equipment and Systems*, Claim Construction Order at 33. As discussed above, the ordinary meaning of “received signal strength” is not meaningfully contested, and the specification’s alleged disclosure of different metrics that are “indicative of signal strength” does not come close to the type of clear and unambiguous disclaimer or lexicography that would permit a departure from the term’s plain and ordinary meaning. See *Hill-Rom Servs.*, 755 F.3d at 1371; *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1366–67 (Fed. Cir. 2012) (“To constitute disclaimer, there must be a clear and unmistakable disclaimer.”).¹⁴

Third, the ID erroneously relies on Dr. Akl’s purported identification of rate and channel utilization as metrics that indicates signal strength. See ID at 111–12. As discussed above, however, Dr. Akl’s testimony at most drew tenuous and incoherent relationships between these metrics. He did not dispute that the terms’ meanings are fundamentally distinct. Again, even if the terms are related in some way—and Dr. Akl could not define any coherent relationship—that would not be a basis for construing “received signal strength” to “include” utilization or rate. Dr.

¹⁴ As Dr. Bims explained, col. 3, lines 20–28 actually is “making a **distinction** [between metrics like hop count and data rate] and signal strength,” in the specific context of a “daisy chain configuration” where “different APs will have different hop count values” and “may also have different data rates in trying to reach the AP.” 1/22/24 Tr. (Bims Direct) at 850:19–851:25. Contrary to Dr. Akl’s contention, these lines do **not** “give[] examples [of signal strength] like hop count, data rate, and RSSI.” 1/19/24 (Akl Direct) at 549:25–550:8; see also *id.* 1/18/24 (Akl Direct) at 374:18–24; ID at 111.

[REDACTED]

Akl’s extrinsic testimony certainly is not sufficient a basis to redefine the term’s ordinary meaning. *See Phillips*, 415 F.3d at 1318–19; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (“Only if there were still some genuine ambiguity in the claims, after consideration of all available intrinsic evidence, should the trial court have resorted to extrinsic evidence, such as expert testimony, in order to construe claim 1.”).

Remarkably, the ID casually dismisses Dr. Akl’s inability to describe any coherent correlation between received signal strength, utilization, and rate as being “not relevant.” ID at 112. As support for that conclusion, the ID introduces an analogy between bench presses, pull ups, and fitness. *See id.* Putting aside the internal factual error in that analogy (bench press and pull-up strength are, in fact, highly correlated), the ID’s argument appears to be that three metrics can each be indicative of a fourth metric, even if the three are not correlated with one another. The ID then concedes—remarkably—that “RSSI [Received Signal Strength Indicator], channel utilization, and rate ... **are not correlated to each other.**” *Id.* As discussed above, however, ***RSSI is a direct measure of received signal strength.*** *See* JX-0002 (’698 Patent) at Abstract, Figs. 4–9, Fig. 11, 1:43–59, 3:6–10, 3:22–25, 4:42–67, 5:1–49, 5:54–61, 5:66–6:2, 6:39–50, 7:33–39, 7:54–8:6, 8:21–27, 8:34–40; 1/18/24 Tr. (Akl Cross) at 486:4–487:19 (agreeing “received signal strength” can be measured in terms of RSSI). Accordingly, the ID’s concession that channel utilization and rate are not correlated with RSSI makes it impossible to reasonably conclude that these metrics are correlated with received signal strength. The ID’s conclusion that channel utilization and rate nonetheless “each indicate received signal strength” is logically inconsistent and flies in the face of the facts in the record. Moreover, once again, even if such a relationship did exist, that still would not provide any legitimate basis to construe “received signal strength” as “including” utilization and rate, because the three remain fundamentally distinct concepts. The

[REDACTED]

ID's contrary claim construction is clearly erroneous and must be rejected.

b. The accused APS “preferred backhaul” functionality is based on utilization and rate, not “received signal strength,” and therefore does not infringe.

Claim 12 requires “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. As the ID itself acknowledges, it is undisputed that the accused APS “preferred backhaul” functionality is based on [REDACTED], *not* received signal strength. *See, e.g.*, ID at 112–16; CX-2779C.36 (APS Module Test Design); 1/18/24 Tr. (Baer Direct) at 297:14–299:8 (describing source code flow and check of [REDACTED]); 1/18/24 Tr. (Akl Direct) at 408:23–410:10; 1/22/24 Tr. (Bims Direct) at 844:25–847:11 (describing load balancing based on [REDACTED]). The ID relies on utilization and rate—equating them, under its flawed construction, with “received signal strength”—to find infringement. *See* ID at 113–15. The ID's infringement analysis does not provide any basis for concluding that utilization and rate somehow correspond to “received signal strength” in the context of the Accused Products. Rather, the analysis simply relies on the ID's flawed construction equating these metrics. As discussed above, under the ordinary meaning of “received signal strength,” channel utilization and rate do not practice this limitation. The ID therefore clearly errs in finding infringement. *See* ID at 116; *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 812 (Fed. Cir. 2002) (“Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim.”).

To the extent the ID is interpreted as finding that utilization and rate are sufficiently indicative of “received signal strength” in the Accused Products to establish that the “received signal strength” limitation is met under an ordinary-meaning construction, such a finding would also be clearly erroneous, because (as discussed above) the evidence fails to establish any coherent relationship between those metrics. 1/22/24 Tr. (Bims Direct) at 847:12–25, 848:10–17, 849:20–

[REDACTED]

850:7; 1/18/24 Tr. (Akl Direct) at 414:23–415:13; 1/18/24 Tr. (Akl Cross) at 484:2–11, 489:13–490:14, 490:7–14, 490:19–491:1, 491:13–20, 492:16–493:17, 495:10–17; 1/23/24 Tr. (Akl Cross) at 1165:25–1167:8. Utilization or rate “cannot serve as an adequate proxy” for received signal strength, because there is no coherent relationship between them—much less any relationship that is “guaranteed.” *See Gen. Elec. Co. v. Int’l Trade Comm’n*, 685 F.3d 1034, 1042 (Fed. Cir. 2012) (affirming Commission’s finding of no literal infringement where “experts’ testimony support[ed] the Commission’s finding that a predetermined value of time ‘cannot serve as an adequate proxy for current because the relationship between the two cannot be guaranteed’”); *Certain Routers, Access Points, Controllers, Network Management Devices, Other Networking Products, and Hardware and Software Components Thereof*, ITC Inv. No. 337-TA-1227 (“*Certain Routers*”), Final ID at 44, 55–58 (U.S.I.T.C. Dec. 7, 2021) (finding no infringement because “complainant’s alleged ‘total airtime’ and/or ‘channel utilization’ metric is not a transmission capacity and cannot satisfy the ‘overall transmission capacity’ in the claims”), *not reviewed in* Comm’n Det. (U.S.I.T.C. May 3, 2022); *Brigham & Women’s Hosp., Inc. v. Perrigo Co.*, 761 F. App’x 995, 1004–05 (Fed. Cir. 2019) (“Data merely correlating to the claimed limitation does not suffice to prove literal infringement.”).¹⁵

Indeed, it is telling that (again) Dr. Akl could not even consistently identify the direction of the purported correlation between channel utilization and “received signal strength.” *See*

¹⁵ The ID does not reference the doctrine of equivalents (“DOE”), and the DOE is not a basis for any finding of infringement in the ID. However, even if the ID is interpreted as making a finding under the DOE (which it should not be), the “preferred backhaul” functionality does not infringe under the DOE. Dr. Akl’s DOE testimony was limited to utilization and did not address rate, *see* 1/18/24 Tr. (Akl Direct) at 415:22–416:15, and his testimony regarding utilization lacked the particularity required for a legally sufficient DOE argument. *See VLSI Tech. LLC v. Intel Corp.*, 87 F.4th 1332, 1344–45 (Fed. Cir. 2023). Further, as Dr. Bims explained, utilization and rate are not equivalent, and have nothing to do with “received signal strength.” *See* 1/22/24 Tr. (Bims Direct) at 848:10–17, 850:10–13.

