IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

REDWOOD TECHNOLOGIES, LLC, Plaintiff, v. NETGEAR, INC., Defendant.	Civil Action No. 22-1272-GBW

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MEMORANDUM OPINION

October 28, 2024
Wilmington, Delaware

GREGORY B. WILLIAMS
U.S. DISTRICT JUDGE

Pending before the Court is Defendant Netgear, Inc.'s ("Netgear") Motion to Dismiss Plaintiff's First Amended Complaint (D.I. 17), which is fully briefed (*see* D.I. 18; D.I. 21; D.I. 22). For the reasons set forth below, the Court GRANTS-IN-PART and DENIES-IN-PART Netgear's motion.

I. BACKGROUND

Redwood Technologies, LLC ("Redwood") filed this action against Netgear alleging that Netgear infringes the Asserted Patents.[1] D.I. 14 (the "Operative Complaint"). Specifically, Redwood has alleged infringement of: "claim 7 of the '165 patent"; "claim 43 of the '754 patent"; "claim 1 of the '300 patent"; "claim 1 of the '272 patent"; and "claim 1 of the '071 patent" (collectively, the "Asserted Patent Claims"). D.I. 14 ¶¶ 26, 47, 63, 85, 115. In response, Netgear filed a motion to dismiss contending that the Asserted Patent Claims are directed to ineligible subject matter. *See* D.I. 17; D.I. 18.

Netgear contends that the Asserted Patent Claims "are directed to the abstract idea of manipulating and transmitting data signals." D.I. 18 at 1. Redwood disagrees and contends that the "claims of [its] [purportedly] standard essential patents are directed to specific technological improvements in wireless communications systems." D.I. 21 at 1.

[1] U.S. Patent Nos. 8,005,165 (the "'165 patent"), 8,654,754 (the "'754 patent"), 9,628,300 (the "'300 patent"), 10,075,272 (the "'272 patent"), and 10,341,071 (the "'071 patent").

II. LEGAL STANDARDS

A. Patent Eligible Subject Matter

35 U.S.C. "§ 101 is a threshold inquiry in *obtaining* patent protection." *Astellas Pharma, Inc. v. Sandoz Inc.*, ___ F.4th ___, No. 2023-2032, 2024 WL 4219374, at *5 n.2 (Fed. Cir. Sept. 18, 2024). Patent claims that fail to comply with § 101 are invalid. *See Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1356 n.2 (Fed. Cir. 2018) (denying petition for rehearing en banc). "[A] challenge to patent eligibility on § 101 grounds is an affirmative defense to a claim of patent infringement." *Mobile Acuity Ltd. v. Blippar Ltd.*, 110 F.4th 1280, 1289 (Fed. Cir. 2024). "The burden to prove the ineligibility of any patent claim stays with the patent challenger at all times." 110 F.4th at 1291.

With respect to the judicial exceptions to patent eligibility, "[w]e evaluate claims challenged under Section 101 by applying the now-familiar two-step *Alice/Mayo* framework." *Beteiro, LLC v. DraftKings Inc.*, 104 F.4th 1350, 1355 (Fed. Cir. 2024). "At step one, we consider 'whether the claims at issue are directed to [a] patent-ineligible concept' such as an abstract idea." 104 F.4th at 1355 (alteration in original) (quoting *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208 (2014)).[2] "If they are, then we proceed to step two, at which 'we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application.'" *Id.*

B. Motion to Dismiss

"To state a viable claim, a plaintiff must offer a short and plain statement showing that he is entitled to relief, including 'allegations plausibly suggesting (not merely consistent with)' such

[2] "As to the abstract idea exception, no single, hard-and-fast rule that automatically outputs an answer in all contexts exists because there are different types of abstract ideas[.]" *In re Killian*, 45 F.4th 1373, 1381–82 (Fed. Cir. 2022).

entitlement." *Bah v. United States*, 91 F.4th 116, 119 (3d Cir. 2024) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007)). "[A]t the motion-to-dismiss stage, the Court assumes the truth of 'well-pleaded factual allegations' and 'reasonable inference[s]' therefrom." *Nat'l Rifle Ass'n of Am. v. Vullo*, 602 U.S. 175, 181 (2024) (some alterations in original) (quoting *Ashcroft v. Iqbal*, 556 U.S. 662 (2009)). "In ruling on a motion to dismiss," a court is "not bound to accept as true a legal conclusion couched as a factual allegation." *Wood v. Moss*, 572 U.S. 744, 755 n.5 (2014) (quoting 556 U.S. 662).

Thus, "[t]he primary question in deciding a motion to dismiss is not whether the plaintiff will ultimately prevail, but rather whether they are entitled to offer evidence to establish the facts alleged in the complaint." *Fenico v. City of Philadelphia*, 70 F.4th 151, 161 (3d Cir. 2023). In other words, "when a complaint adequately states a claim, it may not be dismissed based on a district court's assessment that the plaintiff will fail to find evidentiary support for his allegations or prove his claim to the satisfaction of the factfinder." 550 U.S. at 563 n.8.

The Federal Circuit "ha[s] repeatedly recognized, 'it is possible and proper to determine patent eligibility under 35 U.S.C. § 101 on a Rule 12(b)(6) motion.'" *Mobile Acuity*, 110 F.4th at 1289–90 (quoting *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369 (Fed. Cir. 2016)). "If patent eligibility is challenged in a motion to dismiss for failure to state a claim pursuant to Rule 12(b)(6), we must apply the well-settled Rule 12(b)(6) standard which is consistently applied in every area of law." *Aatrix*, 890 F.3d at 1357. "[P]atent eligibility [under § 101] can be determined at the Rule 12(b)(6) stage ... only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law." *Beteiro*, 104 F.4th at 1355 (some alterations in original) (quoting *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018)).

III. DISCUSSION

A. A Representative Claims Analysis Is Unnecessary

The Court rejects Redwood's argument that it is purportedly "problematic[] [that] Defendant seeks dismissal of the FAC by relying on only a single representative claim for each patent[,]" because purportedly "the FAC does not limit its infringement allegations to the explicit exemplar infringed claims." D.I. at 21 at 2. First, Redwood's cursory argument is "raised in passing," as opposed to being "squarely argued," and thus it is forfeited. *Purewick Corp. v. Sage Prod., LLC*, 666 F. Supp. 3d 419, 441 n.14 (D. Del. 2023). Second, Netgear's motion specifically addresses each patent claim that Redwood's Operative Complaint alleges Netgear infringes. *See* D.I. 18 at 3 n.1. The Court rejects Redwood's attempt to insert new patent claims through its opposition brief, *see* D.I. 21 at 2, as Redwood put forward only a skeletal argument and "did not file a motion for leave to amend [its] [Operative] Complaint." *Harrison v. Christopher*, 489 F. Supp. 2d 375, 377 (D. Del. 2007). Redwood "may not amend [its] claims via [its] opposition to the motion[] to dismiss." *Banner v. Dep't of Health & Soc. Servs. Div. for the Visually Impaired*, No. CV 14-691-LPS, 2016 WL 922058, at *3 (D. Del. Mar. 10, 2016). "[T]he Court will consider only the claim[s] asserted in [Redwood's] [Operative] Complaint." 489 F. Supp. 2d at 377; *cf. El v. Capiak*, No. CV 17-662-CFC, 2019 WL 4572854, at *1 n.2 (D. Del. Sept. 20, 2019) ("[T]o the extent [p]laintiff attempts to add new claims in his opposition to the motion for summary judgment, those claims are not considered.").

Thus, as Redwood fails to specifically identify a single, disputed claim left unaddressed by Netgear's motion, there are no "disputes over representativeness" for this Court to resolve. *Mobile Acuity*, 110 F.4th at 1290–92 (discussing representative claims analysis).

B. Subject Matter Eligibility

For the reasons stated below, the Court grants Netgear's motion to dismiss Count II of the Operative Complaint and denies Netgear's motion to dismiss the other counts.

1. Claim 7 of the '165 Patent Withstands *Alice* Scrutiny

The '165 patent has twenty claims and discloses multiple embodiments. *See* '165 patent, 3:65-6:17 (listing embodiments), 42:12-46:2 (listing claims). Netgear's pending motion is directed at claim 7 of the '165 patent, *see* D.I. 18 at 3, which is reproduced below:

> 7. A MIMO-OFDM [multiple-input multiple-output orthogonal frequency division multiplexing] transmission method comprising:
>
> [a] forming a plurality of OFDM signals, each of the plurality of OFDM signals comprising several pilot carriers, the several pilot carriers being located on identical carrier positions among the plurality of OFDM signals, such that orthogonal pilot sequences are assigned to identical time slots of pilot carriers on an identical carrier position among the plurality of OFDM signals and an identical pilot sequence is assigned to at least two of the plurality of OFDM signals; and
>
> [b] transmitting the plurality of OFDM signals from a plurality of antennas over an identical frequency band at an identical time period.

'165 patent, 42:62-43:7 (bracketed text added for convenience). Although independent claim 1 of the '165 patent is not the subject of Netgear's pending motion, it is worth highlighting. Claim 1 of the '165 patent, which is reproduced below, recites a "transmission apparatus" with a "OFDM signal forming section" and "plurality of antennas" that are apparently configured to perform claim 7's recited method:

> 1. A MIMO-OFDM [multiple-input multiple-output orthogonal frequency division multiplexing] transmission apparatus comprising:
>
> [a] an OFDM signal forming section configured to form a plurality of OFDM signals, each of the plurality of OFDM signals comprising several pilot carriers, the several pilot carriers being located on identical carrier positions among the plurality of OFDM signals, such that orthogonal pilot sequences are assigned to identical time slots of pilot carriers on an identical carrier position among the plurality of OFDM signals, and

an identical pilot sequence is assigned to at least two of the plurality of OFDM signals; and

[b] a plurality of antennas configured to transmit the plurality of OFDM signals over an identical frequency band at an identical time period.

