

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

AMAZON.COM, INC., AMAZON.COM
SERVICES LLC, and EERO LLC.

Defendants.

Case No. 6:21-cv-619-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

APPLE INC.,

Defendant.

Case No. 6:21-cv-620-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

ASUSTEK COMPUTER INC.

Defendant.

Case No. 6:21-cv-622-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

CISCO SYSTEMS, INC.
MERAKI LLC

Defendants.

Case No. 6:21-cv-623-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Case No. 6:21-cv-625-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO
TECHNOLOGIES,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants.

Case No. 6:21-cv-626-ADA

JURY TRIAL DEMANDED

XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES, Plaintiff, v. DELL TECHNOLOGIES INC. AND DELL INC., Defendants.	Case No. 6:21-cv-646-ADA JURY TRIAL DEMANDED
XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES, Plaintiff, v. HP INC., Defendant.	Case No. 6:21-cv-694-ADA JURY TRIAL DEMANDED
XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES, Plaintiff, v. MICROSOFT CORPORATION, Defendant.	Case No. 6:21-cv-695-ADA JURY TRIAL DEMANDED

Plaintiff XR Communications LLC dba Vivato Technologies’
Sur-Reply Claim Construction Brief

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I. INTRODUCTION

Plaintiff XR Communications, LLC dba Vivato Technologies (“Vivato”) submits this sur-reply brief to illustrate that Defendants proposals would result in reversible error. Defendants’ proposals should be rejected, and XR’s proposals adopted, as XR’s proposals are the only ones consistent with the intrinsic record.

II. DISPUTED TERMS

A. “signal transmission/reception coordination logic” (’939 patent, all claims)

If the Court finds this term is subject to § 112 ¶ 6¹, then it should adopt the same construction as the U.S. District Court for the Central District of California and find that the corresponding structure in the specification is the “signal transmission/reception coordination logic 404” and the “MAC coordinator logic 606.” Ex. 6 (ECF No. 312, Minute Order Adopting R&R) at 8-10.

In Reply, Defendants have abandoned their primary argument for indefiniteness. Defendants’ core argument supporting indefiniteness in their opening brief was that the ’939 Patent fails to disclose the recited function of “restrain[ing] an access point from transmitting on one channel, in response to ascertaining that a different access point is receiving on a different channel.” Defendants’ Opening Brief at 6. Defendants had insisted that the ’939 Patent does not disclose “the claimed function of restraining transmission on one channel in response to ascertaining reception on a *different* channel (as all claims require).” Opening Br. at 8 (also contending the specification’s disclosures are “devoid of any algorithm that restrains transmission on a different channel than the channel on which a signal is received.”).

But now, Defendants agree that the ’939 Patent discloses the claimed functions, even acknowledging that the specification “*restates* the recited functions from the claims.” Defendants’

¹ XR has not conceded that this term requires means-plus-function treatment. As explained in XR’s opening brief, the Federal Circuit’s recent guidance in *Dyfan* clarifies that this is not a means-plus-function term. Rather, the “signal transmission/reception coordination logic” in the ’939 Patent is analogous to the “code” and “application” terms found not to invoke §112(6) in *Dyfan v. Target Corp.*, 28 F.4th 1360 (Fed. Cir. Mar. 24, 2022). *See also* *VDPP LLC v. Vizio Inc.*, No. 2021-2040 (Fed. Cir. Mar. 2022) (nonprecedential) (reversing means-plus-function treatment for “processor”).

Reply Br. at 2. Given Defendants' concession, the Court is now required to accept that the '939 Patent discloses the claimed functions of the signal transmission/reception coordination logic, including at '939 Patent, 6:19-53.

Under the law, the Court's remaining task is to identify each structure or algorithm clearly linked to these functions. The U.S. District Court for the Central District of California has already done so, holding that the corresponding structure in the specification is the "signal transmission/reception coordination logic 404" and the "MAC coordinator logic 606." Ex. 6 (ECF No. 312, Minute Order Adopting R&R) at 8-10. There is no reason to depart from that holding.