[REDACTED]

1/18/24 Tr. (Akl Direct) at 415:2–13 (“Channel utilization also depends on signal strength, because the better your channel, the better your signal strength, the *more or less* utilized it is going to be.”). Notably, Dr. Akl opined that high utilization may correlate in some, but not all, circumstances with high received signal strength.¹⁶ And he identified a channel utilization above 50% as the “threshold” that triggers the “attempt to utilize a different channel.” 1/19/24 Tr. (Akl Cross) at 513:6–515:4. According to this positive correlation that Dr. Akl purported to identify, the increase in channel utilization would correspond to “received signal strength” also going above a threshold. Yet, claim 12 requires the *opposite* triggering condition: “detecting that a received signal strength ... is *below* a threshold.” Thus, even if a correlation between utilization were sufficient to meet the claims—which it is not—under Dr. Akl’s posited positive correlation between utilization and received signal strength, the limitation still would not be met, because the direction of the correlation is the opposite to what is required by the claims.¹⁷

For all of these reasons, the ID’s finding of infringement by the preferred backhaul functionality is clearly erroneous and should be reversed.

2. 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

¹⁶ Compare 1/18/24 Tr. (Akl Cross) at 491:4–12 (suggesting that in one example, “if you use very good signals, then a high channel utilization would imply a good signal strength”), *with id.* at 493:4–17 (conceding on cross-examination that if “utilization was 40 percent, and then it goes up to 60 percent,” he would be unable to say whether “the received signal strength in [his] view increase[s] or decrease[s]” because it is an “incomplete hypothetical”).

¹⁷ Dr. Akl’s suggestion that “whether you’re above or below a threshold is a matter of perspective, and so they both mean the same thing” is nonsensical. 1/18/24 Tr. (Akl Direct) at 416:16–417:13, 384:14–18. As he was forced to concede, the claims specifically recite received signal strength being *below* a threshold. See 1/19/24 Tr. (Akl Cross) at 510:13–511:19.

[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* EDIS Doc. ID 803469, 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 this construction, nor does this definition of the term “default frequency band” appear in the specification or in any of the other intrinsic or extrinsic evidence. This construction also bears no relation to the plain meaning of the word “default.” Indeed, 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.” Indeed, if all of the available bands are evaluated according to some criterion (such as an equation), and all of them are available to be selected first (provided they satisfy the criterion), then *none* of the bands 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. Because the ID’s claim 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 [REDACTED] indisputably does not use a “default frequency band” and therefore does not infringe.¹⁸

¹⁸ Netgear accused two APS features for the “default frequency band” limitation [12a]: (1) “preferred backhaul”; and (2) a “path quality” equation based on [REDACTED]. *See* Netgear Post-HB at 45 (citing 1/18/24 Tr. (Akl Direct) at 411:18–412:1; CDX-0003C.41). This section addresses Netgear’s theory under the second feature, *i.e.*, [REDACTED]. For Qualcomm-based accused products, the ID found the first feature (preferred backhaul) to be [REDACTED], ID at 109–11, and the ID’s infringement finding is therefore necessarily

[REDACTED]

a. **The ID errs in construing “default frequency band” as “a first selected frequency band.”**

The ID erroneously construes “default frequency band” to mean “a first selected frequency band”—an interpretation neither party argued at the hearing. *See* ID at 97 (citing Order No. 33 at 28–32). On its face, this construction covers a situation where all available bands are evaluated according to an equation, and the highest-scoring band is selected, thereby becoming “a first selected frequency band.” In that scenario, however, the first selected frequency band is not a default frequency band—it simply is the band that is selected first, per the equation. As such, the ALJ’s construction effectively reads the word “default” out of the limitation. Critically, Netgear relied on this erroneous and overbroad construction for purposes of its infringement theory. At the hearing, Netgear’s expert Dr. Akl conceded after being impeached on cross-examination that his infringement theory is based on “saying the byproduct of the rate and quota caused you to pick something first *and that will meet the ALJ’s construction.*” 1/19/24 Tr. (Akl Cross) at 522:4–20. The ALJ’s construction of “default frequency band”—as applied by Dr. Akl in an argument accepted by the ID—encompasses a situation where there are two bands, *neither of which is used by default as the backhaul*, and the band that happens to have “better connectivity” at a given time becomes “a first selected frequency band,” per an equation “caus[ing] you to pick something first.” *Id.*; 1/23/24 Tr. (Akl Cross) at 1167:13–25. Because that interpretation of the claim language ignores the plain meaning of the word “default,” the ID’s construction is clearly erroneous and should be rejected.

Importantly, the intrinsic evidence shows that the claims use the term “default” consistent with the word’s ordinary meaning. This term appears in the first step of the claimed operations:

based on the second feature ([REDACTED]), though the ID does not clearly articulate the basis for its finding, *see* ID at 106.

“performing an attempt to utilize a first channel *in a default frequency band* as a backhaul.” JX-0002 (’698 Patent) at Claim 12. The claims do not refer to any selection process among multiple candidates, such that the band that happens to be selected first could become the “default” backhaul band. Rather, the claims simply recite attempting to utilize a “default frequency band”—which as a matter of plain meaning indicates that the frequency band is pre-selected or otherwise constitutes a specific frequency band that is used by default in the initial claimed attempt.

The specification’s discussion is consistent with this plain meaning. Although the specification does not expressly use the word “default” in connection with a frequency band, all of the disclosed embodiments describe using the 5 GHz band as a dedicated backhaul, with other bands being utilized only as backup options. *See, e.g.*, JX-0002 (’698 Patent) at 3:45–51 (“The 5 GHz high band is defined as a dedicated backhaul If the dedicated wireless link falls below the quality threshold, the 2.4 GHz band may be used as a backup option.”), 3:56–59.¹⁹ The Provisional Applications similarly describe “[u]sing the 5GHz high band or low band as a dedicated backhaul,” and “[u]sing the 2.4 GHz band as backup if the 5GHz band fails to reach.” CX-2716 (May 2016 Provisional) at 22. Thus, in each embodiment, the dedicated 5 GHz band is used as the default backhaul band—*i.e.*, the band that is automatically selected as the backhaul band—with other bands being used only if the dedicated backhaul band’s quality is too low.

This intrinsic evidence also is consistent with extrinsic dictionary definitions, which

¹⁹ Other embodiments likewise are consistent. *See* JX-0002 (’698 Patent) at 3:66–4:7 (discussing Fig. 3, where nodes 27a and 27b are connected by a dedicated 5 GHz backhaul connection, with 2.4 GHz used only when 5 GHz is not available), 4:42–46 (noting with respect to Fig. 4 that the “5 GHz dedicated channel is the primary backhaul channel. If 5 GHz does not work, the system tries to use the 2.4 GHz band”), Fig. 5 (depicting association with dedicated 5G band unless threshold checks 208, 212, and 216 fail), 5:42–46 (discussing Fig. 6, which utilizes the 5G band as long as RSSI is above a threshold), 5:63–6:5 (discussing connecting to 5 GHz as long as it is above an RSSI threshold).

[REDACTED]

describe a “default” as a preset selection that is used automatically in the absence of user choice. See Ex. 7.1, *Merriam-Webster’s Collegiate Dict.* (11th ed. 2012) at 325 (“a selection automatically used by a computer program in the absence of a choice made by the user”); Ex. 7.2 *Webster’s New World College Dict.* (4th ed. 2010) at 378 (“a preset choice, setting, etc. for automatic use as by a program when no other is specified by a user”).²⁰ These definitions match the claims and the specification, where the dedicated 5 GHz backhaul band is a preset backhaul that is selected without user choice and that is sought to be used automatically (with other bands being used only as a backup if the 5 GHz band’s quality turns out to be too low). Consistent with this intrinsic and extrinsic evidence, TP-Link’s proposed construction (during the *Markman* process and now) is a “preset frequency band used automatically in the absence of a choice made by the user.” EDIS Doc. ID 803469, Joint Claim Construction Statement, at 4. For purposes of the ID’s infringement finding, however, the specific language of TP-Link’s proposed construction is less important than the basic proposition that there must be a specific band that is designated as the default band for the backhaul—a proposition that flows directly from the plain meaning of the word “default.”

The ALJ’s Claim Construction Order raised two primary objections to TP-Link’s plain meaning construction of “default frequency band,” neither of which is relevant to the ultimate infringement issue. First, the ALJ contended that “TP-Link’s use of the word ‘preset’ suggests that the ‘default frequency band’ will necessarily be used, when the claim language is clear that it

²⁰ See also Ex. 7.4, *Newton’s Telecom Dict.* (28th ed. 2014) at 387 (“The default is a factory-set ... setting or configuration. It is the preset value that the program or equipment comes with. It will work with default values in the absence of any other command from the user.”); Ex. 7.5, *Dict. of Computing* (6th ed. 2010) at 97 (“a predefined course of action or value that is assumed unless the operator alters it”); Ex. 7.6, *Dict. of Comp. Sci. & Eng.* (2014) at 57 (“The options that are used if no others are specified.”); Ex. 7.7, *Dict. of Comp. Sci.* (7th ed. 2016) at 149–50 (“A value that is used when no other value has been supplied.”); Ex. 7.8, *Authoritative Dict. of IEEE Standards Terms* (7th ed. 2000) at 281 (“Pertaining to a value, attribute, or option that is assumed in place of a value, attribute or option when one is required, but not specified explicitly”).