'165 patent, 42:12-25 (bracketed text added for convenience). Based on the textual similarity between claim 1 and claim 7, these are "corresponding" claims. *Creo Prod., Inc. v. Presstek, Inc.*, 305 F.3d 1337, 1342 (Fed. Cir. 2002); *see* D.I. 22 at 4 (alleging that "Claim 1 merely recites an apparatus to carry out the same . . . process claimed in Claim 7").

As illustrated in figure 1, which is reproduced below, the '165 patent admits that the prior art disclosed MIMO-OFDM methods, where "pilot symbols are inserted in specific carriers such as carrier **2** and carrier **5** and used for the receiver to estimate frequency offset and/or phase noise":

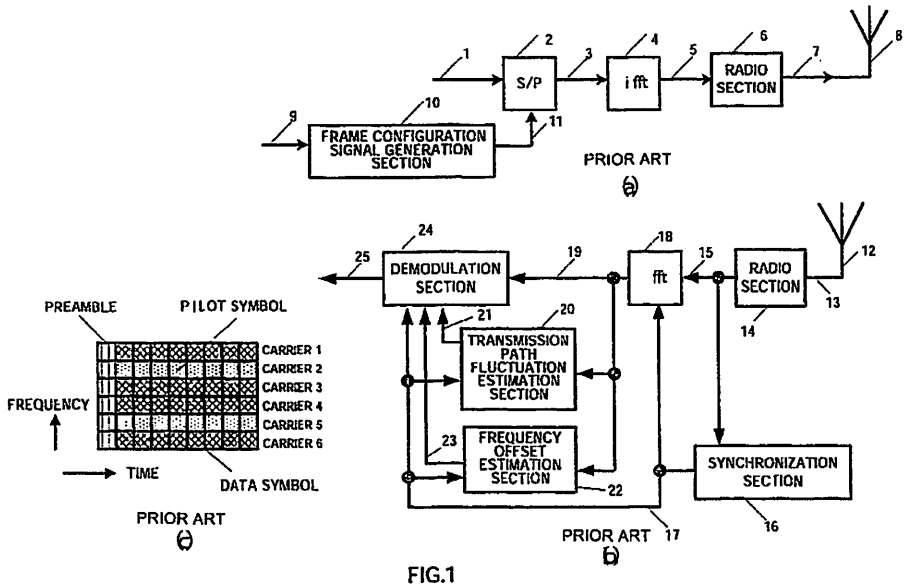


FIG.1

'165 patent, 2:9-21 (discussing fig. 1(c)); *see id.* at 1:27-32 ("FIG. 1 shows the configuration of a transmission/reception apparatus of a wireless LAN (Local Area Network) which is an example of a radio communication system using OFDM (Orthogonal Frequency Division Multiplexing) which is currently being implemented, and the frame configuration thereof."), 2:31-34 ("Non-

Patent Document 1 shows the symbol configuration for frequency offset estimation, transmission path fluctuation (channel fluctuation) estimation and synchronization/signal detection in a case using OFDM."). The '165 patent suggests that the "wireless LAN scheme," depicted in figure 1, has been around at least since 1999. '165 patent, 2:24-25. The '165 patent asserts that "further improvement of transmission speed can be expected in the wireless LAN by combining the scheme disclosed in [the prior art, which is depicted in figure 1,] with a MIMO system using spatial multiplexing or SDM: Spatial Division Multiplexing." '165 patent, 2:35-40.

Redwood alleges claim 7 of the '165 patent "describes a method that improves transmission in a multiple-input multiple-output (MIMO) orthogonal frequency division multiplexing (OFDM) system." D.I. 14 ¶ 32. Redwood asserts that claim 7 "is a technologically complex, particularized method of signal formation and transmission." D.I. 14 ¶ 33. According to Redwood, claim 7 "provides a technical solution to achieve high accuracy frequency offset by assigning orthogonal sequences to corresponding subcarriers among OFDM signals transmitted at the same time from the respective antennas in the time domain to form pilot carriers." D.I. 14 ¶ 34 (citing '165 patent, 3:4-10). Redwood alleges that claim 7 is beneficial, because "it is possible to simplify the configuration of the section for compensating for the frequency offset/phase noise." D.I. 14 ¶ 35 (citing '165 patent, 3:10-15). Redwood asserts that collectively the limitations of claim 7 "describe a method of transmission conceived to minimize transmission peak power without degrading estimation accuracy for frequency offset/phase noise." D.I. 14 ¶ 36. Redwood alleges that "claim 7 of the '165 Patent . . . utilize[s] pilot signals of the same sequence for each of the antennas that are transmitted and/or received by a MIMO OFDM device at the same time over the same channel, which results in high accuracy

synchronization/signal detection by the receiving apparatus." D.I. 21 at 4-5 (citing '165 patent, 14:54-63).

On the other hand, Netgear alleges that claim 7 "is directed to [a] well-known MIMO-OFDM scheme." D.I. 18 at 3; *see id.* at 4 (citing'165 patent, 1:27-48, 2:9-21, fig. 1). Netgear asserts that "the '165 Patent specification admits that inserting pilot signals at specific positions on pilot carriers was well-known in the prior art." D.I. 22 at 5. According to Netgear, "[t]he purported improvement of symbol configuration as captured by" claim 7 "involves only placing pilot signals at specific positions on pilot carriers." D.I. 22 at 4. Thus, Netgear alleges that "Claim 7 is [] drawn to nothing more than modulating and transmitting data in a conventional manner with basic adjustments to timing or sequencing, without including any inventive concept or any concrete and non-conventional way of doing so." D.I. 18 at 4.

a. *Alice* Step One: Netgear Has Not Established That Claim 7 of the '165 Patent Is Directed to an Abstract Idea

As discussed below, the Court holds that Netgear has not met its burden of establishing that claim 7 of the '165 patent is directed to an abstract idea at *Alice* step one.

First, Netgear has not met its burden, because it "describ[es] the claim[] at a high level of abstraction, divorced from the claim language itself." *Contour IP Holding LLC v. GoPro, Inc.*, 113 F.4th 1373, 1379 (Fed. Cir. 2024). "[W]e must articulate with specificity what the claims are directed to." *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1258 (Fed. Cir. 2017); *see Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018). To meet its burden at *Alice* step one, Netgear must propose an abstract idea that fairly characterizes the challenged claim and thus avoids oversimplifying the challenged claim. *See, e.g.*, *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1294 (Fed. Cir. 2020) ("The Step 1 'directed to' analysis called for by our cases depends on an accurate characterization of what the claims

require and of what the patent asserts to be the claimed advance."); *F45 Training Pty Ltd. v. Body Fit Training USA Inc.*, No. 21-385-LPS, 2021 WL 2779130, at *6 (D. Del. July 2, 2021) (*Alice* step one burden not met, where movant "proposed abstract idea [that] oversimplifie[d] what [c]laim 1 is directed to"); *Content Square SAS v. Quantum Metric, Inc.*, No. 20-832-LPS, 2021 U.S. Dist. LEXIS 51656, at *12 (D. Del. Mar. 18, 2021) (*Alice* step one burden not met, where movant proposed abstract idea that was not "a fair characterization of what the claims are directed to"); *Mod Stack LLC v. Aculab, Inc.*, No. CV 18-332-CFC, 2019 WL 3532185, at *3 (D. Del. Aug. 2, 2019) (*Alice* step one burden not met, where movant "proposed abstract idea [that did not] satisfactorily capture[] the substance of the claims").

In reaching its conclusion that claim 7 "only describ[es] generic steps for modulating, sequencing, and transmitting data," D.I. 18 at 7, Netgear "characterizes the claim[] at an impermissibly high level of generality." *Contour IP*, 113 F.4th at 1379–80. For example, in its opening brief, Netgear's *Alice* step one argument lacks sufficient discussion of claim 7's limitations. *See* D.I. 18 at 4-7. This is problematic, as "the focus must ultimately be on the claim language itself." *Route Guidance Sys. LLC v. INRIX, Inc.*, No. CV 20-221 (MN), 2021 WL 24705, at *5 (D. Del. Jan. 4, 2021); *see CardioNet, LLC v. InfoBionic, Inc*, 955 F.3d 1358, 1374 (Fed. Cir. 2020) ("[O]ur analysis at *Alice* step one involves examining the patent claims in view of the plain claim language, statements in the written description, and the prosecution history, if relevant."); *see also* D.I. 22 at 1 (emphasis removed) (criticizing Redwood for not "analyz[ing] the claim language"). Thus, "[w]hile it may be possible that claim [7] could be accurately characterized as directed to some abstract idea, all [the Court] need[s] to decide today is that the claim is not directed to the abstract idea articulated by [Netgear]." *3G Licensing, S.A. v. HTC Corp.*, No. CV 17-1646-LPS, 2019 WL 2904670, at *2 (D. Del. July 5, 2019); *see*

Trident Holdings, Inc. v. HubSpot, Inc., No. CV 21-401-CFC, 2022 WL 823514, at *6 n.15 (D. Del. Mar. 18, 2022) (collecting cases) ("Courts in this district regularly deny motions to dismiss based on patent ineligibility under § 101 when the defendant's proffered abstract idea fails to satisfactorily capture the substance of the claims.").

Additionally, Netgear fails to persuade the Court that claim 7 is directed to an abstract idea because the claim purportedly "fails to recite any improvement to the functioning of any computing device" and "is described in functional terms with insufficient explanation on how to achieve the desired result." D.I. 18 at 5-6. "If the focus of the claim is a specific and concrete technological advance, for example an improvement to a technological process or in the underlying operation of a machine, our inquiry ends and the claim is eligible." *Adasa Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 908 (Fed. Cir. 2022) (collecting cases).