Defendants' only *substantive* arguments in Reply are that the "signal transmission/reception coordination logic 404" and the "MAC coordinator logic 606" are both "black box" disclosures that do not inform an ordinary artisan of their "internal structure." Defendants' Reply Brief at 2-3. Defendants are wrong. Indeed, the '939 Patent explains the internal structure of both. The '939 Patent, 5:65-6:15 explains that the internal structure of the logic 404 corresponds to a numbered list of access points 402(1)-402(N) so that each access point can be identified in relation to each other access point that is receiving a signal on the same channel or on a different channel. The internal structure of the logic 404 also includes "receive information combiner 1002," "receive information selector 1004," and "channel selectivity 1008," which are structures that apply the "signal coordination function to the receive information to produce the combined receive information" which is then "utilized to ascertain signal reception and restrain signal transmission" on particular channels. '939 Patent, 15:30-65. Defendants' arguments against the MAC coordinator logic 606 fare no better, as the internal structure of MAC coordinator logic 606 includes the "receive indicator combiner 810" described in FIG. 8 and the accompanying text. '939 Patent, 15:49-65, FIGs. 6, 8.

Defendants' Reply Brief does nothing to contradict these disclosures of the internal structure of the logic 404 (and logic 606), and that is dispositive. Instead, Defendants argue that XR is changing its position by explaining how these disclosures inform the internal structure of the "signal transmission/reception coordination logic 404" and the "MAC coordinator logic 606".

Defendants' Reply Brief at 1-2. But XR is not changing its position—it is simply pointing to additional disclosures in the '939 Patent which inform an ordinary artisan of the internal structure of the “signal transmission/reception coordination logic 404” and the “MAC coordinator logic 606,” to rebut Defendants' incorrect view that these structures are mere “black box” depictions. Judge Carter in C.D. Cal. relied upon the same evidence in finding that the “signal transmission/reception coordination logic 404” and the “MAC coordinator logic 606” are adequate corresponding structures. Ex. 6 (ECF No. 312, Minute Order Adopting R&R) at 8-10; Ex. 7 (3/28/22 Hearing Transcript) at 88:25-100:20 (describing the disclosures of the internal structure of the signal transmission/reception coordination logic 404 and MAC coordinator logic 606 in '939 Patent, 5:65-6:15 15:30-65, FIGs. 6, 8, 13, including the baseband circuitry, receive information combiner 1002, receive information selector 1004, and channel selectivity 1008), 106:16-110:16 (describing receive information combiner and channel selectivity 1008, and both baseband and MAC embodiments).

Defendants also assert it is irrelevant that the '939 Patent teaches an ordinary artisan to implement these structures in an off-the-shelf baseband and MAC chipset within wireless input/output unit 206. '939 Patent, 6:54-7:6, 18:25-31, FIG. 4 (depicting “signal transmission/reception coordination logic 404” coupled within “wireless input/output unit 206”); Vojcic Decl. ¶ 41. Far from being irrelevant, these disclosures establish that logic 404 is not a “black box,” because an ordinary artisan knows how to build one and what is inside of it. *Telcordia Technologies, Inc. v. Cisco Systems, Inc.*, 612 F.3d 1365, 1367-68 (Fed. Cir. 2010). Defendants have no answer for *Telcordia*. Defendants cannot prove indefiniteness by clear and convincing evidence, particularly at this stage of the case. *See Rembrandt Data Technologies, LP v. AOL, LLC*, 641 F.3d 1331, 1343 (Fed. Cir. 2011) (vacating summary judgment of invalidity since there were issues of fact as to whether the specification disclosed to one of skill in the art algorithms for several means-plus-function limitations).

B. “802.11” ('939 patent, cl. 3, 19, 32; '376 Patent, cl. 10 and 21)

A POSITA at the time of the invention understood that the “802.11 standard” would

continue to be updated, as Dr. Vojcic has opined. Vojcic Decl. ¶¶ 46-55. For example, the '939 patent gives examples of numerous versions of the 802.11 standard. *See, e.g.*, '939 Patent at 1:41–46 (“Since the late 1990s, LANs have expanded into wireless media so that networks may be established without necessitating wire connections between or among various network elements. Such LANs *may operate in accordance with IEEE 802.11 (e.g., 802.11(a), (b), (e), (g), (k), (n), etc.)* or other wireless network standards.”). Construing this term to have its plain meaning does not mean that the scope of the claim is arbitrarily expanding. Rather, the term “802.11 standard” has the same meaning it did as of the filing date of the '939 and '376 patents, which refers to a standard that receives periodic updates and improvements.