[REDACTED]

may not.” Order No. 33 at 31. That characterization of TP-Link’s construction is incorrect—the word “preset” merely indicates that there *is* a default band and that, as the first limitation of claim 12 reflects, an attempt will be made to use it as the backhaul. As the claim language makes clear, that attempt need not succeed. Regardless, the issue for purposes of non-infringement (as discussed below) is that the accused path quality equation does not preset *any* band as the backhaul, such that none can reasonably be identified as a “default frequency band.”

Second, the ALJ stated that “TP-Link’s injection of user choice in its proposed construction confuses the issue.” Order No. 33 at 31. The “no user choice” requirement is appropriate as it is drawn directly from dictionary definitions that reflect the term’s plain meaning. Regardless, the question of user choice is not implicated by Netgear’s infringement theory, so this requirement can be removed from the construction without issue.

b. Under the proper construction of “default frequency band,” the accused path selection function in the Qualcomm-based Accused Products does not infringe.

Under TP-Link’s construction—or any reasonable application of the term “default frequency band” that reflects the plain meaning of the word “default”—the accused path quality equation does not practice this limitation, because it does not use any particular band as a backhaul by default.²¹ Rather, it applies the [REDACTED] to evaluate all available bands. It is undisputed that the [REDACTED]

[REDACTED]. See CDX.0003C.41; 1/19/24 Tr. (Akl Cross) at 517:23–518:10.

This equation is applied to [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

²¹ For limitation 12[a], Netgear relied on both the preferred backhaul functionality (which is disabled in Qualcomm-based products) and, independently, APS’s [REDACTED].

[REDACTED]

1/19/24 Tr. (Akl Cross) at 519:8–25; *see also id.* at 520–522.²² Because none of the available backhaul bands is preselected or otherwise sought to be used by default, this functionality cannot infringe under any appropriate construction of “default frequency band.”

The ID’s analysis does not change this conclusion. Indeed, the ID’s conclusion is deficient even under its own construction of the term. The ID notes that the Accused Products each use the “highest available frequency band” as the “dedicated backhaul band.” ID at 106. However, the term “dedicated” simply means that the band is not used for client communication. 1/18/24 Tr. (Akl Direct) at 361:20–362:3, 431:10–432:8. It does not mean that the band necessarily is “first selected” to be used as the backhaul band, let alone that is a “default” band. For example, even if the 6GHz band happens to be the dedicated backhaul, a 5 GHz band still would be selected as the backhaul first, if the results of the [REDACTED] are higher for that 5 GHz band. *See* 1/19/24 Tr. (Akl Cross) at 519:8–21. Thus, the ID’s identification of a dedicated backhaul in each product does not establish the existence of a “default frequency band” that is used as the backhaul. *See* ID at 102 (distinguishing between “default” and “dedicated”).

The ID further states that “TP-Link provided an interrogatory response that identified the default frequency band used as a backhaul with respect to a second node in the network in its products.” ID at 106 (citing CX-3287C.1–3). That statement is false. TP-Link’s interrogatory response simply identified the “dedicated” backhaul band. *See* CX-3287C.1–3. Contrary to the ID’s assertion, it does not say anything about a “default” backhaul band.

Unsurprisingly, the ID is bare of any legitimate rationale for how the TP-Link products’

²² While Dr. Akl stated in conclusory fashion that “6G high will have a higher negotiated rate,” 1/18/24 Tr. (Akl Direct) at 412:4–7, that is only sometimes the case, including because 6G has relatively poor coverage. *See id.* (Akl Cross) at 515:5–12; 1/23/24 Tr. (Akl Cross) at 1166:13–24 (testifying that it is merely “a possibility” that higher frequency band will have higher rate).

[REDACTED]

dedicated backhaul bands could constitute a “default frequency band” under any construction (even the ID’s incorrect one). Although the ID provides a string-cite to evidence that supposedly addresses this issue, *see* ID at 106 (citing 1/18/24 Tr. (Akl Direct) at 408:23–412:19; CX-2779C.36–37 (APS Test Design); CX-2481C (internal technical specification); CX-2765C.16 (identifying dedicated backhaul)), the cited documents and testimony merely confirm that TP-Link products include a dedicated backhaul band (*i.e.*, a band that does not permit client access) and that the [REDACTED] 1/19/24 Tr. (Akl Cross) at 519:8–25. Because the evidence of record indisputably shows that the accused [REDACTED] does not use any particular band as the default band for backhaul, the ID’s infringement finding should be reversed.

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

The Asserted Claims require establishing a different backhaul band be performed “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. 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. Indeed, it is [REDACTED] [REDACTED]—the products. The ID nevertheless finds infringement based on this feature—an absurd result where TP-Link has been found to infringe based on code that does [REDACTED] on the Accused Products. The ID reaches this clearly erroneous conclusion in the face of a complete absence of evidence that the relevant code is compiled. Instead, 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”

[REDACTED]

the code was [REDACTED]. ID at 117. Netgear’s expert failed even to address this issue. Because the unequivocal and uncontested evidence in the record establishes that TP-Link [REDACTED] the accused Qualcomm driver roaming feature—and indeed, that this feature [REDACTED] on the Accused Products—the ID’s infringement finding is clearly erroneous and must be reversed.

a. The accused Qualcomm driver roaming code is an [REDACTED].

The accused TP-Link products use Wi-Fi chips from third-party chip suppliers Qualcomm and Broadcom. Besides providing the Wi-Fi chip itself, Qualcomm and Broadcom supply associated driver code that is referred to as a Software Development Kit (“SDK”), which allows the customer to access the chip’s capabilities. *See* 1/22/24 Tr. (Bims Direct) at 837:14–838:5. Both Qualcomm and Broadcom provide Wi-Fi chips for a wide range of Wi-Fi devices (including not just mesh APs, such as the Accused Products, but also phones, laptops, TVs, and other devices that support Wi-Fi). Given the wide range of customers and devices that the SDK needs to support, it typically includes features that are relevant to some customers and device types, but not to others. *See id.* at 838:3–14. For this reason, Qualcomm and Broadcom often provide the capability to “either not include portions of the SDK in [a customer’s] software build or to disable certain features in their software build.” *Id.* at 838:15–24.

The primary mechanism that determines whether a given portion of the SDK is included in a customer’s build is known as a compile-time configuration (or “flag”). As testimony from Netgear’s own source code expert Mr. Baer established, a given feature may be compiled and included on the product (or not) based on #if (or #ifdef) statements. *See* 1/18/24 Tr. (Baer Direct) at 270:5–271:19. These statements are used to check whether a compile-time flag that would include the optional feature has been defined. *Id.* Mr. Baer presented a tutorial-style slide titled “Product Software Basics: Build/Compile Time Configurations,” which expressly illustrates that

[REDACTED]

compiled code may not include certain features, depending on the compile-time define settings:

[REDACTED]

CDX-0003C.4; *see also* 1/18/24 Tr. (Baer Direct) at 270:5–271:19 (explaining “build or compile time configuration affects what source code actually is built or compiled into the software, and -- that goes onto the product”). Critically, Mr. Baer conceded that “[w]hen there’s an ifdef with no corresponding define, then the code within the ifdef is not compiled or included on the product.” *Id.* (Baer Cross) at 325:6–23.

The roaming code in question is but one feature among many that are included in third-party Qualcomm driver code. As TP-Link’s expert Dr. Bims explained at the hearing—and as Netgear’s experts do not dispute—this roaming feature is located inside a conditionally compiled block of code. *See* 1/22/24 Tr. (Bims Direct) at 839:5–19. The relevant code follows the C preprocessor statement “#if.” *Id.* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. Uncontested evidence in the record establishes that the accused Qualcomm driver roaming code is [REDACTED] in the Accused Products.