Considering the procedural posture, the Court concludes that "when read as a whole, claim [7] is directed to a specific means that improves the relevant technology." *Contour IP*, 113 F.4th at 1379. According to the '165 patent's specification, its inventors identified "[p]roblems" with prior art MIMO-OFDM transmission methods and disclosed "[m]eans for [s]olving the [p]roblem" that change how the transmission method occurs and thereby provide technical improvements. *See* '165 patent, 1:27-32, 2:9-40; *see also* D.I. 14 ¶¶ 35-36. At this stage, it appears that claim 7 encompasses a purported, technical solution that is discussed in the '165 patent's specification. This is apparent, because claim 7's limitations track closely to what the '165 patent's specification identifies as an advantageous, technical solution. *Compare* '165 patent, 42:62-43:7, *with* '165 patent, 2:58-3:10. "This conclusion is particularly proper on a motion to dismiss under Rule 12(b)(6), where all factual inferences drawn from the specification

must be weighed in favor of [Redwood], the non-moving party." *Visual Memory*, 867 F.3d at 1261–62.

Netgear has not persuaded the Court that the relevant "detail[s] described in the specification [are] lacking in the claim[]." *KOM Software Inc. v. NetApp, Inc.*, 697 F. Supp. 3d 203, 217 (D. Del. 2023). To the extent that Netgear suggests that details in the specification are per se irrelevant at *Alice* step one, *see* D.I. 22 at 1-4 (criticizing Redwood for "discuss[ing] various details set forth in the patent specifications"), that is too strong of a rule statement. The patent specification is often consulted at *Alice* step one. *See, e.g.*, *CardioNet*, 955 F.3d at 1374; *Sunoco Partners Mktg. & Terminals L.P. v. Powder Springs Logistics, LLC*, 624 F. Supp. 3d 484, 487 (D. Del. 2022); *Redwood Techs., LLC v. Netgear, Inc.*, No. CV 22-1271-GBW, 2024 WL 3202395, at *6 n.4 (D. Del. June 27, 2024). For example, in *Mentone Sols. LLC v. Digi Int'l Inc.*, the Federal Circuit noted that "the specification inform[ed] [its] understanding of the claimed invention, the technological solution, and how the elements of the claim work together to provide that solution." No. 2021-1202, 2021 WL 5291802, at *5 (Fed. Cir. Nov. 15, 2021) (nonprecedential).

Further, Netgear has not persuaded the Court that, for the purposes of the *Alice* analysis, claim 7 lacks sufficient specificity.[3] Section 101 requires that "the claim itself (whether by its own words or by statutory incorporation of specification details under section 112(f)) must go beyond stating a functional result; it must identify 'how' that functional result is achieved by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of a method claim." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 (Fed. Cir. 2020).

[3] The irony is not lost on the Court that Netgear's specificity argument itself lacks specificity.

Claim 7's specificity appears comparable to the specificity of claims that withstood *Alice* scrutiny in Federal Circuit cases, such as *Contour IP Holding LLC v. GoPro, Inc.*; *Mentone Sols. LLC v. Digi Int'l Inc.*; *CosmoKey Sols. GmbH & Co. KG v. Duo Sec. LLC*; *TecSec, Inc. v. Adobe Inc.*; *Koninklijke KPN N.V. v. Gemalto M2M GmbH*; and *Ancora Techs., Inc. v. HTC Am., Inc.*[4] *Koninklijke*, 942 F.3d at 1147-53, which Redwood relies on in its opposition (*see* D.I. 21 at 6), is instructive. In *Koninklijke*, the Federal Circuit addressed dependent claim 2, which recited: "The device according to claim 1, wherein the varying device is further configured to *modify* the permutation *in time*." 942 F.3d at 1148. Claim 2 of *Koninklijke* was sufficiently specific to pass *Alice* step one, because "[b]y requiring that the permutation applied to original data be modified 'in time,' claim 2 . . . recite[d] a specific implementation of varying the way check data is generated that improves the ability of prior art error detection systems to detect systematic errors." 942 F.3d at 1150. At this stage, and without the benefit of Netgear having sufficiently distinguished *Koninklijke*,[5] the Court does not discern a meaningful difference in the specificity of claim 2 of *Koninklijke* and claim 7 of the '165 patent. Thus, Netgear has not persuaded the Court that "the claim scope" of claim 7 fails to be "limit[ed] . . . to concrete action." *Am. Axle*, 967 F.3d at 1302.

Having determined that Netgear has not carried its burden at *Alice* step one, the Court declines to discuss *Alice* step two. *See Contour IP*, 113 F.4th at 1378 ("If the claims are not

[4] 113 F.4th 1373, 1376–77, 1379 (Fed. Cir. 2024); No. 2021-1202, 2021 WL 5291802, at *2–6 (Fed. Cir. Nov. 15, 2021) (nonprecedential); 15 F.4th 1091, 1094, 1099 (Fed. Cir. 2021); 978 F.3d 1278, 1282–83, 1295-96 (Fed. Cir. 2020); 942 F.3d 1143, 1147–48, 1151, 1153 (Fed. Cir. 2019); 908 F.3d 1343, 1345–46, 1348–49 (Fed. Cir. 2018), as amended (Nov. 20, 2018).

[5] To be clear, Netgear could have distinguished *Koninklijke*, without expressly addressing that case.

directed to an abstract idea, the *Alice* inquiry ends."). Thus, with respect to the '165 patent, Defendant's motion is denied without prejudice. Depending on how the record develops, Defendant may have another opportunity to try to meet its burden at *Alice* step one. *See 3G Licensing, S.A.*, 2019 WL 2904670, at *2.

2. Claim 43 of the '754 Patent Crumbles Under *Alice* Scrutiny

The '754 patent has sixty-two claims and discloses multiple embodiments. *See* '754 patent, 6:47-7:16 (listing embodiments), 20:54-26:65 (listing claims). Netgear's pending motion is directed at claim 43 of the '754 patent, which is reproduced below:

> 43. A first electronic device comprising:
> [a] processing circuitry configured to
> [a.i] control transmitting a request to send signal to a second electronic device, the request to send signal indicating a request to initiate data transmission, the request to send signal frame including an address of the second electronic device; and
> [a.ii] control receiving a clear to send signal from the second electronic device, the clear to send signal is transmitted in reply to the request to send signal, wherein
> the clear to send signal includes at least a first section, a second section, and a third section,
> the first section including a duration information for setting a counter value for controlling communication operation,
> the second section including the address of the first electronic device,
> the third section including the address of the second electronic device.[6]

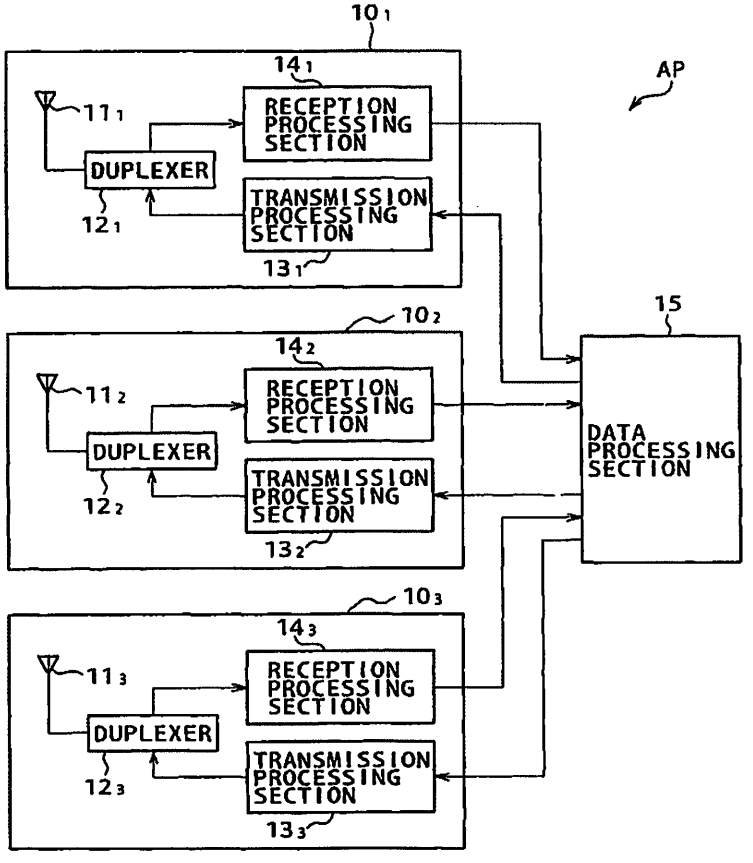
'754 patent, 25:12-30 (bracketed text added for convenience). Before discussing claim 43, the Court turns to the '754 patent's specification to provide context.

According to its abstract, the '754 patent generally relates to "[a] communication system for carrying out data communication among a plurality of communication stations." '754 patent,

[6] The Court reproduces claim 43 with its original indentation. That original indentation appears to conflict with 37 C.F.R. § 1.75(i) ("Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation.").

Abstract. That communication system includes "a first communication station for transmitting to other communication stations a Request To Send (RTS) signal" and receiving from those "communication stations" "a plurality of [Clear To Send] (CTS) signals." '754 patent, Abstract. The first communication station, which is involved in transmitting the RTS signals and receiving the CTS signals, can be "an access point AP." '754 patent, 2:12-25, 7:42-8:52, fig. 1, fig. 2. Figure 2, which is reproduced below, "is a block diagram of an access point in the communication system" that is "according to one embodiment of the present invention":

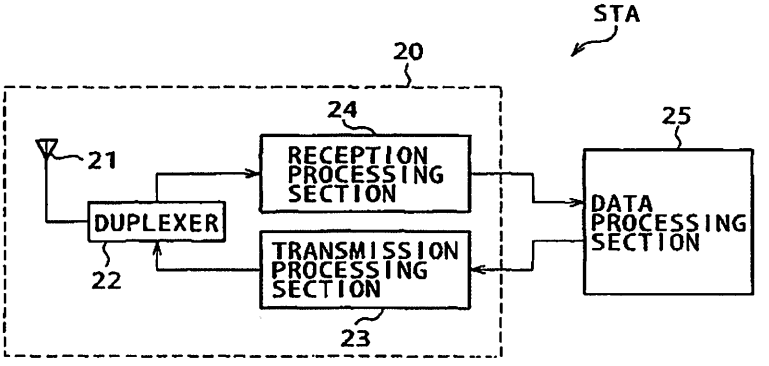
FIG. 2



'754 patent, 6:47-50 (quoted language), fig. 2; *see id.* at 7:42-8:39 (discussing fig. 2). The "data processing section 15" of the access point AP plays a role in generating the RTS signal and

handling received signals. '754 patent, 8:26-39. Figure 3, which is reproduced below, "is a block diagram of each station in the communication system" that is "according to one embodiment of the present invention":

FIG. 3



'754 patent, 6:47-52 (quoted language), fig. 3; *see id.* at 8:40-56 (discussing fig. 3). The "data processing section 25" of the stations plays a role in generating the CTS signals. '754 patent, 8:40-56.