C. “transmission nulls”; '235 patent, claims 2, 4, 8, 12, 16; '376 patent, claims 1, 12, 22, 30, 32

The Court should construe “transmission nulls” as “plain and ordinary meaning, an example of which is portions of one or more spatially distributed patterns of electromagnetic signals where transmissions of no or insignificant energy are selectively directed.”

D. “transmission peaks” ('235, claims 2, 4, 8, 12, 16; '376, claims 1, 12, 22, 30, 32)

Defendants’ construction (limiting “transmission peaks” to the “maximum”) cannot be reconciled with the intrinsic record. The specification states that a single transmission pattern can exhibit multiple transmission peaks and clarifies that the transmission peaks refer to each part of the pattern where a “generated and particular amount of energy is directed in a particular direction”—and this includes “sidelobes to a communication beam [which] may also be considered to represent transmission peak(s).” '376 Patent, 5:65-6:9. According to the '376 Patent, “in practice, a communication beam (e.g., directional beam) has a main beam whose width can be controlled by the size of the antenna aperture, and sidelobes which vary in different directions.” '376 Patent, 26:55-58. This establishes that “transmission peaks” refers to both the *main beam* (the “maximum” energy) and the *sidelobes*. *Id.* Because “sidelobes” also represent transmission peaks, and “sidelobes” are not the “maximum,” Defendant’s construction limiting “transmission peaks” to the “maximum” would exclude “sidelobes” and directly contradict the intrinsic record.

This point is clear from Figure 15, which depicts multiple transmission peaks, including one “main beam” and fourteen “side lobes.” Defendants’ construction purports to limit “transmission peak” to the maximum point in the very center of the graph. But the plain meaning of “transmission peaks” includes both the entire “main beam” as well as the “sidelobes to a communication beam [which] may also be considered to represent transmission peak(s).” ’376 Patent, 5:65-6:9. That is because these portions of the pattern have a “generated and particular amount of energy [] directed in a particular direction.” ’376 Patent, 5:65-6:9.

XR’s proposal is the only one consistent with the intrinsic record. Defendants contend that a “generated and particular amount of energy” refers only to the “peak amount.” Defendants’ Reply Br. at 6. But the specification confirms that there may be *multiple* “transmission peaks,” including sidelobes, in addition to the main beam. ’376 Patent, 5:65-6:9. Accordingly, the term “transmission peak” **cannot** be limited to one portion of the pattern alone. On this point, Defendants now argue that their construction is broad enough to allow for “local maximums” as well as the “absolute” maximum. Defendants’ Reply Br. at 6. But this is not clear from the construction itself, which says “maximum energy,” and does not specify that “relative maxima” are included. Rather than provide clarity, Defendants’ proposal would invite confusion as to whether “relative maxima” are included.

Further, Defendants’ proposal would also risk confusing the jury into believing that “transmission peak” only refers to one point within the “main beam,” rather than the entire main beam. But the specification confirms that “transmission peaks” are associated with the entire “signal path” to any receiving node. ’376 Patent, 5:65-6:9. This is illustrated in FIG. 5, which shows “transmission peaks” are not single points in space but include the entire signal path to the client device. That is also why the specification says that transmission peaks are associated with the “intent to maximize”—because an ordinary artisan understands what a “transmission peak” is, without precise mathematical measurement of the location of maximum energy. Indeed, the intrinsic record confirms that a “transmission peak” occurs when a beamformer *intends* to direct energy toward a client device, and this is recognizable from the pattern itself without precise

energy measurements. It appears that Defendants prefer a construction requiring “maximum” so that they can insist on “objectively measured” evidence that a portion of a signal pattern is the “maximum.” Defendants’ Reply Br. at 6. But that is not how an ordinary artisan would understand these claims.

Defendants finally contend that “peak” communication loads and the definition of the term “peak” in the dictionary should outweigh the intrinsic record’s clear teaching that “transmission peaks” refer to a “generated and particular amount of energy” rather than a “maximum energy.” ’376 Patent, 5:65-6:9. But these unrelated examples do not support a construction that contradicts the inventor’s preferred language to describe the specific claim term in dispute, “transmission peaks,” which is described in detail at ’376 Patent, 5:65-6:9. Likewise, if any description of a *different* term were to be informative, it would be the descriptions of “transmission nulls,” which are taught as the portions of the pattern where a “relatively insignificant amount of energy is transmitted in a particular direction.” ’235 Patent, 6:10-14. The patentee did not limit “transmission nulls” to only the portions of the pattern where “no transmission energy” occurs, just as the patentee did not limit “transmission nulls” to only the portions of the pattern where “maximum energy” occurs. Defendants’ proposal should therefore be rejected.