Netgear's witnesses provided no testimony whatsoever regarding the [REDACTED], let alone any evidence that this preprocessor compile-time flag is set in the Accused Products—despite it being critical to determining whether the Qualcomm roaming feature even exists on the Accused Products. *See* 1/18/24 Tr. (Akl Direct) at 420:6–421:9; *id.* (Baer Direct) at 303:3–307:2; 1/18/24 Tr. (Baer Cross) at 325:6–23.

Given the “[h]undreds of hours” Mr. Baer spent reviewing code in this case, he certainly had the opportunity to identify any code defining the [REDACTED]—if it existed—to show the relevant roaming code was compiled and included on the products. 1/18/24 Tr. (Baer Direct) at 268:24–269:1. But Mr. Baer did not identify any such code. Mr. Baer also was aware that to show source code was compiled and included on a product, he would need to analyze the compile-time configurations. As noted above, he presented a tutorial-style slide on compile-time configurations. *See* CDX-0003C.4; 1/18/24 Tr. (Baer Direct) at 270:5–271:19. Moreover, for other code, Mr. Baer admitted that he knew the code was compiled “because [he] saw that define.” *Id.* (Baer Cross) at 325:18–327:1; *see also* C. Post-HB at 54 (addressing compilation issue for different feature). Yet, for the Qualcomm driver roaming code, Mr. Baer conspicuously failed to provide any analysis regarding whether the compile-time flag is defined. Not only is this lack of testimony a failure of proof, but given Mr. Baer’s recognition of compile-time flags and his testimony about them in relation to other features, his failure to address the flag in this context supports an inference that he knew the flag is not defined.

Nor is there any circumstantial evidence to indicate that the Qualcomm driver roaming code is included or used on TP-Link products. Again, this feature is one among hundreds that are

[REDACTED]

included in the much broader Qualcomm SDK. Netgear did not identify a single TP-Link or Qualcomm document referring to this feature, nor did Netgear provide any testimony from a Qualcomm witness. If the Qualcomm chip driver roaming code were compiled and used in any software build provided to TP-Link, a Qualcomm witness could have testified to that fact. Yet, Netgear presented no such testimony, despite having had every opportunity to depose a Qualcomm witness during fact discovery—and despite including a Qualcomm witness on its witness list for the hearing, only to inform TP-Link mid-proceeding that it would not call that witness.

In short, the sum total of the evidence that Netgear presented on the crucial question of whether the relevant roaming feature is compiled onto the Accused Products is zero. Netgear did not present one iota of testimony that the critical compile-time flag is set, nor did it present one iota of documentary evidence even referring to the roaming feature. On this basis alone, Netgear indisputably failed to meet its burden of proof. *See INVT SPE LLC v. Int’l Trade Comm’n*, 46 F.4th 1361, 1380 (Fed. Cir. 2022) (affirming ALJ’s finding of non-infringement as supported by substantial evidence where lack of source code analysis resulted in “significant evidentiary gap”); *Certain Magnetic Data Storage Tapes and Cartridges Containing the Same*, Inv. No. 337-TA-1012 (“*Certain Magnetic Data Storage Tapes*”), ID at 307–09 (U.S.I.T.C. Sept. 1, 2017) (finding Complainant, despite having “discusse[d] the LTO-7 standard exhaustively,” had “not met its burden of showing that the accused method is performed by [Respondents]” because its “expert could not identify the source code responsible for the encoding step”), *affirmed with additional discussion* by Comm’n Op. at 90–97 (U.S.I.T.C. Apr. 2, 2018); *Metro. Life Ins. Co. v. Bancorp Servs., L.L.C.*, 527 F.3d 1330, 1334 (Fed. Cir. 2008) (recognizing that “source code ... was critical to understanding both the functioning of the Vantage system and many of the documents regarding that system”); *Uni-Sys., LLC v. U.S. Tennis Ass’n*, No. 17 CV 147 (KAM) (CLP), 2017 WL

[REDACTED]

4081904, at *6 (E.D.N.Y. Sept. 13, 2017) (“the source code is critical to an understanding of how defendants’ system works”) (citing FED. R. CIV. P. 26(b)(1)).

In addition, while Netgear failed to proffer the necessary evidence to support its infringement theory, uncontested testimony from TP-Link’s witnesses confirmed that the roaming feature is [REDACTED] on the Accused Products. TP-Link offered testimony on this issue from its engineer Mr. Pu, who is highly knowledgeable regarding the accused functionality. Mr. Pu has been a TP-Link engineer for almost ten years, during which time he has risen to become the section chief of Deco, managing “six teams and about 95 people.” 1/22/24 Tr. (Pu Direct) at 940:8–18. Given Mr. Pu’s experience and position, he is very familiar with the design and functionality of the only accused products for the ’698 patent, TP-Link’s Deco products. *See id.* at 940:9–21. Moreover, he is personally familiar with the TP-Link APS code, as he himself authored it. *See id.* at 942:5–943:10. Mr. Pu provided unequivocal testimony that the accused Deco products do not contain any chip driver that would [REDACTED]. *See* 1/22/24 Tr. (Pu Direct) at 950:12–951:14 (discussing “the Qualcomm and Broadcom drivers in TP-Link Deco products”), 953:2–7 [REDACTED] [REDACTED]). Mr. Pu explained that because TP-Link has its own custom-designed Auto Wi-Fi Networking (AWN) roaming functionality, it [REDACTED] the chip driver roaming functionality. *see id.* at 953:8–24. Indeed, Mr. Pu explained that if the chip driver roaming functionality operated alongside AWN, which performs the same function, it would interfere—and be in conflict—with AWN. *See id.* at 953:8–24.

TP-Link also presented testimony on this issue from its expert Dr. Bims. To determine whether the Qualcomm driver roaming code actually is compiled and included on the Accused Products, Dr. Bims examined the Qualcomm roaming code that Netgear printed and relied on to

[REDACTED]

identify whether the [REDACTED] anywhere in that code. As Dr. Bims testified: “That flag, from my research, I’ve not identified where that flag is defined anywhere in a TP-Link build.” 1/22/24 Tr. (Bims Direct) at 839:20–23; *see also id.* (Bims Redirect) at 932:10–16 (testifying he “review[ed] the Qualcomm driver code that was relied on by Dr. Akl and Mr. Baer” and “did not see any evidence” that the code [REDACTED] [REDACTED]).

The evidence in the record therefore is clear and uncontradicted. Mr. Pu testified that TP-Link [REDACTED] chip driver roaming code, because it has its own custom-designed AWN solution, which the chip driver roaming code would interfere or conflict with. And Dr. Bims analyzed the Qualcomm driver code and was unable to find any evidence that the [REDACTED] [REDACTED] on the Deco products. Neither Dr. Akl nor Dr. Baer provided any contrary testimony, and Netgear failed to present any testimony from a Qualcomm witness. Indeed, as noted above, Dr. Akl and Dr. Baer did not address the roaming compile-time flag at all—despite being aware of the importance of compile-time flags, and despite arguing that they had identified such flags for other features in this case.

- c. Given the uncontested evidence establishing that the accused Qualcomm driver roaming code is not compiled or used on the Accused Products, the ID’s contrary finding is clearly erroneous.**

Notwithstanding the complete lack of evidence from Netgear that the roaming code at issue is compiled and used—and notwithstanding TP-Link’s uncontested evidence that it is not—the ID concludes that “[t]he evidence supports that the Qualcomm driver code is compiled in the Qualcomm-based accused products.” ID at 118. That conclusion is premised on clearly erroneous

[REDACTED]

factual findings, as well as legally erroneous burden-shifting, and should be reversed.²³

First, the ID clearly errs in relying on Mr. Baer’s testimony as supporting that the Qualcomm roaming code is compiled, when Mr. Baer did not even address the compilation issue. As the ID concedes, Mr. Baer “did not identify a specific compile time flag.” ID at 117. As discussed above, the technical question of whether the code is compiled hinges entirely on whether the compile-time flag [REDACTED]. *See* 1/18/2024 Tr. (Baer Cross) at 325:6–23 (conceding that “[w]hen there’s an ifdef with no corresponding define, then the code within the ifdef is not compiled or included on the product”). Mr. Baer presented zero testimony on this issue. Although the ID cites “Baer Tr. at 268:24–269:5,” *see* ID at 117, Mr. Baer merely stated in that portion of his testimony that he spent hundreds of hours reviewing code across the entire case, not that he spent any particular amount of time reviewing the Qualcomm driver roaming code or—critically—that he devoted any time to determining whether this code was actually compiled. The ID also cites “Baer Tr. at 303:3–305:19,” *see* ID at 117, but that testimony merely addressed a handful of questions regarding the Qualcomm driver roaming code’s purported functionality. Mr. Baer did not address—then or ever in his testimony—whether that code was actually compiled and included on the Accused Products.