RTS and CTS signals existed in the prior art. *See* '754 patent, 2:3-11, 8:55-56. Figure 4 and figure 5, which are reproduced below, respectively show "the format of the conventional RTS signal" and "formats of the conventional CTS signal":

FIG. 4
RELATED ART

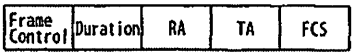
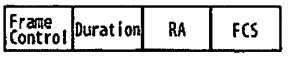


FIG. 5
RELATED ART



'754 patent, 8:57 (first quote), 9:25 (second quote), fig. 4, fig. 5; *see id.* at 8:57-62 (discussing fig. 4), 9:25-36 (discussing fig. 5). "The conventional RTS signal [depicted in figure 4] includes a Frame Control formed of two octets, a Duration formed of two octets, and a Receiver Address RA and a Transmitter Address TA respectively formed of six octets, and a Frame Check Sequence FCS formed of four octets." '754 patent, 8:57-62; *see id.* at 8:63-9:2 (discussing Frame Control), 9:3-17 (discussing Duration), 9:13-16 (discussing Receiver Address RA), 9:17-24 (discussing Frame Check Sequence FCS). Like the conventional RTS signal depicted in figure 4, "the conventional CTS signal [depicted in figure 5] . . . include[s] two octets of Frame Control, two octets of Duration, six octets of Receiver Address, and four octets of Frame Check Sequence FCS." '754 patent, 9:26-30. The "[d]ifference between the [conventional] CTS signal . . . and the [conventional] RTS signal is the absence of the Transmitter Address." '754 patent, 9:34-36.

The '754 patent's named inventor was apparently not satisfied with the conventional RTS and CTS signals, especially when those signals are "applied to an adaptive array antenna." '754 patent, 9:37-58; *see* D.I. 21 at 11-12 (alleging that "[t]he traditional CTS signal protocol cannot

solve this problem because it does not include an address of the station that transmits the CTS signal"). Thus, the '754 patent "propose[s]" "new frame format[s]" for RTS and CTS signals that purportedly provide improvements over the prior art RTS and CTS signals. '754 patent, 6:25-29; *see* D.I. 21 at 11-12 ("Specifically, the patent explains that the new frame format for the CTS signal includes a newly added portion for a Transmitter Address TA . . . . This improved solution allows directional antennas to know which communication station(s) transmitted the clear to send signal for determining weightings for the adaptive array antenna and optimum directivity of transmissions to such station(s)."). A sizeable portion of the '754 patent's specification discusses new formats for the RTS and CTS signals. *See, e.g.*, '754 patent, 9:55-11:9, 14:64-15:34, 18:10-13, fig. 6, fig. 7, fig. 10A, fig. 10B, fig. 11A, fig. 11B.

Having provided background from the '754 patent's specification, the Court returns to claim 43 of the '754 patent. Claim 43 is directed to a system ("[a] first electronic device") that recites a single tangible component: "processing circuitry." '754 patent, 25:12-13. At a high level, the recited processing circuitry is "configured to" do two things. '754 patent, 25:13. One, the processing circuitry is configured to "control transmitting a request to send signal to a second electronic device." '754 patent, 25:14-15. That request to send signal, also known as a RTS signal, "indicat[es] a request to initiate data transmission." '754 patent, 25:15-16. Further, the "[RTS] signal frame includ[es] an address of the second electronic device[.]" '754 patent, 25:16-17. Two, the processing circuitry is configured to "control receiving a clear to send signal from the second electronic device." '754 patent, 25:19-20. That clear to send signal, also known as a CTS signal, "is transmitted in reply to the request to send signal." '754 patent, 25:20-21. Further, the "[CTS] signal includes at least a first section, a second section, and a third section." '754 patent, 25:22-23. The "first section includ[es] a duration information for setting a counter

value for controlling communication operation." '754 patent, 25:24-26. The "second section includ[es] the address of the first electronic device." '754 patent, 25:27-28. The "third section includ[es] the address of the second electronic device." '754 patent, 25:29-30.

Redwood alleges that the '754 patent is a "technologically complex invention that 'provides a communication system in which new frame formats for the RTS (Request To Send) signal, the CTS (Clear To Send) signal and the ACK (Acknowledge) signal are proposed, and the access point transmits the RTS signal describing at least addresses of a plurality of stations requested to receive data and receives a plurality of CTS signals transmitted from a plurality of stations, so that the space division multiplexing communication can be provided between the access point with the adaptive array antenna and a plurality of stations with the coexistent with the station operating according to the conventional protocol.'" D.I. 14 ¶ 53 (citing '754 patent, 6:25-37). Redwood alleges that such a solution is reflected in claim 33. D.I. 14 ¶ 53.[7]

With respect to claim 43, Redwood alleges a solution is reflected in the limitation "that 'the clear to send signal includes ... the third section including the address of the [communication station that transmits the CTS signal].'" D.I. 21 at 11-12 (alterations in original). This, according to Redwood, means that claim 43 "can[] solve [a] problem" that "[t]he traditional CTS signal protocol cannot solve." D.I. 21 at 11.

a. *Alice* Step One: Claim 43 of the '754 Patent Is Directed to an Abstract Idea

As discussed below, the Court holds that claim 43 of the '754 patent is directed to an abstract idea at *Alice* step one.

"We often conduct the *Alice* step one inquiry by examining the 'focus of the claimed advance over the prior art.'" *AI Visualize, Inc. v. Nuance Commc'ns, Inc.*, 97 F.4th 1371, 1378

[7] As noted above, *see supra* Part III.A, the only '754 patent claim at issue here is claim 43.

(Fed. Cir. 2024) (quoting *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253 (Fed. Cir. 2016)). The parties offer competing characterizations of what the focus of the claimed advance is for claim 43 of the '754 patent. Netgear asserts that "the focus of Claim 43 is on the abstract process of sending and receiving control signals." D.I. 18 at 10. Redwood asserts that the focus of claim 43 is "an additional field in the CTS signal" that "includes an additional field for an address of the communication station transmitting the CTS that was lacking in the conventional CTS signal." D.I. 21 at 12-13. Under Redwood's formulation, the "purported claimed advance lies in the following specific limitation[] of claim [43]":[8] "the clear to send signal includes . . . a third section . . . the third section including the address of the second electronic device." '754 patent, 25:19-31.

Given the procedural posture,[9] and given that Netgear's formulation essentially "describe[s] [Redwood's formulation] at [a] different level[] of abstraction," the Court will accept Redwood's formulation. *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). Under Redwood's formulation, the focus of the claimed advance over the prior art is modifying the prior art CTS signal to include information about who transmitted the signal. In other words, the CTS signal that claim 43's recited system receives resembles a conventional RTS signal, instead of a conventional CTS signal. This is apparent from the '754 patent's specification, which states that the "[d]ifference between the [conventional] CTS signal . . . and the [conventional] RTS signal is the absence of the Transmitter Address [TA]" in the

[8] *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1362 (Fed. Cir. 2021).

[9] *Cf. MyMail, Ltd. v. ooVoo, LLC*, 934 F.3d 1373, 1379 (Fed. Cir. 2019) ("[I]f the parties raise a claim construction dispute at the Rule 12(c) stage, the district court must either adopt the non-moving party's constructions or resolve the dispute to whatever extent is needed to conduct the § 101 analysis."); *Visual Memory*, 867 F.3d at 1261–62.

conventional CTS signal. '754 patent, 9:34-36; *see id.* at fig. 4 (conventional RTS signal format showing TA field), fig. 5 (conventional CTS signal format showing lack of TA field).

Though patent claims that are directed to modifying existing data structures to include additional data fields sometimes survive *Alice* scrutiny,[10] as discussed below, "even under [Redwood's] characterization of what the claim is directed to, claim [43] is directed to an abstract idea." *Savvy Dog Sys., LLC v. Pennsylvania Coin, LLC*, No. 2023-1073, 2024 WL 1208980, at *3 (Fed. Cir. Mar. 21, 2024) (nonprecedential).

Under Redwood's formulation of the focus of the claimed advance, claim 43 is directed to a fundamental, longstanding practice. "The Supreme Court has held that 'fundamental ... practice[s] long prevalent' are abstract ideas." *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1314 (Fed. Cir. 2016) (alterations in original) (quoting *Alice*, 573 U.S. 208). Specifically, claim 43 is directed to the longstanding practice of a communication including information about its sender.[11] That practice is present in physical mail and electronic mail, which both include sender and signature fields. *Cf.* 838 F.3d at 1314 ("[I]t was long-prevalent practice for people receiving paper mail to look at an envelope and discard certain letters, without opening them, from sources from which they did not wish to receive mail based on characteristics of the mail."). Claim 43's relationship to wireless communication systems makes it no less abstract. *See Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1346 (Fed. Cir. 2019) (identifying claim as "directed to wirelessly communicating status information about a system").

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[10] *See Adasa*, 55 F.4th at 907–10.

[11] The Court "articulate[s] the abstract idea slightly (and not materially) differently than" Netgear. *Mobile Acuity*, 110 F.4th at 1292.