E. “third signal comprising content based on the set of weighting values” (’235 Patent, claims 1, 8 and 15)

Claim 1 requires a “set of weighting values” that is “configured to be used by the transceiver to construct one or more beam-formed transmission signals,” and then requires transmitting a “third signal comprising content based on the set of weighting values.” Similarly, the Figure 12 embodiment states that the “stored weighting values associated with each connection, data signal, and/or source are utilized in a weighting matrix 1210 which operates to apply the latest weighting values to the received signals and also to transmitted signals.” ’376 Patent, 25:16-30. Defendants contend that this embodiment “would not be covered by these asserted claims”—but that could only be true *under Defendants’ proposed construction*. But constructions that exclude the preferred embodiment are “rarely, if ever, correct.” *Adams*

Respiratory Therapeutics, Inc. v. Perrigo Co., 616 F.3d 1283, 1290 (Fed. Cir. 2010). Accordingly, the Court should reject Defendants’ narrowing proposal for what it is: an attempt to construe the claims in a manner that excludes the preferred embodiment.

During patent prosecution, the patentee stated that “transmitting to the remote station a third signal comprising content based on the set of weighting values” covers the embodiment in Document C describing “compute the complex weights for a second RF beamformer.” Dkt. 42-22, Office Action Response (July 25, 2018). But Defendants argue that this embodiment *would not be covered under their proposed construction*. Defendants’ Reply Br. at 9. This is reversible error. The scope of this limitation must include the disclosures that the Patent Owner cited for this limitation during prosecution. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (“In construing the claims we look to the language of the claims, the specification, and the prosecution history...In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. The claims, the specification, and file history, rather than extrinsic evidence, constitute the public record of the patentee’s claim.”). Defendants have no answer for *Vitronics* and do not address it.

Finally, when the patentee wanted to specify what the “content” must contain, the patentee did so in claim 4, saying that the content “comprises data.” But in claim 1, the patentee did not say that the “content” “comprises” anything. Instead, the patentee wrote that the “signal” comprises content and this signal is “based on the set of weighting values.” The Court should not construe the claim as though the patentee had said “content *comprising* the set of weighting values,” as the Court should not re-write the claim without clear lexicography or disclaimer.

F. “the set of weighting values is configured to be used by the [remote station/transceiver] to construct one or more beam-formed transmission signals” (’235 Patent, claims 1, 8, 15)

Defendants have failed to prove by clear and convincing evidence that any Claim is indefinite under *Geneva Pharms.* XR’s Opening Brief showed that claims 1 and 15 are not indefinite under *Geneva Pharms.*, and Defendants now agree with XR about claims 1 and 15.

Indeed, Defendants’ Reply Brief abandons its arguments about Claims 1 and 15. Claims 1 and 15 do not require a *combination* with any other device to understand whether there is infringement. Claims 1 and 15 describe a device that determines a set of weighting values and that also includes a transceiver that uses the weighting values to perform beamforming. ’235 Patent, cls. 1 and 15. Given Defendants’ concession, the Court must adopt the plain meaning of the claimed phrase “the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals” in claims 1 and 15.

Defendants’ arguments as to claim 8 fare no better. Claim 8 presents a different issue from claims 1 and 15. However, claim 8’s language (“set of weighting values is configured to be used by the remote station to construct one or more beam-formed transmission signals”) also does not run afoul of *Geneva Pharms.* because no combination is required to ascertain if there is infringement. Defendants continue to insist—without any support in the claim language—that infringement cannot be ascertained without “combining” the weighting values with the remote station. Defendants’ Reply Br. at 11. But the claims only require *preparing* a set of weighting values for use by another station, because “configured to be used” means “prepare or arrange for use.” And *preparing* weighting values for use by a remote station is accomplished without actually “combining” the weighting values with the remote station—and indeed, has nothing do with whether the ultimate combination is *effective*. This is dispositive. Defendants’ argument that a remote station might *fail* to use the weighting values effectively rests on the premise that the “configured to be used” language requires that the claimed apparatus *know, for certain*, that the set of weighting values will be *effective* once they are received at the remote station. But this is not required by Claim 8. Claim 8 only requires *preparation*, and *preparation* does not require that the weighting values be *effective* once they are received at the remote station. This distinguishes *Geneva Pharms.*, where the claims recited more than *preparation* and required actual *effectiveness* for treating bacterial infections. *Geneva Pharms.*, 349 F.3d at 1382. Indeed, the problem in *Geneva Pharms.* was that the claims required *effectiveness*, which could not be ascertained until combination with the bacterium. *Id.* But here, claim 8 does not require *effectiveness*—it only

requires that weighting values be prepared or arranged for use by another station, regardless of whether that station will succeed in using them.