Second, the ID clearly errs in finding that Mr. Baer’s testimony “is supported by TP-Link’s internal engineering documents,” specifically referencing CX-3286C.24. ID at 117–18. Mr. Baer never addressed this document in his testimony. *See* Baer Tr. at 303:3–305:19 (Qualcomm driver code testimony). CX-3286C.24 was only shown briefly on cross to Mr. Pu, who stated that he

²³ The ID initially contends that TP-Link did not “squarely rais[e]” this issue in its pre-hearing brief. ID at 116–17. That is incorrect. TP-Link’s pre-hearing brief expressly states that Netgear “provides no evidence that [the Qualcomm and Broadcom Chip Driver Code] is ever used.” TP-Link Pre-Hearing Brief at 159–60.

[REDACTED]

“ha[d] not read ... this document before,” but believed it “would be talking about the Qualcomm driver code.” 1/22/24 Tr. (Pu Cross) at 954:24–25. Importantly, there is no testimony or evidence to suggest that this document relates to the specific *roaming* code at issue here—let alone that it demonstrates the roaming code is compiled or used. As noted above, the Qualcomm driver SDK includes hundreds of features, of which the roaming feature is only one. TP-Link has never disputed that it uses the Qualcomm SDK more generally. *See, e.g.*, 1/22/24 Tr. (Pu Direct) at 950:9–951:5. Yet, the roaming code is merely an optional feature *within* the broader Qualcomm SDK driver code. *See* 1/22/24 Tr. (Bims Direct) at 839:5–19. As discussed above, the evidence showed that while TP-Link’s products use Qualcomm driver code, they [REDACTED] the specific roaming feature. Nor does CX-3286C.24 suggest otherwise, as it merely discusses link state statistics, with no mention of roaming. *See* CX-3286C.24 (“The basis for determining the link state is the [REDACTED] [REDACTED].”). Because CX-3286C on its face has nothing to do with the roaming code—and there was no evidence to support that it does—the ID clearly errs by relying on this document to conclude that the Qualcomm roaming code is [REDACTED] on the Accused Products.

Third, the ID clearly errs by disregarding Dr. Bims’s testimony, which established that the roaming code is [REDACTED] on the Accused Products. As discussed above, Dr. Bims “review[ed] the Qualcomm driver code that was relied on by Dr. Akl and Mr. Baer” and could not identify any location where the relevant compile-time flag was defined. 1/22/24 Tr. (Bims Redirect) at 932:10–16; *see also id.* (Bims Direct) at 839:20–840:9. The ID erroneously dismisses this testimony on the basis that Dr. Bims supposedly did not review the relevant Qualcomm code. *See* ID at 117. But that is incorrect. Although Dr. Bims did not review the roaming code at the Qualcomm facility, he reviewed *the same code* in printed form—as reflected in his undisputed

[REDACTED]

testimony that he “review[ed] the Qualcomm driver code that was relied on by Dr. Akl and Mr. Baer.” 1/22/24 Tr. (Bims Redirect) at 932:10–16. There is no requirement that evidence must be reviewed in electronic rather than paper form. Given that Netgear specifically printed the code for the Qualcomm chip driver roaming functionality, if the [REDACTED], it should be defined in that code. Dr. Bims reviewed the code printed by Netgear, and determined it did not define the flag. Indeed, Dr. Bims expressly testified about the driver source code, put that code on-screen in a demonstrative, and testified about the relevance of a conditional #if flag and that he had been unable to identify “where that flag is defined anywhere in a TP-Link build.” 1/22/24 Tr. (Bims Direct) at 839:5–840:9 (citing RDX-0002.74C; CPX-0075C). By “TP-Link build,” Dr. Bims was referring to the Qualcomm code as it would be compiled and incorporated on TP-Link products—which is the relevant subject to analyze. The ID clearly errs in disregarding Dr. Bims’s testimony that he reviewed the Qualcomm driver roaming code and concluded the compile-time flag was not set. *See* 1/22/24 Tr. (Bims Direct) at 839:8–840:9.

Fourth, in addition to mischaracterizing Dr. Bims’s testimony, the ID errs by improperly shifting the burden of proof to TP-Link, stating that Dr. Bims “was not in a position to definitively know whether Qualcomm driver code was compiled.” ID at 117. As an initial matter, there is no way to more definitively prove the absence of a compile-time flag definition than to review the relevant code and determine the flag is not set—which is what Dr. Bims did. Regardless, ***it is not TP-Link’s burden*** to “definitively” know or prove non-infringement. On the contrary, it is Netgear’s burden to prove infringement. *See Catalina*, 289 F.3d at 812 (“To prove infringement, the patentee must show that the accused device meets each claim limitation either literally or under the doctrine of equivalents.”); *Medtronic, Inc. v. Mirowski Fam. Ventures, LLC*, 571 U.S. 191, 198 (2014) (“It is well established that the burden of proving infringement generally rests upon the

[REDACTED]

patentee.”). As discussed above, Netgear incontestably presented *no evidence whatsoever* that the relevant compile-time flag is set. By finding for Netgear—on the basis that TP-Link supposedly did not “definitively” prove non-infringement—when Netgear failed to provide any affirmative evidence, the ID improperly shifts the burden to TP-Link, which constitutes clear error. *See Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1095 (Fed. Cir. 2008) (“[T]he burden remains with the patentee to prove infringement, not on the defendant to disprove it.”); *Amgen Inc. v. Apotex Inc.*, 712 F. App’x 985, 993 (Fed. Cir. 2017) (“[I]t was not Apotex’s burden to prove non-infringement. ... It was Amgen’s burden to prove that Apotex’s processes would infringe the ’138 patent.”).

Fifth, the ID clearly errs in finding that Mr. Pu’s testimony was limited to Broadcom-based products and that it did not address the Qualcomm-based products that are at issue for the disputed roaming code. *See* ID at 117. In fact, the testimony in question from Mr. Pu was directed to the Deco product line as a whole, including both Broadcom- and Qualcomm-based products. *See* 1/22/24 Tr. (Pu Direct) at 950:9–951:14 (discussing driver code generally, including “Qualcomm and Broadcom” chips), 953:2–24 (discussing “Deco product” without qualification as to the chip supplier). To be sure, a portion of Mr. Pu’s testimony was specifically directed to Broadcom code. *See id.* at 951:15–953:1. When Mr. Pu stated on cross-examination that “[e]arlier I was talking about the Broadcom driver code,” he was referring to that testimony, in response to a question about which code he “reviewed.” *See id.* (Pu Cross) at 954:17–23. Mr. Pu did not review the Qualcomm chip driver roaming source code because, as he explained, Qualcomm does not make that particular feature available to TP-Link in source code form. *See* 1/22/24 Tr. (Pu Redirect) at 959:13–25. Nevertheless, Mr. Pu “collaborate[s] with Qualcomm as part of [his] ordinary work at TP-Link,” and (as discussed above) he had ample foundation to testify about whether the chip driver roaming functionality operates on the accused Deco products. As section head of the Deco

[REDACTED]

product line, Mr. Pu would be fully aware of any conflicting chip driver roaming code that is operating alongside—and interfering with—the Deco products’ AWN and APS. As he testified—and as Dr. Bims confirmed—there [REDACTED] roaming code. The ID nonetheless finds that “the Qualcomm driver code is both included and used in TP-Link’s APS feature,” ID at 117—even though Pu himself *wrote the APS code*. See 1/22/24 Tr. (Pu Direct) at 942:14–21. It defies reason for the ID to dismiss Mr. Pu’s testimony regarding whether the Qualcomm roaming code is used in TP-Link’s APS feature, when Mr. Pu is the person who *authored* that feature. No witness could be better situated to know that APS does not use the Qualcomm roaming code, and he testified it does not. The ID’s finding that Mr. Pu’s testimony was limited to Broadcom products is clearly erroneous, and is another reason its finding of infringement of the ’698 patent should be reversed.