Additionally, under Redwood's formulation of the focus of the claimed advance, claim 43 is directed to "results rather than to a means of achieving the claimed result." *In re Killian*, 45 F.4th at 1382. This is apparent, as claim 43 lacks meaningful limitations about how the CTS signal is used, generated, received, and transmitted. Likewise, the '754 patent's specification is sparse in its discussion of using, generating, receiving, and transmitting the CTS signal that claim 43's recited system receives.[12] *See Simio, LLC v. FlexSim Software Prod., Inc.*, 983 F.3d 1353, 1362 (Fed. Cir. 2020) ("This disparity—in both quality and quantity—between how the specification treats the abstract idea and how it treats the executable-process limitation suggests that the former remains the claim's focus."). In fact, "the specification [does not] suggest that the invention involved overcoming some sort of technical difficulty in adding" the purported claimed advance. *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 768 (Fed. Cir. 2019). Indeed, the '754 patent's specification suggests that claim 43's claimed advance can be accomplished trivially by modifying the prior art CTS signal to resemble the prior art RTS signal. *See* '754 patent, 9:34-36; *see id.* at fig. 4, fig. 5.

Having determined that claim 43 is directed to an abstract idea, the Court "proceed[s] to step two, at which 'we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application.'" *Beteiro*, 104 F.4th at 1355 (quoting 573 U.S. 208).

[12] In analyzing claim 43, the Court does not give weight to the portions of the '754 patent's specification that are outside the scope of claim 43. *See Am. Axle*, 967 F.3d at 1293 (collecting cases) ("[W]e have repeatedly held that features that are not claimed are irrelevant as to step 1 or step 2 of the *Mayo/Alice* analysis.").

b. *Alice* Step Two: Claim 43 of the '754 Patent Lacks an Inventive Concept

As discussed below, at *Alice* step two, the Court holds that claim 43 of the '754 patent is invalid, as "[c]onsidered individually or as an ordered combination, the claim limitations [of claim 43] fail to transform the claimed abstract idea into a patent-eligible application." *Miller Mendel, Inc. v. City of Anna, Texas*, 107 F.4th 1345, 1354 (Fed. Cir. 2024).

At *Alice* step two, the Court considers "two distinct questions: (1) whether each of the [elements] in the claimed [product] (apart from the [abstract ideas] themselves) involve well-understood, routine, conventional activity previously engaged in by researchers in the field, and (2) whether all of the [elements] '*as an ordered combination* add[ ] nothing to the [abstract idea] that is not already present when the [elements] are considered separately." *Chamberlain*, 935 F.3d at 1348–49 (some alterations in original) (citations and internal quotation marks omitted). "In other words, beyond the [abstract] idea [identified at *Alice* step one] . . . what elements in the claim may be regarded as the 'inventive concept'?" 935 F.3d at 1348–49 (some alterations in original).

The Court agrees with Netgear that claim 43 lacks an inventive concept, regardless of whether its limitations are considered individually or collectively. *See* D.I. 18 at 11-12. Considering the claim limitations individually, while also keeping in mind that "[t]he abstract idea itself cannot supply the inventive concept," the Court is unable to identify "an inventive concept [that] [is] evident in the claim[]." *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019) (first quote); *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (second quote). As discussed above, beyond the abstract idea itself, the '754 patent's specification makes clear that claim 43's recited limitations each involve well-understood, routine, and conventional elements. Even assuming *arguendo* that claim 43 applies CTS signals in a manner that was not well-understood, routine, or conventional, that would not

save claim 43, because "part[s] of the abstract idea" cannot confer patent eligibility. *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1377 (Fed. Cir. 2021). Considering the claim limitations collectively, the Court is unable to identify "any inventive concept present in the ordered combination of elements beyond the" abstract idea. 935 F.3d at 1349.

The Court is not convinced by Redwood's allegation that claim 43 "recite[s] an inventive concept that provides features that are more than well-understood, routine, conventional activity." D.I. 21 at 13. "[W]hen, as here, the defendant contends that the asserted claim lacks a plausible factual basis in the form of an inventive concept, the patent owner is required to respond with more than 'conclusory allegations of inventiveness.'" *GeoComply Sols. Inc. v. Xpoint Servs. LLC*, No. CV 22-1273-WCB, 2023 WL 1927393, at *13 (D. Del. Feb. 10, 2023) (quoting *Int'l Bus. Machines Corp. v. Zillow Grp., Inc.*, 50 F.4th 1371 (Fed. Cir. 2022)). Redwood's opposition, however, consists mostly of conclusory allegations followed by string cites that are not discussed. *See* D.I. 21 at 13.[13] Redwood's conclusory counterarguments generally suffer from a shared flaw: they fail to tie claim 43 and its limitations to a technical solution. This flaw is problematic for Redwood, because "[t]o claim a technological solution to a technological problem, the patent must actually *claim* the *technological solution.*" *Dropbox, Inc. v. Synchronoss Techs., Inc.*, 815 F. App'x 529, 535 (Fed. Cir. 2020) (nonprecedential).

The Court is not convinced by Redwood's attempt to conjure factual disputes at *Alice* step two. In *Aatrix Software, Inc. v. Green Shades Software, Inc.* and *Berkheimer v. HP Inc.*, the Federal Circuit observed that factual disputes may preclude invalidating a patent claim before

[13] This form of advocacy is unpersuasive. *Cf. Takadu Ltd. v. Innovyze LLC*, No. CV 21-291-RGA, 2023 WL 2563157, at *9 (D. Del. Mar. 17, 2023).

trial under the *Alice* test. *See* 882 F.3d 1121, 1130 (Fed. Cir. 2018); 881 F.3d 1360, 1370 (Fed. Cir. 2018). However, "*Aatrix* and *Berkheimer* do not stand for the proposition that a plaintiff can avoid dismissal simply by reciting in the complaint that the invention at issue is novel and nonconventional." *Brit. Telecommunications PLC v. IAC/InterActiveCorp*, 381 F. Supp. 3d 293, 322–23 (D. Del. 2019), *aff'd*, 813 F. App'x 584 (Fed. Cir. 2020). "District courts have frequently decided section 101 issues on motions to dismiss, and the Federal Circuit has approved of that procedure on numerous occasions, including in cases post-dating the decisions in *Aatrix* and *Berkheimer*." 381 F. Supp. 3d at 323 (collecting cases). Thus, while "plausible factual allegations of an inventive concept can defeat a motion to dismiss, a plaintiff cannot defeat a motion to dismiss merely by including conclusory allegations of inventiveness." 2023 WL 1927393, at *14 (citation omitted); *see Plotagraph, Inc. v. Lightricks, Ltd.*, No. 2023-1048, 2024 WL 223185, at *4 (Fed. Cir. Jan. 22, 2024) (nonprecedential) ("Although patentees who adequately allege their claims contain inventive concepts can survive a § 101 eligibility analysis under Rule 12(b)(6), dismissal is appropriate where the factual allegations are not plausible, are refuted by the record, or are conclusory.").

Redwood's attempt to conjure factual disputes at *Alice* step two is based on a skeletal argument that fails to tie claim 43 to any of the purported, technical solutions described in the '754 patent's specification and Operative Complaint. Redwood cannot preclude an *Alice* determination by simply pleading that "[t]he claims of the '754 patent are patent eligible under 35 U.S.C. § 101." D.I. 14 ¶ 53. That pleading is given no weight in the *Alice* analysis, as it "provide[s] no more than a series of legal conclusion about the § 101 analysis." 815 F. App'x at 538; *see Bluebonnet Internet Media Servs., LLC v. Pandora Media, LLC*, No. 2022-2215, 2024 WL 1338940, at *2 (Fed. Cir. Mar. 29, 2024) (nonprecedential) ("[T]he district court was not

required to accept as true allegations in the complaint that are conclusory, state legal conclusions, or contradict the patent itself."). Further, as discussed above, the Operative Complaint's allegations are insufficiently linked to claim 43. Thus, given the absence of "plausible and specific factual allegations that *aspects of the* [*asserted*] *claim*[] are inventive," the Court is not convinced that there are factual disputes at *Alice* step two that preclude holding claim 43 invalid. 815 F. App'x at 538 (quoting *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306 (Fed. Cir. 2019)).

With respect to claim 43 of the '754 patent, the Court rejects Redwood's request "to amend its FAC to address any deficiencies the Court may find." D.I. 21 at 1. Sometimes a "party can attempt to re-plead by adding additional factual allegations." *DISH Techs. L.L.C. v. FuboTV Media Inc.*, No. CV 23-986-GBW, 2024 WL 2300928, at *3 (D. Del. May 21, 2024). However, Redwood's request was "raised in passing," as opposed to being "squarely argued," and thus it is forfeited. *Purewick*, 666 F. Supp. 3d at 441 n.14. Moreover, Redwood has not identified any "new allegations [that] are sufficient to preclude dismissal." *Simio*, 983 F.3d at 1364–65. In fact, with respect to the '754 patent, Redwood's opposition provided no reasons for why leave to amend should be granted.

Neither party has explained whether the dismissal of claim 43 should be with or without prejudice. That determination is informed by Third Circuit precedent. *See Univ. of Pittsburgh v. Varian Med. Sys., Inc.*, 569 F.3d 1328, 1331 (Fed. Cir. 2009) ("In reviewing a district court's determination that a dismissal should be with prejudice, we apply the procedural law of the pertinent regional circuit."). The Third Circuit has noted that "a dismissal is ordinarily presumed to be without prejudice." *Showers v. Rodgers*, No. 23-1241, 2024 WL 1877028, at *3 n.3 (3d Cir. Apr. 30, 2024) (nonprecedential). However, "that presumption gives way when no clear path exists for a plaintiff to cure the defect through amendment or supplementation – as

commonly occurs when a dismissal is based on an affirmative defense instead of a pleading defect." 2024 WL 1877028, at *3 n.3; *see Tigo Energy Inc. v. SMA Solar Tech. Am. LLC*, No. CV 22-915-GBW, 2024 WL 964203, at *13 n.10 (D. Del. Mar. 5, 2024) (dismissing with prejudice after "find[ing] that an amendment to SMA's answer would not cure the deficiencies in its pleadings").