Moreover, *preparing* a set of weighting values for use by another station is performed entirely within “access station 102” without any combination with a remote station. For example, “access station 102” prepares the set of weighting values for use by a remote access station (*e.g.*, “nodes within the wireless routing network”) by computing the weighting values that are associated with received signals from that remote access station. ’235 Patent, 24:44-25:30 (“the routing table includes stored weighting values (w) each associated with a particular signal source 1202...a description of the received signal(s) can be stored in the routing table in the form of the pattern or weighting of the signal(s)...the stored weighting values associated with each connection, data signal, and/or source are utilized in a weighting matrix 1210 which operates to apply the latest weighting values to the received signals and also to transmitted signals.”). As explained in XR’s Opening Brief, because the “set of weighting values” in claim 8 is determined from the “first signal” and “second signal” received simultaneously from the remote station, no further analysis of the “remote station” is needed to ascertain whether the “set of weighting values” is appropriate for it. Vojcic Decl. ¶¶ 72-74.

Defendants’ only response to this point is to argue that this renders the “configured to be used” limitation superfluous—but it does not, as that limitation further requires *preparing* the weighting values for use by the remote station. The point, however, is that *preparing* the weighting values for use does not depend on combinability with the remote station (*e.g.*, how many antennas it has) because it instead depends on information already known to the access station, *i.e.*, information ascertained from the simultaneously received “first signal” and “second signal” from the remote station. The claimed apparatus understands, given the received first and second signal from the remote station, how to compute weighting values that can be used by the remote station, as they are calculated based on the received “first signal” and “second signal” from that very remote station. Vojcic Decl. ¶¶ 72-74.

Even assuming *arguendo*, that preparing weighting values for use by another station

required antenna information about the remote station, claim 8 does not run afoul of *Geneva Pharms.* because infringement can be ascertained based on whether the claimed apparatus has obtained the requisite information (e.g., antenna information) about the remote station from the received “first signal” and “second signal.” Unlike the compounds in *Geneva Techs.*, the “access stations” in the ’235 Patent are capable of ascertaining antenna information about remote stations based on received signals from the remote station. For example, the specification discloses that the “memory component 818” maintains routing and signal information such as “antenna pointing direction information” and “weighting information” associated with each node in the wireless network. ’235 Patent, 15:44-16:49. The “scanning receiver 822 scans each directed communication beam [] consecutively and monitors for client devices and associated information such as the transmit power of a client device, roaming status, and the many other communication factors to update data that is maintained about each client device that is in communication via communication beam.” *Id.* Indeed, “a determination to direct a transmission null and/or a transmission peak (e.g., a communication beam 214) in a particular direction can be made based on collected *or otherwise provided routing information* which may include a variety of data associated with the operation of the multi-beam directed signal system 206, wireless routing device, and other devices at other locations or nodes within the wireless network.” ’235 Patent, 6:20-28, 28:21-30:2 (describing “coordination between access stations 102 in a wireless communications environment”). Thus, *Geneva Pharms.* would still not apply to claim 8, because a combination with a remote station is not required to ascertain whether weighting values are prepared for use by the remote station—one can ascertain whether the weighting values are “configured to be used” by the remote station based on (1) whether the access station has obtained the requisite information (or not) from the “first signal” and “second signal” received simultaneously from the remote station, and (2) whether the access station has then prepared the weighting values for use by the remote station based on this information.

G. “remote station” (’235 patent, claims 1, 4, 8, 9, 12, 15)

Defendants’ proposal to exclude “remote access station” from the definition of “remote

station” has no support in the intrinsic record, let alone clear lexicography or disclaimer. An ordinary artisan understands “remote station” can refer to a remote access station. Vojcic Decl. ¶¶ 77-82. Defendants’ proposal should be rejected.