C. ’179 Patent

The ID clearly errs in concluding that TP-Link violated Section 337 with regard to claim 11 of the ’179 patent, at least because the ID disregards the undisputed evidence of record regarding the source code that defines the products’ operation. TP-Link provided extensive, uncontroverted testimony based on the source code establishing that the accused “[REDACTED]” feature does not perform the relevant functionality. However, the ID disregards this undisputed testimony without any plausible basis, instead crediting the testimony of Netgear’s expert, who did not analyze *a single line of code* defining the actual operation of the accused “[REDACTED]” feature. The ID’s finding in favor of Netgear once again comes in the face of a complete lack of evidence on the dispositive issue from Netgear, and is clearly erroneous.

1. 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

[REDACTED]

backhaul has dropped to below a predetermined threshold.” 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. Whereas the claims require establishing an alternative backhaul “upon” determining that QoS has dropped below a threshold, the record shows that the alleged trigger—the [REDACTED] threshold—has nothing to do with establishing an alternative backhaul. Netgear’s infringement theory therefore misses the mark. Critically, Netgear *did not present any source code evidence or testimony regarding the “[REDACTED]” feature*. Instead, the ID relies on two words in a technical document as purportedly indicating a connection between the “[REDACTED]” threshold being exceeded and an alternative backhaul being established. Yet, this lone, outdated technical document cannot outweigh the uncontested testimony introduced by TP-Link regarding the code that actually defines the Accused Products’ operation. Indeed, the TP-Link engineer responsible for AWN specifically testified that the technical document on which the ID relies is not accurate on this point. Because the ID improperly disregards the only evidence that defines the products’ actual operation—the source code—in favor of relying on two words in a lone document that unconverted testimony shows are inaccurate, its finding of infringement is clearly erroneous and must be reversed.

a. Asserted claim 11

The ID finds that TP-Link’s Deco Wi-Fi 6 Products infringe claim 11 of the ’179 patent. *See* ID at 164. Claim 11 is directed to a procedure for failing over to an “alternative backhaul communication.” In particular, the claim recites “upon determining that a quality of service of the established backhaul has dropped to below a predetermined threshold, establishing an alternative backhaul communication with the second mesh point using a backhaul candidate with the highest score on the list.” JX-0003 (’179 Patent) at Claim 11; *see also* RDX-0002.141. For purposes of

[REDACTED]

this petition, the limitation’s relevant aspect is the specific triggering condition it recites for “establishing an alternative backhaul”: “upon determining that a quality of service of the established backhaul has dropped to below a predetermined threshold” Per that condition, to establish infringement, Netgear must identify a quality of service (QoS) threshold, and show that “upon” determining that the established backhaul’s QoS has dropped below this threshold, an “alternative backhaul” is established.

b. The accused “[REDACTED]” functionality governs [REDACTED], not establishing an alternative backhaul.

The accused functionality for the “upon determining ... establishing an alternative backhaul” limitation is TP-Link’s Auto-Wifi-Network (“AWN”) module—and, in particular, the “[REDACTED]” feature within that module. *See* ID at 172–78.

It is undisputed that when a Deco satellite AP starts up, it runs the AWN module. AWN first [REDACTED]. *See* 1/22/24 Tr. (Bims Direct) at 877:16–878:7; RDX-0002.131C. AWN then [REDACTED]. *See* 1/22/24 Tr. (Bims Direct) at 878:8–879:15; RDX.0002.132C. Both parties’ witnesses agree that AWN is responsible for establishing backhauls in the Accused Products. *See* 1/22/24 Tr. (Bims Direct) at 877:6–15; *id.* (Pu Direct) at 942:5–945:3; 1/18/24 Tr. (Baer Cross) at 337:2–338:4, 338:18–20; 1/19/24 Tr. (Akl Cross) at 522:21–523:17.

Dr. Bims provided uncontested testimony based on the source code that after AWN establishes the backhaul links, the accused “[REDACTED]” functionality merely serves to [REDACTED]. 1/22/24 Tr. (Bims Direct) at 885:16–888:6 (citing RPX-0023C at lns. 3420–31). Specifically, a satellite AP executes the accused “[REDACTED]” functionality to detect, [REDACTED]. *See id.* at 886:15–22. If a particular band connection [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] See *id.* at 887:2–11, 885:2–19; RDX-0002.142.

The accused [REDACTED]” functionality therefore is unrelated to establishing an *alternative* backhaul—it does not attempt to connect to a *different* band or AP. Rather, “[REDACTED] merely governs the [REDACTED] when that band cannot be found for an extended period of time. In this manner, uncontroverted testimony establishes that the accused functionality does not involve assessing the QoS of one band and then establishing a backhaul on a different band in response, as claim 11 requires.

c. Uncontroverted testimony based on the source code confirmed that [REDACTED]” is not involved in establishing an alternative backhaul and therefore does not infringe.

Dr. Bims’s conclusions on this issue are supported by uncontroverted analysis and testimony regarding the AWN [REDACTED]” source code. As Dr. Bims himself explained based on the source code presented and annotated in RDX-0002.145C (namely, RPX-0023C at lns. 2535–58), the “[REDACTED]

[REDACTED]

See 1/22/24 Tr. (Bims Direct) at 886:16–887:3; *id.* (Pu Direct) at 946:24–947:1 (explaining threshold is set to [REDACTED] [REDACTED]) (citing RPX-0073C at ln. 71 [REDACTED] [REDACTED])).

Based on the same lines of code (as presented and annotated in RDX-0002.146C), Dr. Bims further explained that when the [REDACTED], one of two results occurs, depending on the band. See 1/22/24 Tr. (Bims Direct) at 887:2–888:6. For the 2.4 GHz and 5 GHz-1 bands, AWN will [REDACTED]

[REDACTED] See *id.* at 886:4–6, 888:2–3. For the 5 GHz-2

[REDACTED]

band (the alleged dedicated/established backhaul), [REDACTED]

[REDACTED] *See id.* at 887:6–11, 888:4–6.

Mr. Pu, the TP-Link section head responsible for the AWN source code, confirmed Dr. Bims’s testimony regarding how this functionality operates—again with express reference to the source code. Mr. Pu testified that the [REDACTED] code is *not* used to select an alternative AP or backhaul link, but instead determines [REDACTED]

[REDACTED]. *See* 1/22/24 Tr. (Pu Direct) at 944:13–947:5.

When the accused [REDACTED] functionality is compared to claim 11 in view of this uncontested testimony about the source code, the claim indisputably is not satisfied. Because claim 11 recites “upon determining that a quality of service of the established backhaul has dropped to below a predetermined threshold, establishing an alternative backhaul communication,” the accused functionality cannot infringe unless it determines that a QoS of the alleged established backhaul (5 GHz-2) has dropped below a threshold, and an alternative backhaul is established in response. Yet, as discussed above, uncontroverted testimony established that the accused “notFind” feature merely determines that 5 GHz-2 [REDACTED]

[REDACTED] from 5 GHz-2. The alleged [REDACTED] threshold does *not* trigger any action in AWN that corresponds to establishing an alleged “alternative backhaul,” which Netgear contends is a connection to a *different* AP. *See* Netgear Post-HB at 133–34 (discussing “replacing” the root AP).

Critically, Mr. Pu and Dr. Bims’s analysis of the [REDACTED] code stands uncontested. As Netgear’s source code expert Mr. Baer acknowledged, “source code outlines the exact steps that are executed when the software is run.” 1/18/24 Tr. (Baer Cross) at 313:16–18. Yet, Mr. Baer did not address the “notFind” code at all. *See* CDX-0003C.24–35 (Mr. Baer’s “Source Code Analysis”

[REDACTED]

of AWN, which does not discuss the “[REDACTED]” code). Mr. Baer neglected to provide any such analysis, despite having spent “[h]undreds of hours” reviewing the code in this case, 1/18/24 Tr. (Baer Direct) at 268:24–269:1, and having presented a code analysis for every other accused and domestic industry feature implicating source code. Indeed, Mr. Baer testified that “based on the source code produced in this case, [he has] a complete understanding of the source code and its operation in terms of the functionality [he] analyzed.” *Id.* at 313:19–23. Yet, Mr. Baer failed to address even a single line of code for the “[REDACTED]” feature at the hearing. Netgear’s technical expert Dr. Akl also did not present any analysis of the “[REDACTED]” code. *See* 1/19/24 Tr. (Akl Cross) at 534:17–535:4 (“Q. We can verify this as well, sir, but you did not present any source code evidence for the [REDACTED] functionality, correct? A. I did not personally. ...”).