In the context of *Alice* challenges at the Rule 12 stage, whether to dismiss with prejudice often turns on why the claim is being dismissed. This Court has noted that dismissal without prejudice is appropriate if the patentee "may be able to fix the deficiencies identified by the Court." *Redwood Techs., LLC v. Netgear, Inc.*, No. CV 22-1271-GBW, 2024 WL 3202395, at *10 (D. Del. June 27, 2024). On the other hand, this Court has noted that dismissal with prejudice is appropriate if "an amendment [of the complaint] would not change the Court's *Alice* analysis." *ThroughTEK Co. v. Reolink Innovation Inc.*, No. CV 23-218-GBW, 2024 WL 1701841, at *14 n.7 (D. Del. Apr. 19, 2024); *see Game Play Network, Inc. v. Potent Sys., Inc.*, No. CV 23-323-GBW, 2024 WL 3226214, at *10 (D. Del. June 28, 2024) ("The claims of the patents say what they say, and GPN cannot, by pleading, overcome the disclosures of the specifications."). Courts outside the Third Circuit have taken a similar approach. *See Accelerated Memory Tech, LLC v. Hulu, LLC*, No. CV 19-8968-PSG-SKX, 2020 WL 1934979, at *7 (C.D. Cal. Jan. 8, 2020) (dismissing with prejudice, where patentee did not "provide[] a basis to show that it could add allegations to the complaint that would both be consistent with the patent intrinsic record and also support a position of patent eligibility under 35 U.S.C. § 101").

Based on the Court's *Alice* analysis of claim 43, and Redwood's failure to explain how amending its complaint could be fruitful, Netgear's Motion to Dismiss claim 43 of the '754 patent is granted with prejudice. Amending the Operative Complaint would not change the

Court's § 101 analysis. *See ThroughTEK*, 2024 WL 1701841, at *14; *Game Play Network*, 2024 WL 3226214, at *10.

3. Claim 1 of the '300 Patent Withstands *Alice* Scrutiny

The '300 patent has thirteen claims and discloses multiple embodiments. *See* '300 patent, 7:35-11:33 (listing embodiments), 90:62-92:34 (listing claims). Netgear's pending motion is directed at claim 1 of the '300 patent, which is reproduced below:

> 1. A method of transmitting modulation signals, the method comprising:
> generating a plurality of modulation signals each of which is to be transmitted from a different one of a plurality of antennas,
> wherein each modulation signal includes a pilot symbol sequence and/or a pilot subcarrier including a plurality of pilot symbols used for demodulation;
> inserting each of the pilot symbol sequences and/or pilot subcarriers at a same temporal point in each modulation signal,
> wherein the pilot symbol sequences and/or pilot subcarriers are orthogonal to each other, each pilot symbol having a non-zero amplitude,
> a quantity of the plurality of pilot symbols in each pilot symbol sequence and/or pilot subcarrier being greater than a quantity of the plurality of modulation signals to be transmitted; and
> transmitting in an identical frequency band the plurality of modulation signals, each including different transmission data and one of the pilot symbol sequences and/or pilot subcarriers, from the plurality of antennas.[14]

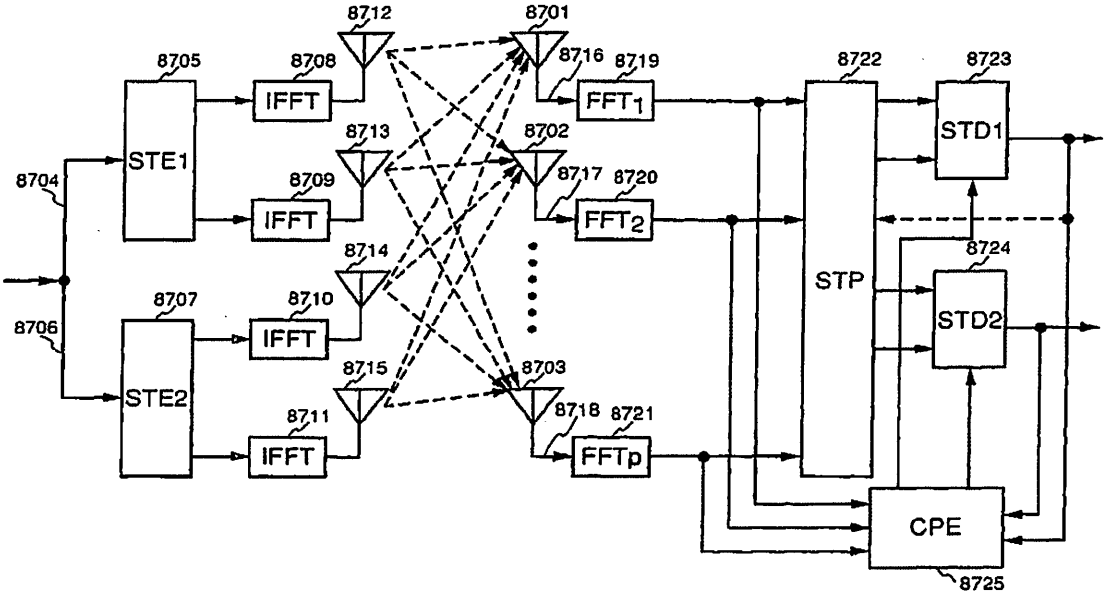
'300 patent, 90:63-91:16. According to its abstract, the '300 patent relates to "[a] method and apparatus for generating and transmitting modulation signals includes generating a plurality of modulation signals each of which is to be transmitted from a different one of a plurality of antennas." '300 patent, Abstract. More specifically, the '300 patent "relates to a transmission

[14] The Court reproduces claim 1 with its original indentation. That original indentation appears to conflict with 37 C.F.R. § 1.75(i).

method for multiplexing modulation signals of a plurality of channels to the same frequency band, a transmission apparatus and a reception apparatus." '300 patent, 1:25-29.

The '300 patent admits that the prior art disclosed related transmission and reception methods. *See* '300 patent, 1:30-43. One such prior art method is illustrated in figure 87, which is reproduced below and "shows a block diagram illustrating parts of a conventional MIMO-OFDM system":

Fig.87



'300 patent, 11:32-33 (quoted language), fig. 87; *see id.* at 1:30-55 (discussing fig. 87). The '300 patent's named inventors were not satisfied with such "conventional structure." '300 patent, 1:56. Apparently, the conventional structure "gives no thought to the synchronization between channels in the same frequency band as well as a frequency offset," and it "encounters the

difficulty of achieving the most important factor in order to demultiplex a multiplexed signal, namely, obtaining an accuracy of estimating channels." '300 patent, 1:56-62.

Redwood alleges claim 1 of the '300 patent "provides a method for transmitting a particularized signal that improves the estimation of spatial channels from multiplexed modulated signals transmitted simultaneously from multiple antennas." D.I. 14 ¶ 73. As an example of a "specific solution[]," Redwood asserts that claim 1 involves "inserting pilot subcarriers at a same temporal point in each of a plurality of modulations from a plurality of antennas, where the pilot subcarriers are orthogonal to each other." D.I. 21 at 15. Redwood alleges that claim 1 "is a technologically complex, particularized method of transmitting modulation signals." D.I. 14 ¶ 72. Redwood asserts that claim 1 is beneficial, because it "increases data transmission rate and allows estimating channels with ease." D.I. 14 ¶ 71. According to Redwood, collectively the limitations of claim 1 of the '300 patent "allow[] the reception apparatus to isolate the symbols with ease for estimating channels." D.I. 14 ¶ 74 (citing '300 patent, 2:34-40).

On the other hand, Netgear asserts that claim 1 of the '300 patent "does nothing more than describe the generic, functional steps of modulating, sequencing, and transmitting data." D.I. 18 at 12. According to Netgear, "[t]he only claimed improvement is the 'synchronization' or timing/sequencing of known data signals." D.I. 18 at 12. Thus, Netgear alleges that "Claim 1 is therefore drawn to nothing more than modulating and transmitting data in a conventional manner with basic adjustments to timing or sequencing, without including any inventive concept or any concrete and non-conventional way of doing so." D.I. 18 at 13.

a. *Alice* Step One: Netgear Has Not Established That Claim 1 of the '300 Patent Is Directed to an Abstract Idea

As discussed below, the Court holds that Netgear has not met its burden of establishing that claim 1 of the '300 patent is directed to an abstract idea at *Alice* step one.

Like its challenge against the '165 patent,[15] Netgear has not met its burden, because it "describ[es] the claim[] at a high level of abstraction, divorced from the claim language itself." *Contour IP*, 113 F.4th at 1379. To meet its burden at *Alice* step one, Netgear must propose an abstract idea that fairly characterizes the challenged claim and thus avoids oversimplifying the challenged claim. *See, e.g.*, *F45 Training*, 2021 WL 2779130, at *6; *Content Square SAS*, 2021 U.S. Dist. LEXIS 51656, at *12; *Mod Stack*, 2019 WL 3532185, at *3.

In reaching its conclusion that claim 1 "only describ[es] generic steps for modulating, sequencing, and transmitting data," D.I. 18 at 13, Netgear "characterizes the claim[] at an impermissibly high level of generality." *Contour IP*, 113 F.4th at 1379–80. For example, in its opening brief, Netgear's *Alice* step one argument insufficiently discusses claim 1's limitations. *See* D.I. 18 at 13. This is problematic, as "the focus must ultimately be on the claim language itself." *Route Guidance*, 2021 WL 24705, at *5; *see CardioNet*, 955 F.3d at 1374. Thus, "[w]hile it may be possible that claim 1 could be accurately characterized as directed to some abstract idea, all [the Court] need[s] to decide today is that the claim is not directed to the abstract idea articulated by [Netgear]." *3G Licensing, S.A.*, 2019 WL 2904670, at *2.

Additionally, Netgear fails to persuade the Court that claim 1 is directed to an abstract idea, because purportedly "it is described in functional terms with insufficient explanation of how to achieve the desired result." D.I. 18 at 13. Section 101 requires that "the claim itself . . .