Defendants assert that the intrinsic record support identified by XR never refers to remote access stations, but the intrinsic record proves Defendants are wrong. The ’235 Patent describes placing “transmission peaks” in the direction of remote access stations. ’235 Patent, 6:1-9 (“Transmission peaks are, therefore, associated with the signal path and/or communication beam to a desired receiving node, *such as another wireless routing device* or a wireless client device.”). The specification expressly describes placing transmission peaks at the location of “another wireless routing device *or* a wireless client device,” which confirms that “remote stations” can be remote wireless routers or remote wireless clients. *Id.* In response, Defendants argue this sentence in the specification does not use the word “station” or “remote,” and so it should be disregarded. Defendants’ Reply Br. at 14. That is wrong. The patent uses the term “wireless routing device” to refer to an “access station.” ’235 Patent, 3:38-44 (“Directed wireless communication provides improved performance over conventional wireless network arrangements by utilizing *multi-beam receiving and/or transmitting adaptive antennas*, when practical. In an implementation, simultaneous transmission and reception may occur at a *wireless routing device* by applying multi-channel techniques”), 4:1-55 (“*access station 102* includes a *multi-beam directed signal system 206*”), 6:1-50 (describing “simultaneous” transmission/reception by access station 102 in multi-beam directed signal system 206). Thus, the plain meaning of “station” and “remote station” clearly includes “another wireless routing device or a wireless client device.” ’235 Patent, 6:1-50, Vojcic Decl. ¶¶ 77-82. Given this intrinsic record, there is no support for a narrowing construction that excludes “wireless routing devices” from the scope of “remote station.”

Similarly, the ’235 Patent describes placing “transmission nulls” in the direction of remote access stations. ’235 Patent, 24:25-25:30 (“scanning receiver 822 may identify information about different classes of interferers (e.g., known and unknown types) within routing information 1206....the routing table includes identifiers of the desired sources and other identifiers for the

interferers (“Int”)...a description of the received signal(s) can be stored in the routing table in the form of the pattern or weighting of the signal(s)”; *see also* 15:59-16:10. Defendants argue that these disclosures are not related to “remote stations.” Defendants’ Reply Br. at 14. Respectfully, that interpretation cannot be squared with the record. The “interferers” are clearly “remote stations” depicted in FIG. 12 and described in the accompanying text. As shown in FIG. 12, preferred embodiments maintain “stored weighting values (w) each associated with a particular signal source,” including signals from remote access stations that are desired receiving nodes or that are interfering with communications (“Int” in routing table **1206**), such as “other nodes” in the same network, or remote access stations operating another wireless network (“WLAN **1204**”). ’235 Patent, 24:25-25:30, FIG. 12; *see* Vojcic Decl. ¶¶83-90.

Defendants insist that FIG. 12 “only shows access station 102 as a centralized device that is beamforming to other remote client units.” Defendants’ Reply Br. at 14. Defendants are wrong. FIG. 12 also describes determining weighting values that establish transmission nulls for remote access stations. FIG. 12 discloses determining weighting values to null out “WLAN 1204,” which is a remote wireless access station operating a different wireless local area network. ’235 Patent, 24:25-25:30 (“zeroes represent directions for communication that should be nulled out to prevent self-interference or interfering with other nodes or possibly other known wireless communication systems, such as WLAN 1204 that is not part of the wireless routing network, but is operating within at least a portion of a potential coverage area 1208 and frequency bands.”). The accompanying text explains that the “weighting values” are stored with “zeroes” that “represent directions for communication that should be nulled out” to prevent interference with the remote access station corresponding to “WLAN 1204.” *Id.* Defendants never acknowledge the description of WLAN 1204 or explain why it would not correspond to a “remote station” that is a remote *access* station rather than a remote *client*. Defendants’ Reply Br. at 14. Defendants’ position is incompatible with the intrinsic record.

Defendants also have no good answer to the description of “stations” in the specification as referring to remote access stations participating in 802.11 carrier sense multiple access/collision