Netgear’s failure to present any analysis or testimony regarding the “[REDACTED]” source code is fatal to its infringement case. Indeed, the only reasonable inference that can be drawn—after Netgear *did* provide such an analysis for every other feature in the case that implicates source code—is that it did not like what it found in the “[REDACTED]” code. In any event, Netgear’s failure to present source code evidence to show that claim 11’s “upon determining ... establishing an alternative backhaul” limitation is met—or to contest the undisputed analysis and testimony from TP-Link’s witnesses showing that the limitation is *not* met—mandates a finding of non-infringement. *See INVT*, 46 F.4th at 1380; *Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same*, Inv. No. 337-TA-1240 (“*Certain UMTS and LTE Communication Modules*”), Final ID at 218–19 (U.S.I.T.C. Apr. 1, 2022) (finding that Complainants’ expert “cannot reliably conclude that the accused and domestic industry products ever perform a power reduction in response to a received signal” because he “admitted to not having reviewed any source code,” and “[w]ithout source code, one cannot determine specific

implementations”), *not reviewed in* Comm’n Det. at 3 (U.S.I.T.C. July 6, 2022); *Certain Magnetic Data Storage Tapes*, ID at 307–09, *affirmed with additional discussion by* Comm’n Op. at 90–97 (U.S.I.T.C. Apr. 2, 2018); *Metro. Life*, 527 F.3d at 1334; *Uni-Sys.*, 2017 WL 4081904, at *6.

d. The ID clearly errs by crediting two words in a lone document over uncontroverted testimony regarding the source code.

Despite Dr. Bims and Mr. Pu having provided extensive and uncontested testimony on the operation of the “[REDACTED]” feature’s source code—testimony demonstrating *line-by-line* in the code how the “[REDACTED]” not to establish an alternative backhaul—the ID brushes aside this evidence because it purportedly “focused only on the ‘[REDACTED]’ functionality, and not what happens after that functionality.” ID at 177. That finding is clearly erroneous. The entire focus of Dr. Bims’s and Mr. Pu’s testimony was on what the “[REDACTED]” functionality did and did not *trigger*—*i.e.*, “what happens after” the “[REDACTED]” threshold is exceeded. See 1/22/24 Tr. (Pu Direct) at 944:13–947:5; 1/22/24 Tr. (Bims Direct) at 886:16–888:10. Both witnesses testified that after the “[REDACTED]” threshold is exceeded, AWN adjusts its behavior regarding [REDACTED]—and those attempts do not involve establishing an alternative backhaul. See *id.* If the source code showed any connection with establishing an alternative backhaul, Netgear could have identified it—but it did not. In short, the only evidence in the record regarding the Accused Products’ actual operation based on the source code demonstrates that “establishing an alternative backhaul” is ***not*** triggered by—and does not “happen after[]”—the [REDACTED] threshold is exceeded.

Although the ID does not expressly state as much, to the extent its conclusion is based on the contention that a sequence of events might occur whereby “████████” operates, and AWN then establishes an alternative backhaul for reasons unrelated to ██████████ that theory is not supported, either. Even if that sequence of events could occur, it would not establish infringement. Again,

[REDACTED]

the limitation requires “upon determining” that a *quality of service* [QoS] of the established backhaul has *dropped to below a predetermined threshold, establishing* an alternative backhaul communication.” Thus, the alternative backhaul must be established “upon determining” that the alleged QoS threshold—*i.e.*, the “[REDACTED] threshold—has dropped below a threshold. *See* ID at 172–75. Accordingly, for the Accused Products to infringe, AWN must establish an alternative backhaul communication “upon determining” the [REDACTED] threshold is exceeded. The undisputed source code evidence shows that this is not the case in the Accused Products—even assuming an alternative backhaul communication is established at some point later in time.

As noted above, despite the dispositive source code evidence, the ID bases its finding of infringement on two words that are present in a lone technical document. Specifically, the ID concludes that [REDACTED] triggers a scanning process—and that this scanning can result in the uplink AP (rootAP) being replaced, such that alternative backhaul communications are established with a different uplink AP. *See* ID at 176–77. To reach this conclusion, the ID relies on two words found in CX-2757C: “When [REDACTED] [REDACTED] [REDACTED].” CX-2757C.18 (cited in CDX-0002C.200); *see also* 1/18/24 Tr. (Akl Direct) at 477:1–8 (relying on [REDACTED] language from CX-2757C).

Again, however, this conclusion that [REDACTED] [REDACTED] is inconsistent with the uncontroverted source code analysis. It is not surprising that a technical document would happen to misdescribe certain aspects of the [REDACTED] feature, as technical documents frequently do not reflect the exact operation of the source code as it ultimately is implemented in the product. Such documents often are drafted during the initial design process, before the final version of the feature is implemented in the source

[REDACTED]

code. Here, the source code evidence presented at the hearing confirms that certain aspects of CX-2757C do not reflect the [REDACTED] feature's final implementation. As Mr. Pu testified, the document's flow chart on which the ID relies is "[n]ot completely consistent" with the source code implementation, because it does not reflect that [REDACTED] [REDACTED]. 1/22/24 Tr. (Pu Direct) at 945:11–18 (discussing CX-2757C.21). Indeed, the very sentence on which Netgear and the ID rely in CX-2757C includes another demonstrable inaccuracy, referring to "[REDACTED] [REDACTED]—whereas the source code makes clear that the [REDACTED] [REDACTED] See 1/22/24 Tr. (Pu Direct) at 946:24–947:1. Such discrepancies underscore why source code evidence is routinely produced and analyzed in cases such as this—because it confirms “the exact steps that are executed when the software is run.” 1/18/24 Tr. (Baer Cross) at 313:16–18. Two contrary words in a lone technical document cannot overcome the detailed and undisputed source code evidence showing how the accused feature actually operates in the products. The ID's finding to the contrary is clearly erroneous. See *Certain Portable Battery Jump Starters and Components Thereof*, Inv. No. 337-TA-1256, ID at 83 (U.S.I.T.C. Apr. 29, 2022).

The ID attempts to excuse the deficient evidentiary basis for its finding by stating that “Netgear’s assertion is not based on ‘two contrary words,’ but on a description of the product functionality consistent with the source code (CX-2757C.18), a description of the [REDACTED] [REDACTED] immediately following (CX-2757C.19), and a flow chart identifying that scanning and resetting occur after the [REDACTED] functionality (CX-2757C.21).” ID at 177–78. Again, however, each of these citations is to the *same* lone technical document that TP-Link engineer Mr. Pu confirmed is inaccurate in key respects, and that is contradicted by the source code that defines the products’ actual operation. Moreover, as discussed above, the critical

[REDACTED]

missing link in Netgear’s infringement theory is its need to establish that the “[REDACTED] threshold being exceeded triggers AWN to [REDACTED] (*i.e.*, the alleged “establishing an alternative backhaul”). The ID’s statement notwithstanding, the *only* purported evidence of that link are the two words in 2757C.18: [REDACTED]. Other than those two words—which the source code demonstrates are inaccurate—the document does not even discuss, let alone prove, the necessary link. For example, the flowchart on CX-2557C.21 does not indicate that the [REDACTED]. Again, the undisputed testimony and source code analysis establishes that [REDACTED] scanning relates only to the timing of [REDACTED], not replacing the root AP with an alternative one.

In sum, TP-Link introduced un rebutted source code evidence and related testimony establishing that “[REDACTED]” does *not* trigger the establishing of connections on different bands (let alone different APs). In contrast, Netgear failed to present a single line of source code evidence regarding this feature—even though its expert spent hundreds of hours analyzing the code and presented a code analysis for every other accused and domestic industry feature for the ’698 and ’179 patents besides [REDACTED]. The only evidence that the ID relies on to conclude that the [REDACTED] (thereby allegedly establishing an alternative backhaul) are two demonstrably inaccurate words found in a lone technical document. Because the ID improperly elevates those inaccurate words over uncontested source code evidence that proves the feature’s actual operation, its finding of infringement is clearly erroneous and should be reversed.