[15] Given the similarity between Netgear's arguments against the '300 patent and the '165 patent, the Court's discussion here is largely repetitive of its earlier discussion on the '165 patent.

must identify 'how' th[e] functional result is achieved by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of a method claim." *Am. Axle*, 967 F.3d at 1302.

Claim 1's specificity appears comparable to the specificity of claims that withstood *Alice* scrutiny in Federal Circuit cases, such as *Contour IP.*; *Mentone Sols.*; *CosmoKey Sols. GmbH*; *TecSec*; *Koninklijke*; and *Ancora Techs.*[16] *Koninklijke*, 942 F.3d at 1147-53, which Redwood relies on in its opposition (*see* D.I. 21 at 15), is instructive. As discussed above, at this stage, and without the benefit of Netgear having sufficiently distinguished *Koninklijke*, the Court does not discern a meaningful difference in the specificity of claim 2 of *Koninklijke* and claim 1 of the '300 patent. Thus, Netgear has not persuaded the Court that "the claim scope" of claim 1 fails to be "limit[ed] . . . to concrete action." *Am. Axle*, 967 F.3d at 1302.

Further, Netgear fails to persuade the Court that claim 1 "is directed to an abstract idea because it [purportedly] fails to recite any improvement to the functioning of any computing device, and, instead, merely describes performing conventional modulating and transmission of data." D.I. 18 at 13. The parties essentially dispute whether claim 1 is focused on "an improvement to a technological process or in the underlying operation of a machine." *Adasa*, 55 F.4th at 908. Neither party has persuasively identified "the 'focus of the claimed advance over the prior art.'" *AI Visualize*, 97 F.4th at 1378 (quoting *Affinity Labs of Tex.*, 838 F.3d 1253). Both parties glossed over claim 1's focused advance over the prior art and made representations that are difficult to reconcile with the prosecution history.[17] For example, neither party has

[16] *See* cases cited *supra* note 4.

[17] The Court takes judicial notice of portions of the '300 patent's prosecution history. *See Sound View Innovations, LLC v. Facebook, Inc.*, 204 F. Supp. 3d 655, 658–59 (D. Del. 2016); *Trinity Info Media, LLC v. Covalent, Inc.*, 562 F. Supp. 3d 770, 788, 788 n.86 (C.D. Cal. 2021)

persuasively explained why the claimed advance over the prior art does not include the claim limitation that was emphasized in the patent "examiner's statement of reasons for allowance[.]" Notice of Allowability dated Dec. 9, 2016, at 3, in Appl. No. 14/591,346 (emphasizing that "[t]he quantity of the plurality of pilot symbols . . . being greater than a quantity of the plurality of modulation signals . . . ."). [18] Given the procedural posture and Netgear's burden, the uncertainty regarding claim 1's focused advance over the prior art will be construed against Netgear.

Having determined that Netgear has not carried its burden at *Alice* step one, the Court declines to discuss *Alice* step two. *See Contour IP*, 113 F.4th at 1378. Thus, with respect to the '300 patent, Defendant's motion is denied without prejudice. Depending on how the record develops, Defendant may have another opportunity to try to meet its burden at *Alice* step one. *See 3G Licensing, S.A.*, 2019 WL 2904670, at *2.

4. Claim 1 of the '272 Patent Withstands *Alice* Scrutiny

The '272 patent has twenty claims and discloses multiple embodiments. *See* '272 patent, 4:5-6:34 (listing embodiments), 42:56-46:21 (listing claims). Netgear's pending motion is directed at claim 1 of the '272 patent, *see* D.I. 18 at 14, which is reproduced below:

> 1. A transmission apparatus comprising:
> [a] electronic circuitry to:
> [a.i] map a first stream of input data to first complex symbols in serial format;

(considering prosecution history in *Alice* analysis at motion to dismiss stage), *aff'd*, 72 F.4th 1355 (Fed. Cir. 2023); *Sonos, Inc. v. Google LLC*, No. C 20-06754 WHA, 2023 WL 6542320, at *7 (N.D. Cal. Oct. 6, 2023) ("Seeing that the judge must consider the[] prosecution histories and patents in order to evaluate arguments raised herein, this order takes judicial notice of the[] prosecution histories and patents.").

[18] The Court takes judicial notice of the Notice of Allowability. *See* cases cited *supra* note 17.

[a.ii] convert the first complex symbols in serial format into first complex symbols in parallel format;

[a.iii] perform an inverse Fourier transform on the first complex symbols in parallel format to form first Orthogonal Frequency Division Multiplexed (OFDM) signals associated with multiple subcarriers;

[a.iv] transmit the first OFDM signals via a first antenna over the multiple subcarriers in a same frequency band over a same time period that includes a same set of time slots;

[a.v] transmit first pilot information via a first antenna on a first one of a plurality of pilot subcarriers during the same set of time slots;

[a.vi] transmit second pilot information via a first antenna on a second one of a plurality of pilot subcarriers during the same set of time slots, the second pilot information being different from the first pilot information;

[a.vii] map a second stream of input data to second complex symbols in serial format;

[a.viii] convert the second complex symbols in serial format into second complex symbols in parallel format;

[a.ix] perform an inverse Fourier transform on the second complex symbols in parallel format to form second OFDM signals associated with the multiple subcarriers;

[a.x] transmit the second OFDM signals via a second antenna over the multiple subcarriers in the same frequency band over the same time period that includes the same set of time slots,

[a.xi] transmit the first pilot information via the second antenna on the second pilot subcarrier during the same set of time slots; and

[a.xii] transmit the second pilot information on one of the plurality of pilot subcarriers during the same set of time slots.

'272 patent, 42:57-43:30 (bracketed text added for convenience). The '272 patent's specification states that it "incorporate[s] by reference" "the entire contents" of the '165 patent. '272 patent, 1:10-30. Redwood asserts, and Netgear does not dispute, that the '272 patent "share[s] the same specification" as the '165 patent. *See* D.I. 21 at 2. Thus, here, the Court incorporates by reference its previous discussion regarding the '165 patent's specification. *See supra* Part III.B.1.

According to Netgear, "Redwood's contention that the '272 Patent is eligible rests on the same arguments and intrinsic evidence as the '165 Patent." D.I. 22 at 7. Redwood alleges claim 1 of the '272 patent "describes a MIMO-OFDM transmission apparatus capable of high accuracy frequency offset estimation, high accuracy transmission path fluctuation estimation and high accuracy synchronization/signal detection." D.I. 14 ¶ 101. Redwood asserts that claim 1 includes "limitations [that] make it possible [to] estimate frequency offset/phase noise with high accuracy." D.I. 14 ¶ 104 (citing '272 patent, 2:21-27). Redwood alleges that "claims 1 and 9 of the '272 Patent utilize pilot signals of the same sequence for each of the antennas that are transmitted and/or received by a MIMO OFDM device at the same time over the same channel, which results in high accuracy synchronization/signal detection by the receiving apparatus." D.I. 21 at 4-5 (citing '165 patent, 15:18-28).

On the other hand, Netgear alleges that claim 1 of the '272 patent "fails the first step of the *Alice* test," because it purportedly "only describ[es] a device that converts data symbols, modulates data using the conventional OFDM technique, and transmits data via a conventional antenna." D.I. 18 at 17. Netgear contends that the "specification admits that inserting pilot signals at specific positions on pilot carriers was well-known in the prior art." D.I. 22 at 5. Thus, Netgear alleges that claim 1 is "drawn to nothing more than converting, modulating, and transmitting data, without including an inventive concept or non-conventional way of doing so." D.I. 18 at 16.

a. *Alice* Step One: Netgear Has Not Established That Claim 1 of the '272 Patent Is Directed to an Abstract Idea

As discussed below, the Court holds that Netgear has not met its burden of establishing that claim 1 of the '272 patent is directed to an abstract idea at *Alice* step one. Given the similarity between Netgear's *Alice* step one arguments against the '272 patent and the '165

patent, and Netgear's representation that Redwood relies on the "same arguments and intrinsic evidence," the Court incorporates by reference its discussion regarding the '165 patent. *See supra* Part III.B.1.

Having determined that Netgear has not carried its burden at *Alice* step one, the Court declines to discuss *Alice* step two. *See Contour IP*, 113 F.4th at 1378. Thus, with respect to the '272 patent, Defendant's motion is denied without prejudice. Depending on how the record develops, Defendant may have another opportunity to try to meet its burden at *Alice* step one. *See 3G Licensing, S.A.*, 2019 WL 2904670, at *2.

5. Claim 1 of the '071 Patent Withstands *Alice* Scrutiny

The '071 patent has twelve claims and discloses multiple embodiments. *See* '071 patent, 5:46-9:37 (listing embodiments), 91:50-93:24 (listing claims). Netgear's pending motion is directed at claim 1 of the '071 patent, which is reproduced below:

> 1. A radio transmission apparatus comprising:
> [a] a first antenna and [b] a second antenna;
> [c] circuitry configured, based on information associated with an estimated communications channel condition, to:
> [c.i] generate a single modulation signal or a plurality of modulation signals based on the estimated communications channel condition information, and
> [c.ii] transmit the single modulation signal from the first antenna or transmit the plurality of modulation signals which include different information from each other over an identical frequency band from the first antenna and the second antenna at an identical temporal point; and

wherein the single modulation signal and the plurality of modulation signals contain parameter information indicating a number of modulation signals transmitted at the same time.[19]