avoidance operations. '235 patent, col. 20:32-46 (“The media access technique in 802.11 is based on a Carrier Sense Multiple Access (CSMA) operation in which *each station transmits only when it determines that no other station is currently transmitting*. This tends to avoid collisions that occur when two or more stations transmit at the same time where a collision would typically require that a transmitted packet be retransmitted.”); 23:32-24:24 (FIG. 11 embodiment describing a “notforus() function indicates that *a frame was not addressed to a particular station*.”). The plain meaning of “remote station” includes remote access stations that participate in the CSMA operation. *Id.*; Vojcic Decl. ¶ 87. Defendants argue that this disclosure is irrelevant because it uses the term “station” rather than “access station.” Defendants’ Reply Br. at 15. But it is Defendants—not XR—who are asking the Court to re-define “station” as “client device.” Yet the specification itself uses the term “station” more broadly. Defendants ask this Court to believe that adding the word “remote” to the word “station” can only refer to remote client devices, which contradicts the intrinsic record’s explanation that “station” refers to *any* station in the wireless network that participates in CSMA/CA. It would be error to replace the term in the claims (“station”) with a different term (“client device”) appearing elsewhere in the intrinsic record. After all, it is the actual words of the claims that matters most. *See Renishaw*, 158 F.3d at 1248 (“[T]he claim construction inquiry ... begins and ends in all cases with the actual words of the claim.”). As Defendants’ construction contradicts the intrinsic record, it must be rejected.

Finally, Defendants have no answer to XR’s extrinsic evidence establishing that the word “remote” is not limited to “client devices.” Dr. Vojcic has explained that the term “remote station” would be understood by a POSITA as covering remote access stations and remote clients. Vojcic Decl. ¶¶ 88-95. Defendants do not challenge Dr. Vojcic’s testimony in any meaningful way. Dr. Vojcic has explained that the term “station” is understood to a POSITA as broader than the “access station” / “client device” dichotomy advanced by Defendants, for several reasons. First, the term “station” was understood by ordinary artisans in the early 2000’s based on its use in the IEEE 802.11 standard, which disclosed that a group of “stations” can operate in at least two modes: a self-organizing ad hoc mode, *or* an “access station” mode where one station is actually serving as

an anchor to provide access to wired or wire-line infrastructure, in which case the anchor station would be called an access station. Vojcic Decl. ¶ 95 (confirming agreement with the testimony of Dr. Anthony Acampora (Ex. 9 at 31-32)). On this point, Defendants argue that the fact that “stations” can operate as “access stations” *or* in a “self-organizing ad hoc mode” is irrelevant because the standard does not say the word “remote.” Defendants’ Reply Br. at 15. That misses the point. Defendants have asked the Court to construe “station” as “client device,” and XR has shown that “stations” do not need to fit into the “access station” / “client device” dichotomy and never have. The patentee’s choice to use the word “station” instead of “access station” or “client device” means that the patentee wanted the broader term, “station,” which is well known to a POSITA familiar with IEEE 802.11. Even if Defendants can identify circumstances where “remote stations” are client devices, it does not override XR’s evidence that “remote stations” do not need to be “clients” *or* “access stations” and can simply be “remote stations” operating in the self-organizing ad hoc mode.

Further, Dr. Vojcic explained that Wi-Fi stations can function as both an access station and a client station in a variety of circumstances. Vojcic Decl. ¶¶ 91-92. A POSITA understands that Wi-Fi access stations or access points can behave as a client station that connects to another access station. *Id.* On this point, Defendants argue that their construction “does not preclude a client device that is a remote station from also acting as an access point to other devices.” Defendants’ Reply Br. at 15. In other words, Defendants now apparently agree that a construction of “remote station” as “remote client device” actually includes remote access points. If so, then Defendants’ construction makes no sense. There is no reason to construe “remote station” as “remote client device” (with the intent to exclude “access stations” from the scope of the claim term), since Defendants apparently now agree that remote client devices can be access stations. The only logical outcome is to preserve the full plain and ordinary meaning of “remote station,” as a POSITA already understands that this term is broader than “remote client device”—as Defendants now apparently agree.

III. CONCLUSION

For the foregoing reasons, the Court should adopt Plaintiff's proposed construction and reject Defendants' proposals.

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Respectfully submitted,

/s/ Reza Mirzaie

Reza Mirzaie
Marc A. Fenster
James N. Pickens
Minna Chan
Jason Wietholter
Christian Conkle
RUSS AUGUST & KABAT
12424 Wilshire Boulevard 12th Floor
Los Angeles, California 90025
Tel: 310-826-7474
Fax: 310-826-6991
rmirzaie@raklaw.com
mfenster@raklaw.com

*Attorneys for Plaintiff XR Communications
LLC.*

CERTIFICATE OF SERVICE

I certify that this document is being served upon counsel of record for Defendants on June 3, 2022 via electronic service.

/s/ Reza Mirzaie