D. Incorrect Inventorship

The ALJ erred in denying TP-Link’s motion to amend to add defenses of invalidity due to incorrect inventorship for the ’698 and ’179 patents. *See* Order No. 22. TP-Link’s motion to amend pointed to evidence showing that, at a minimum, a substantial portion of the technology claimed in the ’698 and ’179 patents originated with Qualcomm and was disclosed to Netgear’s

[REDACTED]

named inventors [REDACTED] while the asserted patents were being conceived. *See* EDIS 804356, 9/15/13 Mot. Amend at 4-5, 7-8. For example, an internal email from [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. *Id.* at 4 (citing Ex. 12). TP-Link’s motion further explained that these disclosures included subject matter that corresponds to claim limitations of the ’698 and ’179 patents, including [REDACTED] *See id.* At 4–5 (citing Ex. 13 at 699). For instance, the

[REDACTED]—including a diagram illustrating [REDACTED] *See id.*; *see also* RX-0027C.614-15. During the [REDACTED] timeframe when the ’698 and ’179 patents were allegedly conceived, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

As the Federal Circuit has recognized, when “the invention was conceived while [the named inventor and the third party] were engaged in a collaborative enterprise and . . . [the third party] conceived significant aspects of the invention, [the third party] is certainly at least a co-inventor.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998). A “post-AIA patent is invalid if it does not name all inventors.” *Ultravision Techs., LLC v. Glux Visual Effects Tech (Shenzhen) Co.*, No. 218CV00099JRGRSP, 2021 WL 3508691, at *3 (E.D. Tex. Apr. 9, 2021) (citing 35 U.S.C. § 101); *see also* MPEP § 2157. TP-Link therefore sought leave to raise a defense

[REDACTED]

that Qualcomm personnel should have been named as co-inventors of the '698 and '179 patents due to their contribution of [REDACTED] [REDACTED] Netgear's named inventors.

Although it was undisputed that TP-Link acted diligently in seeking leave to amend to add this defense immediately after it learned the necessary facts from a document production ordered by the ALJ, the ALJ denied TP-Link's motion on futility grounds, finding TP-Link had supposedly failed to connect the '698 and '179 patents' claims with the Qualcomm technology disclosed to Netgear. *See* Order No. 22 at 19–20. The ALJ's finding of futility was clearly erroneous.

As an initial matter, the ALJ clearly erred in failing to credit TP-Link's position that it at least should have been able to pursue a defense that the Qualcomm personnel qualified as co-inventors. *See, e.g., Kemin Foods, L.C. v. Pigmentos Vegetales Del Centro S.A. de C.V.*, 464 F.3d 1339, 1355 (Fed. Cir. 2006). Contrary to the ALJ's statement that TP-Link failed to "even provide a general articulation of any alleged contribution relative to what is claimed," Order No. 22 at 19, TP-Link specifically identified the claimed [REDACTED] as a technology that Qualcomm disclosed to Netgear's named inventors. *See* EDIS 804356, 9/15/13 Mot. Amend at 4–5.

This disclosed [REDACTED] technology is highly significant to the '698 and '179 patents. Regarding the '698 patent, the ALJ specifically "conclude[d] that claim 12 and, in particular, element 12[b] is directed to a dedicated backhaul." ID at 102. And the asserted claim of the '179 patent likewise recites "a backhaul communication, separate from the forward wireless communication" and "5 GHz radio frequency (RF) technology using a dedicated radio." JX-0003 ('179 patent) at 32:8-9, 19-20. Further, the title of each patent begins with "Dedicated Backhaul," *see* JX-0002 ('698 Patent); JX-0003 ('179 Patent), and Netgear's post-hearing briefing identifies these patents as "'698 Patent (Dedicated Backhaul)" and "'179 Patent (Dedicated Backhaul)."

[REDACTED]

EDIS 813615, 2/7/24 C. Post-HB at 38, 90. Netgear also extensively relies on “dedicated backhaul” technology as supposedly satisfying the ’698 and ’179 patents’ claim limitations. *See id.* at 45-48, 79-80, 114-16, 143-46; *see also* ID at 105-07, 126-27, 167, 180-81.

The ALJ also clearly erred in refusing to credit TP-Link’s approach of comparing the technology disclosed by Qualcomm with the technology that Netgear itself has asserted satisfies the ’698 and ’179 patents’ claims. *See* Order No. 22 at 19–20. Netgear relies extensively on the dedicated backhaul technology implemented in its asserted domestic industry products as satisfying claim limitations of these patents. *See* EDIS 813615, 2/7/24 C. Post-HB at 38, 90. TP-Link explained in its motion to amend that this [REDACTED] technology is supplied to Netgear by Qualcomm and that it directly corresponds to the technology previously disclosed to Netgear via the [REDACTED] cited in TP-Link’s motion. *See* EDIS 804356, 9/15/13 Mot. Amend at 4–5. Because Netgear asserts that the dedicated backhaul technology found in its domestic industry products corresponds to the ’698 and ’179 patents—and because this is the same [REDACTED] technology that Qualcomm previously disclosed to Netgear’s named inventors—it reasonably follows that the disclosed technology corresponds to claim limitations in the ’698 and ’179 patents. The ALJ had no legitimate basis to refuse to allow TP-Link to pursue this straightforward theory.

V. CONCLUSION

For the reasons set forth above, Respondents respectfully ask the Commission to review—and reverse—the erroneous conclusions adopted in the ID.

Dated: June 11, 2024

Respectfully Submitted,

/s/ Paul F. Brinkman, P.C.

Paul F. Brinkman, P.C.

Matthew McIntee

Kirkland & Ellis LLP

1301 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

Telephone: (202) 389-5000

Facsimile: (202) 389-5200

Todd M. Friedman, P.C.

James E. Marina, P.C.

Alex Henriques, P.C.

Jae Hyun Kim

Kirkland & Ellis LLP

601 Lexington Avenue

New York, NY 10022

Telephone: (212) 446-4800

Facsimile: (212) 446-4900

Bao Nguyen

Kirkland & Ellis LLP

555 California Street

San Francisco, CA 94104

Telephone: (415) 439-1400

Facsimile: (415) 439-1500

David Rokach

Tasha Francis Gerasimow

Kirkland & Ellis LLP

300 N. LaSalle

Chicago, IL 60654

Telephone: (312) 862-2000

Facsimile: (312) 862-2200

Sarah Mikosz

Kirkland & Ellis LLP

2049 Century Park East

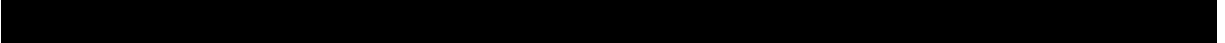
Los Angeles, CA 90067

Telephone: (310) 552-4200

Facsimile: (310) 552-5900

Email: TP-Link_ITC@kirkland.com

Counsel for Respondents TP-Link



*Technologies Co., Ltd., TP-Link Corp. Ltd.
f/k/a/ TP-Link International Ltd., TP-Link
USA Corp. and TP-Link Institute USA Corp.
d/b/a TP-Link Research America Corp.*

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:

Lisa R. Barton, Secretary U.S. International Trade Commission 500 E Street, S.W., Room 112 Washington, DC 20436	☒ Via Electronic Filing (EDIS) ☐ Via Hand Delivery ☐ Via Federal Express ☐ Via Electronic Mail
Hon. Doris Johnson Hines Administrative Law Judge U.S. International Trade Commission 500 E Street, S.W. Washington, DC 20436 <u>Johnsonhines1361@usitc.gov</u>	☐ Via Electronic Filing (EDIS) ☐ Via Hand Delivery ☐ Via Federal Express ☒ Via Electronic Mail ☒ Via Box.com
Kevin C. Wheeler Bert C. Reiser Susan Y. Tull Shuai Yuan Andrew Slottje Amy Thomas Michael A. David Latham & Watkins LLP 555 11th St. N.W., Suite 1000 Washington, D.C. 20004-1304 Patricia Young Blake R. Davis Allison Harms Ben Alred Latham & Watkins LLP 140 Scott Drive Menlo Park, CA 94025 Thomas W. Yeh	☐ Via Electronic Filing (EDIS) ☐ Via Hand Delivery ☐ Via Federal Express ☒ Via Electronic Mail

Latham & Watkins LLP 355 South Grand Avenue, Suite 100 Los Angeles, CA 90071 Melissa Hyson Dejoie Latham & Watkins LLP 10250 Constellation Blvd, Suite 1100 Los Angeles, CA 90067 Daniel R. McNeely Latham & Watkins LLP 330 N. Wabash Avenue, Suite 2800 Chicago, IL 60611 Yan Bao Latham & Watkins LLP 45-11 Two ifc 8 Century Boulevard Shanghai 200120 People's Republic of China Charles H. Sanders Latham & Watkins LLP 200 Clarendon Street Boston, MA 02116 netgearitc.lwteam@lw.com <i>Counsel for Complainant Netgear Inc.</i>	
--	--

/s/ Robert Leonard

Robert Leonard