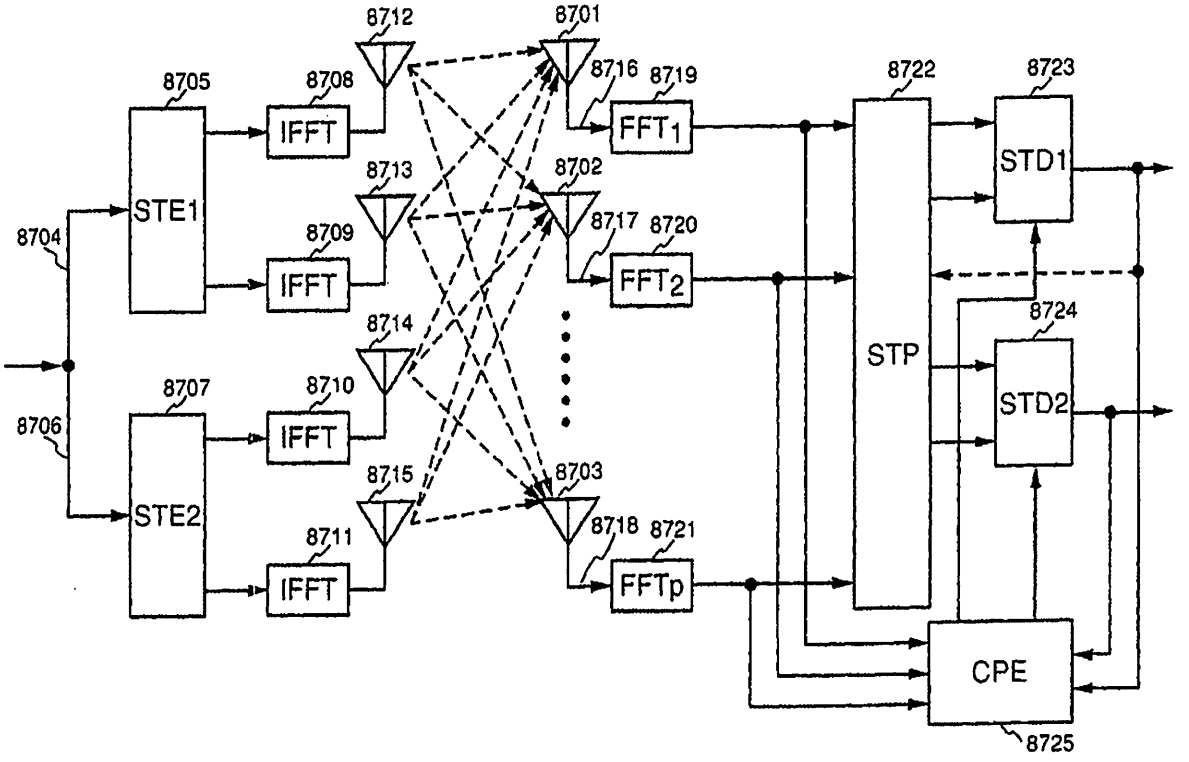
'071 patent, 91:50-67 (bracketed text added for convenience). The '071 patent appears to be related to the '300 patent, as both patents purport a claim of foreign priority to the same Japanese patent applications. *Compare* '071 patent, Foreign Application Priority Data, *with* '300 patent, Foreign Application Priority Data. Unlike the '071 patent's specification, the '300 patent's specification expressly attempts to "incorporate[]" "the disclosures" of those Japanese patent applications. *Compare* '071 patent, 1:4-18, *with* '300 patent, 1:4-21. The parties have not identified the relationship between the specifications of the '071 patent and '300 patent, however. Thus, given the uncertainty over the similarity of their specifications, the Court does not incorporate by reference its previous discussion regarding the '300 patent's specification.

According to its abstract, the '071 patent relates to "[a] radio transmission apparatus [that] includes a first antenna, a second antenna, and circuitry . . . ." '071 patent, Abstract. More specifically, the '071 patent "relates to a transmission method for multiplexing modulation signals of a plurality of channels to the same frequency band, a transmission apparatus and a reception apparatus." '071 patent, 1:20-25.

The '071 patent admits that the prior art disclosed related transmission and reception methods. *See* '071 patent, 1:29-33. One such prior art method is illustrated in figure 87, which is reproduced below and "shows a block diagram illustrating parts of a conventional MIMO-OFDM system":

[19] The Court reproduces claim 1 with its original indentation. That original indentation appears to conflict with 37 C.F.R. § 1.75(i).

Fig.87



'071 patent, 9:38-39 (quoted language), fig. 87; *see id.* at 1:34-53 (discussing fig. 87). The '071 patent's named inventors were apparently not satisfied with such "conventional structure." '071 patent, 1:54. Apparently, the conventional structure "gives no thought to the synchronization between channels in the same frequency band as well as a frequency offset," and it "encounters the difficulty of achieving the most important factor in order to demultiplex a multiplexed signal, namely, obtaining an accuracy of estimating channels." '071 patent, 1:54-60.

Redwood alleges the '071 patent provides a "specific solution" where "[t]he transmission information includes multiplex information data indicating whether the transmission includes multiplexed signals transmitted at the same time or a single modulation stream." D.I. 21 at 18 (citing '071 patent, 45:17-18, 46:3-60). Purportedly that solution permits a "reception apparatus

[to] process [modulation] signal(s) more efficiently." D.I. 21 at 19 (citing '071 patent, 45:17-18, 46:3-60). According to Redwood, that "solution is recited by claim 1 of the '071 Patent of 'wherein the single modulation signal and the plurality of modulation signals contain parameter information indicating a number of modulation signals transmitted at the same time.'" D.I. 21 at 18 (quoting '071 patent, 91:64-67).

On the other hand, Netgear alleges that claim 1 of the '071 patent "describes nothing more than the generic steps of modulating and transmitting signals." D.I. 18 at 18. Netgear alleges that "[t]he purported improvements, as captured by Claim 1, are limited to (1) allowing transmission of a signal from an antenna and signals from a plurality of antennas; and (2) transmitting signals that contain 'parameter information.'" D.I. 22 at 10. Thus, Netgear alleges that "Claim 1 is therefore drawn to nothing more than modulating and transmitting signals, without including an inventive concept or non-conventional way of doing so." D.I. 18 at 18.

a. *Alice* Step One: Netgear Has Not Established That Claim 1 of the '071 Patent Is Directed to an Abstract Idea

As discussed below, the Court holds that Netgear has not met its burden of establishing that claim 1 of the '071 patent is directed to an abstract idea at *Alice* step one.

To meet its burden at *Alice* step one, the moving party must propose an abstract idea that fairly characterizes the challenged claim and thus avoids oversimplifying the challenged claim. *See, e.g.*, *F45 Training*, 2021 WL 2779130, at *6; *Content Square SAS*, 2021 U.S. Dist. LEXIS 51656, at *12; *Mod Stack*, 2019 WL 3532185, at *3. Netgear cannot satisfy this burden by simply identifying abstract ideas that the claim involves. *See PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1315 (Fed. Cir. 2021); *Visual Memory*, 867 F.3d at 1262. Again, at *Alice* step one, Netgear has not met its burden, because it fails to persuade the Court that its

proposed abstract idea satisfactorily captures what claim 1 is directed to. Netgear characterizes claim 1 of the '071 patent as directed to "nothing more than modulating and transmitting signals." D.I. 18 at 18. In support of that characterization, Netgear highlights that claim 1 uses the words "generate" and "transmit." D.I. 18 at 18. Netgear's reasoning lacks details, however. While claim 1 involves generating and transmitting signals, the Court is skeptical that Netgear's "proffered abstract idea [] [] satisfactorily capture[s] the substance of the claim[]." *Trident Holdings*, 2022 WL 823514, at *6 n.15.

At this stage, the Court credits Redwood's argument that claim 1's focus includes the limitation that recites "wherein the single modulation signal and the plurality of modulation signals contain parameter information indicating a number of modulation signals transmitted at the same time." '071 patent, 91:64-67; *see* D.I. 21 at 18. Redwood's argument finds support in the prosecution history.[20] For example, the patent "examiner's statement of reasons for allowance" emphasized that wherein clause. *See* Notice of Allowability dated Feb. 21, 2019, at 2-6, in Appl. No. 15/494,666. Given the procedural posture and Netgear's burden, the uncertainty regarding claim 1's focus will be construed against Netgear. In other words, at this stage, it is at least plausible that claim 1's focus includes that wherein clause. Thus, "[w]hile it may be possible that claim 1 could be accurately characterized as directed to some abstract idea, all [the Court] need[s] to decide today is that the claim is not directed to the abstract idea articulated by [Netgear]." *3G Licensing, S.A.*, 2019 WL 2904670, at *2.

Again, like its challenge against claim 7 of the '165 patent, Netgear has not persuaded the Court that, for the purpose of the *Alice* analysis, claim 1 of the '071 patent lacks sufficient

[20] The Court takes judicial notice of portions of the '071 patent's prosecution history. *See* cases cited *supra* note 17.

specificity. Here, Netgear's argument fails for the same reasons that its challenge against the '165 patent failed. Netgear has not persuaded the Court that "the claim scope" of claim 1 fails to be "limit[ed] . . . to structures specified at some level of concreteness." *Am. Axle*, 967 F.3d at 1302.

Having determined that Netgear has not carried its burden at *Alice* step one, the Court declines to discuss *Alice* step two. *See Contour IP*, 113 F.4th at 1378. Thus, with respect to the '071 patent, Defendant's motion is denied without prejudice. Depending on how the record develops, Defendant may have another opportunity to try to meet its burden at *Alice* step one. *See 3G Licensing, S.A.*, 2019 WL 2904670, at *2.

IV. CONCLUSION

For the above reasons, the Court GRANTS-IN-PART and DENIES-IN-PART Netgear's motion. The Court will enter an Order consistent with this Memorandum Opinion.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

REDWOOD TECHNOLOGIES, LLC, Plaintiff, v. NETGEAR, INC., Defendant.	Civil Action No. 22-1272-GBW

ORDER

At Wilmington this 28th day of October 2024, consistent with the corresponding Memorandum Opinion, **IT IS HEREBY ORDERED** that Defendant Netgear, Inc.'s Motion to Dismiss Plaintiff's First Amended Complaint (D.I. 17) is **GRANTED-IN-PART** and **DENIED-IN-PART**. Count II of Plaintiff's First Amended Complaint for Patent Infringement (D.I. 14) is **DISMISSED WITH PREJUDICE**. Defendant's Motion (D.I. 17) is otherwise **DENIED**.

GREGORY B. WILLIAMS
UNITED STATES DISTRICT JUDGE